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AGARD

ADVISORY GROUP FOR AEROSPACE RESEARCH & DEVELOPMENT
7 RUE ANCELLE 92200 NEUILLY SUR SEINE FRANCE

AGARD LECTURE SERIES 181

Intellectual Property Rights

(Les Droits de Propriété Intellectuelle)

This material in this publication was assembled to support a Lecture Series under the sponsorship of the Technical Information Panel of AGARD and the Consultant and Exchange Programme of AGARD presented on 21st—22nd October 1991 in London, United Kingdom, 24th—25th October 1991 in Brussels, Belgium and 6th—7th November 1991 in Arlington, VA, United States.

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North Atlantic Treaty Organization
Organisation du Traité de l'Atlantique Nord

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Abstract

Intellectual property has become one of the keys to the management of high technology sectors and communication systems. The concept is, however, used to describe a variety of different situations influenced by the combined effect of technical and economic change.

From this results an intensive legal activity, not only in the passing of new legislation and the creation of jurisprudence, but also in the field of contractual and professional practice, which is becoming more important.

Although this process can be observed in a number of countries, it is far from being common to them. The clash of national, and even regional concepts has already begun with the internationalisation of technology transfer activity and the dissemination of information products and services.

The aim of this Lecture Series is therefore to provide a few markers, to look at the prospects for these trends and to assess the stakes involved, so as to enable better evaluation and control of national and international legal practices. It is thus addressed to decision-makers in both the public and private sectors, as well as to the managers of this strategic potential and those involved in the information market.

This Lecture Series, sponsored by the Technical Information Panel of AGARD, has been implemented by the Consultant and Exchange Programme.

Abrégé

La propriété intellectuelle est devenue une clef dans la gestion des secteurs de haute technologie et des systèmes de communication. Mais le concept recouvre des réalités diverses et mouvantes sous l'effet croisé des évolutions techniques et économiques.

Il en résulte une intense activité juridique, non seulement de production législative et jurisprudentielle mais aussi des pratiques contractuelles et professionnelles dont le rôle est croissant.

Si un tel mouvement s'observe dans nombre de pays, cela ne signifie pas qu'il leur soit commun. En effet, la confrontation des conceptions nationales, voire régionales, est déjà engagée en raison de l'internationalisation des activités de transfert de technologies et de diffusion des produits et services informationnels.

Le but de ce cycle de conférences est donc de fournir les points de repère, les perspectives de ces évolutions et leur enjeux, afin de permettre une meilleure évaluation et maîtrise des politiques et pratiques juridiques nationales et internationales. Sont donc concernés les responsables publics et privés, ainsi que les gestionnaires de cet actif stratégique et les divers intervenants sur le marché de l'information.

Ce cycle de conférences est présenté dans le cadre du programme des Consultants et des Echanges, sous l'égide du Panel de l'Information Technique de l'AGARD.

List of Authors/Speakers

Lecture Series Director: Mr Jean Martin
Avocat à la Cour
Chargé d'Enseignement à l'Université de Paris Dauphine
18, rue Berger
75001 Paris
France

AUTHORS/SPEAKERS

Mr Robert W. Beckham
Head of Intellectual Property Department
Defence Research Agency
Empress State House
London SW6 1TR
United Kingdom

Mr Joe Bremner
Database Development
2703 E. Newton Avenue
Shorewood
Wisconsin 53211
United States

Prof. Herbert Burkert
Attorney to Cologne Court
invited Professor from Laval (Canada)
Gesellschaft für Mathematik und
Datenverarbeitung MBH
Forschungsstelle für Informationswirtschaft
Cologne
Germany

Mrs Bridget Czarnota
Commission of the European Communities
200, rue de la Loi
B 1049 Brussels
Belgium

Mr Paul Freiermuth
Contrôleur Général des Armées
Expert auprès de l'OTAN
Ministère de la Défense
Contrôle Général des Armées
Département S1A
14, rue Saint-Dominique
Paris
00450 Armées
France

Mr Colin Hadley
Chief Executive of the
Copyright Licensing Agency
90 Tottenham Court Road
London W1
United Kingdom

Mr Steven J. Metalitz
Vice President and General Counsel
Information Industry Association
555 New Jersey Ave., NW
Suite 800
Washington D.C. 20001
United States

Mr Michel Vivant
Doyen de l'Université de Droit et des
Sciences Economiques
39, rue de l'Université
34090 Montpellier
France

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LES DEFIS JURIDIQUES DU MARCHE MONDIAL DE L'INFORMATION

Par Jean MARTIN
Avocat à la Cour de Paris
Chargé d'Enseignement à l'Université Paris-Dauphine
18 rue Berger - 75001 Paris - France

La propriété intellectuelle est devenue une clef dans la gestion des secteurs de haute technologie et des systèmes de communication. Mais le concept recouvre des réalités diverses et mouvantes sous l'effet croisé des évolutions techniques et économiques.

Il en résulte une intense activité juridique, non seulement de production législative et jurisprudentielle mais aussi des pratiques contractuelles et professionnelles dont le rôle est croissant.

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1 - Il n'est plus besoin d'exposer l'importance de l'information dans le développement de nos sociétés : pour les Etats, les individus, les organisations publiques ou privées, le besoin en information s'apprécie en milliards de giga bits. L'information est au coeur de toute décision stratégique, économique et scientifique notamment. La capacité d'améliorer nos appareils de production et de développer l'innovation est dépendante pour une grande part du système d'information.

2 - Le constat de cette évidence contraste avec l'incertitude qui caractérise les cadres juridiques de l'activité informationnelle. Incertitude d'hier, encore persistante aujourd'hui, même si l'on doit constater certains progrès.

3 - L'AGARD, et les milieux concernés, constatant la difficile rencontre entre l'information et le droit, préoccupés par les conséquences négatives qui en résultent pour l'économie et l'industrie, et plus généralement pour le développement économique et scientifique, très tôt se sont interrogés sur les modes de gestion juridique de l'information. Cette démarche s'est effectuée au travers de travaux spécifiques ou de façon plus diffuse à travers des travaux de groupes et colloques techniques.

4 - L'importance de la dimension juridique du marché de l'information s'est révélée progressivement mais avec une force croissante, tant les interrogations étaient multiples et cruciales, aussi bien pour le droit lui-même que pour les opérateurs économiques.

L'industrie de l'information s'est en effet développée dans une sorte de "désordre" qui est, pour le moins, peu compatible avec la marge de hasard tolérable dans la sphére juridique et économique.

Les fondements du droit sont eux-mêmes affectés. Il suffit, pour s'en convaincre, de se rappeler quelques unes des interrogations qui ont jalonné la dernière décennie : nature de la protection des logiciels, des banques de données, vol d'information, appropriation du vivant informationnel.

La confrontation entre droit et information est de nature tectonique : elle touche les fondements mêmes de l'organisation des sociétés et des systèmes juridiques.

5 - Puis, des éléments de réflexion et de réponse sont venus. Les contributions, la doctrine, le développement des pratiques et les initiatives législatives ou conventionnelles ont permis d'élaborer des dispositifs, dans de nombreux pays et sur la scène internationale.

Tout n'est pas règlé, loin s'en faut. Certaines questions ne le sont peut-être pas du tout, d'autres restent partiellement source d'incertitude tant pour les juristes que pour les opérateurs économiques.

6 - Le temps est donc venu, après cette première période, de faire le point et d'évaluer la pertinence du système juridique pour le système d'information.

Cela est d'autant plus opportun que les évolutions du droit se sont réalisées dans un processus accéléré de développement des technologies de communication, lesquelles ont fait émerger de nouveaux questionnements et de nouveaux besoins juridiques. Leur complexité pourrait faire considérer les précédentes questions comme somme toute assez simples. Le droit semble entrer dans l'ère de la complexité, voire du hasard que connaissent bien les scientifiques mais qui peut troubler quelque peu le juriste.

7 - En effet, le contexte a évolué par rapport aux premières interrogations. Cette évolution se manifeste tant sur le plan économique que technique.

Sur le plan économique, l'information est à présent l'objet d'une réelle stratégie dans nos sociétés développées. Les problèmes pressentis il y a quelques années ont effectivement surgi et leur observation conduit à constater leur acuité grandissante. La place prise par l'information dans le fonctionnement du système économique, notamment dans certains grands secteurs (industrie, grande distribution, transport aérien...) révèle que le système informationnel constitue un double de l'activité elle-même - une activité seconde dont l'importance peut lui conférer, à certains égards, la primauté. N'était-ce pas le sentiment réel de Robert Crandall, président d'AMR, société mère d'American Airlines, lorsqu'il indiquait que s'il avait à choisir entre la vente de sa compagnie et celle de son SIR (système informatisé de réservation) il devrait y réfléchir longuement et profondément ?

8 - L'objet du droit devra donc se déplacer pour appréhender cette nouvelle réalité. Il en est ainsi, par exemple, du droit de la concurrence (activité réelle et activité informationnelle). Les équilibres concurrentiels dans l'activité réelle peuvent être compromis par des déséquilibres dans l'activité informationnelle. Les phénomènes d'intégration ne paraissent plus nécessairement devoir se réaliser dans "le métier physique" mais dans la gestion informationnelle de ce métier.

Avlin Tofler dans "Powershift" illustre, à travers l'ensemble de la grande distribution, cette problématique déjà pressentie et analysée dans les télécommunications et plus généralement les grands systèmes sectoriels d'information. Le développement des EDI (Echanges Informatisés de Documents) s'inscrit dans cette problématique pour laquelle il convient de rechercher les règles du jeu approprié.

9 - Le développement du marché requiert des mécanismes de protection de l'information, valeur active de plus en plus essentielle pour les grandes organisations. Mais un équilibre doit être trouvé afin que cette protection, ou "réservation" de l'information, ne nuise pas à sa circulation, voire à son accès. Où et comment trouver ce point d'équilibre entre les nécessités de la circulation et les besoins de protection, la diffusion et la réservation, sans dire appropriation. L'équilibre doit-il être au même point dans tous les champs de l'information ?

L'IST (Information Scientifique et Technique) peut appeler un équilibre qui lui soit propre.

Le long procès Microfor / Le Monde, en France, mais plus encore la récente affaire FEIST, aux USA, témoignent, plus que de la vivacité de ce débat, des difficultés de concevoir les outils conceptuels, voire la méthodologie, propres à permettre de dégager des lignes de solutions.

Le concept de valeur ajoutée est peut-être l'un d'eux. Tout comme l'originalité constitue le critère de la création "réservée" pour la propriété littéraire et artistique, ou la nouveauté constitue celui de l'invention "appropriée" pour les brevets ... le concept nouveau, tel que celui de la valeur ajoutée, pourrait constituer le critère du droit à "récupération" de l'information en même temps que celui de la protection du résultat de l'activité informationnelle nouvelle, additionnelle. Ne trouve-t-on pas les prémisses, peut-être plus, d'une institution de cette nature dans le droit général, et dans le droit de la propriété intellectuelle plus spécialement dans la propriété industrielle, mais aussi dans la propriété littéraire : abus de droit, déchéance pour non exploitation, oeuvre dérivée.

La pensée économique a pu faire des avancées considérables lorsque certains concepts ont été mis à sa disposition, par Ricardo, Smith ou Marshall. N'est-il pas temps que la pensée juridique se dote des moyens d'analyse qui lui font défaut pour faire face aux défis de l'information ? On remarquera, à cet égard, que ce sont les "applications informationnelles", et non l'information, qui font l'objet des préoccupations des juristes !

10 - Sur le plan technique des transformations technologiques se conjuguent avec l'épanouissement de la logique économique pour contribuer à bouleverser le contexte et faire naître de nouveaux questionnements. Une des données majeures de l'évolution s'est amorçée et devrait se développer : l'interpénétration de l'information et des technologies.

Elle s'exprime à travers le passage du concept d'information à celui de système d'information. Il s'agit d'un changement d'objet pour le droit.

Cette interpénétration s'observe notamment en ce que la technique devient un élément constitutif de l'information et réciproquement. C'est plus que la renaissance du vieux débat contenant-contenu. La technique conditionne la consistance de l'information en tant qu'elle détermine les possibilités d'accès, de traitement, de sélection, d'enrichissement. Elle va permettre ainsi par la multiplicité des services et produits de diversifier une offre afin de mieux répondre à des demandes de plus en plus segmentées. Le système technologique conditionne, nature, objet et qualité de l'information. Il constitue un facteur déterminant de sa valorisation.

C'est donc bien le contenu qualitatif qui est ici en jeu. Le produit lui-même, au sens d'objet physique, comporte de plus en plus de signes et de process d'information : design, connaissance, objet vivant virtuel, système expert d'auto-contrôle de processus industriel. Le

débat au sein des télécommunications reflète ce déplacement, existant et potentiel, du concept d'information à celui de système d'information (débat sur les services à valeur ajoutée, services/supports, les réseaux d'information et informations de réseaux).

De nouveaux acteurs, de nouvelles fonctions, de nouveaux usages surgissent du développement technologique et sont autant de variables nouvelles dans l'équilibre juridique : l'électro-copie entre-t-elle dans le champ de la gestion collective de la photocopie qui, après tant d'années d'effort, se met en place; les droits d'utilisation de l'acquéreur d'un CD-Rom peuvent-ils être valablement restreints ? Quelle régime de responsabilité pour les systèmes d'information multi-polaire (multiplicité des gisements), sans évoquer l'hypothèse, pourtant banale, ou ces gisements seraient localisés dans plusieurs pays, voire dans l'espace extra-atmosphérique ?

Car la dimension internationale de la problématique est depuis longtemps consacrée dans les faits. Elle est accélérée par les évolutions techniques. Devenant une réalité, le marché de l'information est devenu marché mondial.

Si bien que ce n'est plus tel ou tel Etat isolé qui doit et peut à faire face dans sa sphère d'imperium juridique aux défis mais l'ensemble des Etats, agissant de concert. Cette internationalisation est source de nouvelles lignes de fractures en raison de la disparité, non seulement des systèmes juridiques, mais des systèmes économiques et politiques dont le traitement juridique sera le reflet. Certaines initiatives au regard des conventions internationales (ratification de la convention de Berne par les USA, adoption de tels systèmes juridiques par les pays d'Extrême Orient) et les confrontations dans certaines enceintes du commerce international en témoignent.

11 - Ainsi, l'AGARD a choisi opportunément ce moment pour procéder à un examen de "l'état de l'art", dans une perspective rétrospective et prospective. Bien sûr, le domaine est si vaste que tous les sujets ne pouvaient être abordés. Il convenait de focaliser les travaux sur quelques uns des points les plus significatifs, sans toutefois perdre de vue l'unité d'un phénomène polymorphe.

1° - La confrontation propriété intellectuelle et information : panorama international des tendances :

En premier lieu, il s'agit de dresser un panorama comparatif international des rapports entre propriété intellectuelle et l'information. Mr le Doyen Vivant a bien voulu accepter cette tâche considérable qui consistera à embrasser cette vaste matière pour en faire émerger les lignes profondes d'évolution.

C'est ainsi qu'il nous entraîne dans le temps et l'espace, de la Grèce aux USA, sans négliger quelques continents, à la recherche des côtes de l'originalité, ou protectabilité,

et de quelques phares pour les signaler.

Il soulignera les équilibres qui se dessinent entre les diverses familles à l'intérieur du droit de la propriété intellectuelle : comment "le droit d'auteur est privilégié, le brevet courtisé et le droit commun revisité", selon sa très expressive trilogie.

Ce faisant, il nous invite à nous pencher sur l'une des problématiques essentielles aujourd'hui qui résulte de l'internationalisation : les divergences et convergences des droits nationaux, apparentes ou réelles, au-delà des philosophies juridiques ou des terminologies particulières.

Les banques de données, les logiciels, systèmes expert ..., constituent les objets étudiés. Il constate que si l'information est au "coeur" de ces objets, les outils du droit appréhendent peu, ou de façon insuffisante, l'information en tant que telle, notamment le copyright, si ce n'est le brevet.

C'est peut-être que le concept de propriété, élément commun à ces instruments juridiques, est peu adapté à l'information ou bien que l'outil pertinent fait encore défaut dans nos systèmes juridiques. Avec moins d'exigence, ne faut-il pas songer recourir à des concepts classiques du droit commun. Des moyens de portée juridique plus restreinte certes, mais non sans utilité pour asseoir un droit (contrat) pour sanctionner un comportement anti-social (délit civil ou pénal, responsabilité, parasitisme, concurrence déloyale).

Cette multiplication des droits, cet "émiettement", dit Mr Vivant, ajoute, bien que cela ne soit pas sans quelques avantages, à la complexité des tentatives nationales et internationales pour élaborer un droit apte à appréhender l'information.

2° - Logiques et pratiques sectorielles des entreprises internationales dans la gestion de l'information, le transfert de technologie :

Contre-point complémentaire au panorama des tendances mondiales du droit, quelles sont les tendances chez les grands acteurs ? L'analyse des pratiques dans leur stratégie de gestion de l'information et du transfert de technologie devrait permettre de dégager, à présent d'un point de vue plus opérationnel, les tendances, solutions et questions, qui se dessinent dans cette confrontation entre information et propriété intellectuelle. Mr Robert W. Beekham, Directeur du Département de la Propriété Intellectuelle à la Defense Research Agency portera notre attention sur les secteurs de l'aviation, de la recherche et de la défense dans lesquels les systèmes d'information et les transferts de technologies, spécialement du fait des opérations de coopération internationale, jouent un rôle croissant et dont la maîtrise est de plus en plus déterminante pour la stratégie des entreprises.

3° - Reprographie : licence légale et voie contractuelle :

Les 300 billions de photocopies illicites effectuées chaque année dans le monde constituent l'un des défis économiques et juridiques. La reproduction de matériaux protégés a été laissée longtemps sans pratique active de protection de la part des titulaires de droits. L'ampleur du phénomène a conduit les éditeurs et auteurs à se préoccuper du "photoco-pillage". Cette activité de reproduction, jusqu'à présent demeurée "souterraine" d'un point de vue économique et juridique, tente d'émerger.

Les droits individuels ne pouvant plus s'exercer, la gestion collective s'impose d'elle-même. Mais deux grands systèmes de gestion juridique sont en compétition : le contrat et la licence légale.

Mr Colin P. Hadley, chief executive de la CLA (Copyright Licensing Agency) en Grande Bretagne, souligne l'intérêt, tant pour les utilisateurs que pour les détenteurs des droits, de développer un système fondé sur une base volontaire plutôt qu'imposée - même s'il est nécessaire de prévoir, dans certains cas, des substituts de licence non volontaire, tel que l'extension d'accord collectif. C'est l'une de ses dix propositions d'orientation pour un système juridique pertinent. Pertinent car il repose sur l'équilibre des intérêts divers en présence et parce qu'il offre une solution rationnelle à la gestion des flux financiers.

Dans l'optique du marché mondial, la proposition relative à l'égalité de traitement national / étranger, tant en ce qui concerne la tarification que la répartition, retient l'attention car elle pourrait être source d'un véritable transfert de pouvoir à l'échelle des continents dont les enjeux stratégiques et économiques sont loin d'être admis faute d'un cadre juridique international adéquat.

Le système juridique pour la gestion de la reprographie qui s'élabore et se met en place, serait-il déjà dépassé ? Chacun devine en effet que le procédé de reproduction véritable sera numérique - l'électrocopie. Menace ou espoir ? Les moyens techniques offrent-ils des réponses aux risques qu'ils secrètent ? Le contrôle électronique généralisé serait-il envisageable qu'il conviendrait au préalable de s'assurer d'une unité de vue, au plan international, sur la qualification juridique des opérations d'électro-copie afin de déterminer si elles donnent bien prises à des droits.

4° - Services électroniques d'information :

Le développement des services électroniques d'information constitue très certainement l'un des phénoménes qui caractérise la décennie qui vient de s'achever. Comme on le constate, la problématique "reprographie" s'élargit par interpénétration et différenciation à la fois de cette technologie combinatoire multi-fonctionnelle qui

permet reproduction, représentation et surtout traitement et circulation de l'information.

Ces particularités font du secteur des services électroniques d'information un révélateur - laboratoire juridique.

La numérisation, les capacité et rapidité de stockage, de traitement et de circulation font émerger de nouveau biens, les banques de données, de nouveaux acteurs, producteurs, éditeurs, serveurs ... dont les relations avec les objets qu'ils produisent, traitent, distribuent, ont dû être élaborées.

La rapidité du développement de ces services, leur particularisme, leur évolutivité, ont contraint à emprunter des processus de production du droit qui laissent une plus grande place aux professionnels, à la pratique. En d'autres termes, à choisir la voie de la régulation, voire de l'auto-régulation plutôt que celle de la réglementation. Les contrats et les codes de bonne conduite en constituent les instruments privilégiés, comme nous l'exposera Mr Joe Bremmer, Attorney, Conseiller de Databax Developpement Corporation.

5° - Quelles relations entre secteur public et privé ?

Mais n'est-ce pas le développement de ces services électroniques qui a fait émerger une nouvelle problématique sur le marché de l'information : le régime juridique de l'information administrative, ainsi que les conditions d'intervention du secteur public sur le marché.

La question n'est pas nouvelle. Les gisements informationnels publics sont anciens et considérables, dans de nombreux secteurs. Mais l'électronisation renouvelle et élargie la problématique.

Une problématique complexe car le sujet interfère avec une diversité d'aspects légaux relevant notamment du droit de la concurrence, au droit des données nominatives, au secret, comme l'expose Mr Herbert Burckert, Attorney à la Cour de Cologne, Professeur invité à l'Université de Laval.

Quel équilibre établir entre les prérogatives nécessaires à l'exercice des responsabilités des pouvoirs publics, locaux ou nationaux et le fonctionnement du marché de l'information ? C'est poser la question d'une éventuelle dérégulation de l'activité informationnelle de l'administration. Mr Burkert fait une approche en parallèle de certaines réflexions ou positions aux USA et en Europe pour souligner combien une démarche prudente et balancée lui apparaît indispensable, car il conviendrait de prendre en compte la spécificité des fonctions de l'information du secteur public.

6° - Les tranferts de technologie : négociations internationales et travaux en cours :

Le transfert des technologies est par essence un transfert d'information, que le transfert porte sur des compétences, du savoir-faire ou des données. Si son importance quantitative est délicate à évaluer, son importance qualitative, voire stratégique, conduit à l'exercice de contrôles qui font l'objet d'une réglementation spécifique et dans divers secteurs à la mise en place de cadre régulatoire.

Ces informations, en tant qu'elles s'intégrent dans des processus industriels, civils ou militaires, suscitent des modalités juridiques particulières de transfert qui sont marquées par l'environnement technique et économique, objet même de l'information, et par la nature même du secteur d'activité. C'est ainsi, comme le souligne Mr le Contrôleur Général des Armées, Paul Freiermuth, que les transferts de connaissances, de compétences et de performances s'effectuent sur la base d'accord de coopération, de partenariat, dans un cadre bilatéral ou multilatéral, selon les pays et les secteurs.

Malgré ces spécificités, certaines préoccupations apparaissent communes aux autres domaines de l'activité informationnelle : transfert ne signifie pas abandon des droits, mais usage autorisé limité. Le problème de la protection contre une dissémination ou utilisation indue est récurrent.

7° - La nouvelle Europe :

L'Europe est un acteur privilégié de l'information et de la propriété intellectuelle en raison de sa complexité, de son poids sur le marché des technologies de l'information et du double mouvement interne et externe qui l'anime. La Communauté Européenne, au centre de ce mouvement, mène en effet une intense politique interne pour la mise en place du marché unique de 1993 et développe une politique externe dans les enceintes internationales et auprès des pays de la nouvelle grande Europe - anciennement pays de l'Est, notamment.

Les aspects juridiques ont été identifiés par les dirigeants de la CEE comme l'un des obstacles à l'instauration du marché unique de l'information. De nombreuses initiatives ont donc été prises par la Commission et des mesures adoptées, ou mises en chantier, pour parvenir, au-delà de la diversité des systèmes juridiques nationaux, à élaborer une base commune compatible. Cette démarche est illustrée par de nombreux exemples que cite Mme Bridget Czarnota, administrateur principal à la Commission (DG III) : logiciel, topographie de semi-conducteur, banques de données, reprographie, données nominatives ... sans oublier les marques, brevets, standard de normalisation ...

La démarche communautaire se confronte sur la scène internationale aux grands acteurs comme les USA et le Japon, notamment dans les enceintes et négociations en cours au

sein du GATT qui seront commentées par Mme Czarnota, avant qu'elle n'évoque l'émergence de la grande Europe, née des bouleversements de ces dernières années et dans laquelle une autre organisation joue un rôle important sur divers points du secteur informationnel : le Conseil de l'Europe.

8° - Information et responsabilité :

L'activité informationnelle est à haut risque. Les responsabilités encourues sont multiples, les dommages dans certains cas peuvent être considérables.

Dans la chaîne des opérateurs (le fournisseur d'information, le fournisseur de service, le serveur), est-il concevable d'identifier l'un d'entre eux pour assumer la responsabilité finale ? Mais sur quel fondement cette responsabilité serait-elle raisonnablement assise : la faute, la négligence ? Les principes traditionnels sont-ils transposables à la gestion de milliards d'octects à la seconde ... ?

Pour Mr Steven J. Métalitz, Vice Président et Conseiller Général de l'Association de l'Industrie de l'Information (I.I.A.), le développement des services d'information se réalise dans un environnement juridique qui se caractérise par trois pôles de responsabilité liés à trois types de droits et personnes : l'auteur et autres sources, les personnes citées et l'utilisateur.

L'aménagement des clauses contractuelles ne peut permettre d'échapper à toute responsabilité nous précise Mr Steven J. Metalitz qui prône une démarche prudente dans la mise en oeuvre des solutions et suggère d'emprunter la voie de l'auto-régulation pour trouver la juste balance des intérêts en présence et la flexibilité nécessaire.

Conclusion :

De nombreux aspects du marché international de l'information doivent retenir encore l'attention. On songe ici aux diverses questions liées aux relations contractuelles et au problème délicat des conflits de lois et de juridictions. Mais le plus souvent, ils constituent l'environnement plus général de toute activité transfrontalière, sans pour autant négliger le fait qu'ils peuvent être marqués à certains égards par la spécificité du droit de la propriété intellectuelle ou les particularités de l'activité informationnelle.

Les exposés et les questions qui suivront non seulement permettront d'approfondir, voire de compléter, ces divers thèmes et les problématiques qui les sous-tendent afin de parvenir aux termes de nos travaux à dégager quelques lignes directrices pour la réflexion et l'action.

Jean MARTIN

PROPRIETE INTELLECTUELLE ET INFORMATION
Panorama comparatif international

Michel VIVANT
Doyen de la Faculté de Droit
et des Sciences Economiques de Montpellier
(France)
Expert auprès de la Commission des Communautés européennes
Consultant

1. Il est certainement audacieux de prétendre dresser un panorama international de l'état des systèmes nationaux de propriété intellectuelle afin de discerner comment ils appréhendent ou sont susceptibles d'appréhender l'information et réguler le marché de celle-ci.

1.1. La notion même d'information est vague et peut être entendue de manière plus ou moins large jusqu'à comprendre les "objets" les plus variés : presse et livre, logiciel et système-expert, banque de données et émission de télévision, technique brevetable en tant qu'une technique divulguée constitue une information pour les entreprises présentes sur le marché, signes distinctifs comme les marques en tant qu'il s'agit d'information pour le consommateur... Sans omettre qu'information peut renvoyer à information du citoyen ou du salarié par exemple. Dans le contexte qui est le nôtre, il est clair, cependant, que la notion doit être resserrée. L'information est ici celle qui est traitée par les hautes technologies (high technologies) et transite par les systèmes de communication moderne : informatique au sens le plus large du mot et télécommunications, presse électronique par exemple, si l'on doit parler de presse, mais non point presse sous forme papier traditionnelle.

1.2. La notion de propriété intellectuelle, à l'encontre du premier sentiment qu'on peut en avoir, n'est pas non plus parfaitement cernée, du moins à l'échelle internationale. La propriedad intelectual en espagnol et en droit espagnol renvoie au seul droit de la propriété littéraire et artistique (droit d'auteur et copyright), là où, en droit français, les mots équivalents de propriété intellectuelle couvrent ce même champ de la propriété littéraire et artistique mais aussi celui de la propriété industrielle. Et encore convient-il de noter que deux acceptions de ces mots sont encore possibles d'un point de vue français : l'une, étroite, qui vient d'être rappelée qui réserve le vocable à ce qu'un juriste de droit continental qualifiera de propriété stricto sensu ("réservation privative"), l'autre, plus large, qui rejoindra les pratiques anglo-américaines pour considérer tous les mécanismes juridiques aptes à assurer la "gestion" d'une valeur économique, qu'il s'agisse de mécanismes contractuels, de mécanismes de l'ordre des délits dans les droits continentaux ou des torts dans les droits de common law ou de propriétés proprement dites.

Afin de ne pas restreindre abusivement notre champ d'investigation, il sera raisonnable ici d'adopter la vision la plus large, d'autant que, si nul n'ignore que droit d'auteur et copyright sont spécialement sollicités pour répondre aux difficultés nées de ces nouveaux secteurs de l'industrie de l'information, on ne saurait ignorer davantage qu'il ne s'agit pas là d'une voie exclusive. Une option moins ouverte déboucherait sur une vision mutilée de la réalité.

2. Propriété intellectuelle et information : nous nous efforcerons donc d'examiner comment les divers systèmes de droits nationaux tentent de répondre aux défis inattendus lancés par les nouvelles technologies de l'information et de la communication. Nous tenterons de dégager les enjeux et les cheminements communs que suscite cette communauté d'enjeux. Nous noterons dans le même temps les divergences de philosophies et de pratiques qui peuvent être sources de ruptures entre régions du globe voire de pays à pays et de la sorte aller à l'encontre de l'instauration d'un marché international sûr de l'information. Le jeu oppositions - rapprochements entre systèmes et entre solutions retenues au sein même d'un système étant constant témoigne bien des incertitudes qui règnent à ce jour.

2.1. Un rappel général et générique est pourtant possible et de surcroît nécessaire en préalable à tout autre développement, à savoir que **la norme de départ est la non-protection.** Une formule reçue en France, mais qui vaut pour tous pays, dit que "les idées sont de libre parcours" (Desbois). L'information, comme telle, n'appartient à personne ou appartient à tous (comme on voudra). Le droit peut venir affermir une réservation factuelle pour assurer le secret quand le détenteur a

choisi ce moyen pour s'assurer la maîtrise de l'information (c'est le statut bien connu du savoir-faire ou know-how). Il ne peut offrir un autre statut à cette information, selon ses propres canons, que si celle-ci présente tel ou tel trait : caractère inventif, "façonnage",...

2. Ce rappel fait, si l'on ne s'attache pas à des protections "périphériques" comme le droit des marques qui, identifiant un produit informationnel comme il le ferait d'un autre, permet de retenir une clientèle mais n'assure pas de droits sur la création en tant que telle, ce sont ainsi quelques mécanismes spécialement élus par la pratique qu'il faut considérer et qui se présentent dans un curieux rapport dialectique comme si, à chaque fois, les insuffisances de l'un poussaient praticiens et législateurs à opter pour un autre. C'est ainsi que, s'il est évident, comme nous l'avons déjà dit, que le droit d'auteur et le copyright sont dominants, à l'échelle de la planète, pour ces technologies de l'information, il est flagrant aussi que le recours au brevet, qu'on croyait écarté, ressurgit, de même que revient sur le devant de la scène, spécialement pour des créations non encore bien "encadrées", un appel au droit commun, au besoin repensé, sans oublier bien sûr la voie des protections sui generis.

Nous étudierons donc tour-à-tour :

- **le droit d'auteur privilégié (I);**
- **le brevet courtisé (II);**
- **et le droit commun revisité (III),**

avant de dire un mot, en forme d'ultime interrogation, sur de possibles nouvelles pistes.

I.- LE DROIT D'AUTEUR PRIVILEGIE

3. Droit d'auteur et copyright trouvent une place que l'on peut qualifier de naturelle dans un certain nombre de cas pour lesquels la transposition de l'ancien au nouveau se fait de manière aisée, le passage de l'un à l'autre se réalisant en quelque sorte en douceur. Comme jadis la photographie a pu apparaître comme prolongeant la peinture (encore qu'il ne faille pas oublier que, pour certains, le côté "mécanique" de la première devait lui faire dénier tout caractère artistique et que pareille idée a laissé, aujourd'hui encore, certaines "scories" dans nos lois).

Il en va ainsi de l'image digitalisée qui, bien qu'objet d'un tel traitement, reste d'abord une image, ou de l'édition électronique dont le changement de support n'affecte évidemment pas la qualité d'édition. C'est ainsi que la doctrine néerlandaise a souligné que la forme digitalisée éventuellement adoptée n'affectait pas la nature écrite d'un travail (Meijboom) et que le droit français soumet la presse électronique au droit général de la presse tant pour les aspects directs de droit d'auteur que par exemple pour les questions de responsabilité qui peuvent se poser.

4. Droit d'auteur et copyright ont conquis, de haute lutte, ou sont en train de conquérir une semblable place pour ce qui est des logiciels et des banques de données.

Les Etats-Unis, avec la réforme du Copyright Act intervenue en 1980, ont montré la voie à propos des programmes. L'Allemagne, le Chili, la France, le Japon ont adopté des lois analogues dès 1985. A travers lois ou jurisprudence, la plupart des pays, développés ou à tout le moins soucieux de participer au concert des nations, se sont ralliés à cette solution (Canada ou Mexique sur le continent américain, Espagne ou Royaume-Uni sur le continent européen,...) fût-ce parfois avec réticence (Australie ou Brésil). La doctrine, là où il n'existe pas d'autre source, s'est généralement prononcée dans le même sens (qu'il s'agisse de pays aussi différents que le Congo, le Luxembourg ou le Pérou). La Commission des Communautés européennes vient d'adopter, en mai 1991, une directive aux termes de laquelle les programmes sont des oeuvres littéraires qui, sous quelques règles particulières, doivent être traitées comme telles.

Pour ce qui est des banques de données, rarissimes sont les Etats qui, comme la République dominicaine, ont dit expressément leur accorder une protection au

titre de la propriété littéraire et artistique, mais le consensus se fait pour la reconnaissance d'une telle protection et telle ou telle décision nationale peut même être sollicitée en ce sens. Les autorités communautaires travaillent, d'ailleurs, à un projet de directive qui consacrerait ce choix.

5. Ces convergences ne règlent pas tout, cependant, et loin de là.

Sans même s'arrêter au fait que les exemples donnés ne doivent pas masquer l'existence d'incertitudes (que dire, par exemple, d'un système-expert?), il est de fait qu'il ne suffit pas de se retrouver sur quelques mots à forte valeur évocatrice : protection, droit d'auteur (ou copyright), originalité,... pour parler réellement le même langage et concrètement mettre en place des systèmes de droit, sinon semblables, du moins de même esprit et propres à permettre véritablement la mise sur pied d'un marché international de l'information.

Les spécialistes de ces questions savent bien que les philosophies des divers systèmes, et spécialement du droit d'auteur (derecho de autor, diritto d'autore,...) d'une part et du copyright d'autre part, sont très différentes, ce qui induit des pratiques tout à fait dissemblables. Ni les conditions de la protection offerte, ni les effets de celle-ci ne se présentent dans les mêmes termes de région à région (du globe), si ce n'est de pays à pays.

Il sera assez aisé de le démontrer en donnant à cette approche en termes de conditions et d'effets un tour plus concret, à travers deux interrogations : quelle création protège-t-on? Quelle protection offre-t-on? Nous laisserons de côté les disparités strictement procédurales : dépôt ou absence de dépôt, nécessité ou non d'une mention revendiquant un droit sur la création...

A.- Quelle création protège-t-on?

6. Il ne s'agit pas de se redemander ici si l'on protège ou non un logiciel ou telle ou telle autre création en soi. Mais de se poser la question de savoir ce qui justifie l'intervention du droit, sur quel critère un Office national (quand office il y a) ou un juge acceptera de reconnaître protection ou non à une création donnée, logicielle ou autre. L'interrogation est donc, si on veut voir les choses ainsi, de philosophie du droit et des droits, mais il est clair aussi qu'elle est très pratique, puisque, selon la réponse apportée, le même bien pourra être tenu ou non pour susceptible de protection, avec tout ce que cela peut impliquer du point de vue du marché.

7. Quand tous les droits font de la condition d'originalité (originalité de l'oeuvre), la condition de sa protection, il convient donc de se demander ce que pratiquement cela recouvre.

7.1 La philosophie du droit d'auteur stricto sensu est clairement personnaliste.

L'originalité est ainsi définie par la doctrine française traditionnelle (Desbois ou Colombet), rejointe par la doctrine espagnole, italienne, grecque (Koumantos), comme l'empreinte de la personnalité de l'auteur présente dans l'oeuvre, sur l'idée - qui a fait l'objet de débat en philosophie (cf. Hegel) - selon laquelle l'oeuvre est "une émanation incessamment agissante ... de l'individu" (Saleilles). L'oeuvre est protégée parce qu'elle est le prolongement de l'auteur. Elle ne peut donc l'être que si l'auteur est "présent" dans l'oeuvre à protéger. On conçoit qu'une telle conception convienne mieux à un tableau de Picasso qu'à une création logicielle.

7.2 En revanche, si l'on a pu écrire : "Copyright is a property right which authors have in relation to the works which they create" (Dworkin & Taylor), il ne faudrait pas, pour autant, en conclure qu'un même lien personnel entre l'oeuvre et l'auteur est exigé dans ce système de copyright.

Cela est particulièrement net quand on lit sous la plume des auteurs à l'instant cités que l'exigence d'originalité signifie, quant aux oeuvres littéraires, "not

copied" ou que tel autre auteur parle en termes généraux de "skill and labour" (Chalton). On sait aussi que, pour certains, la protection est ou devrait être le prix de la transpiration (sweat of the brow). L'application à des oeuvres "industrielles" (qu'il s'agisse d'industries de l'information ou d'autres industries) est évidemment plus commode dans cette conception des choses que dans le cas précédent.

7.3 Moins marqués dans un sens ou dans l'autre, d'autres droits révèlent des choix médians.

Dans la législation turque, il est ainsi question de "création intellectuelle reflétant la personnalité de l'auteur". Et la formule est à noter car elle amorce un glissement, de la personnalité (individu considéré globalement) qu'elle vise toujours comme par exemple en France, vers l'intellect (qui n'est qu'une dimension de la personne). Il semble bien que l'idée soit également présente en Allemagne quand il est question de "création intellectuelle personnelle". A Panama, à côté de la création artistique, est visée la production résultant d'un "effort personnel d'intelligence". L'accent est encore mis aux Pays-Bas sur les choix - implicitement intellectuels - personnels faits par l'auteur.

7.4 Il est clair que les différents droits nationaux ne sont pas semblablement préparés à accueillir des créations dans lesquelles la dimension technologique peut sembler dominer et le travail ou l'investissement plus important que la créativité.

8. Il faut, cependant, certainement se garder d'une systématisation absolue, trop dogmatique.

8.1 Les conséquences concrètes peuvent n'être pas celles que l'on attendaient. Ainsi, si la loi britannique permet expressément que soient protégées les compilations (Act 1988, art. 3.1), alors que la Cour de cassation française a déclaré, en 1989 (Cour de cassation, 1 ère ch., 2 mai 1989), que celles-ci ne l'étaient point, il n'en demeure pas moins que des listes de rencontres sportives ont été protégées au Royaume-Uni comme l'a été un annuaire en France! Curieusement même, dans un système qui est de copyright, la Cour Suprême des Etats-Unis a récemment refusé d'admettre la protection d'un annuaire par le copyright, récusant au passage les opinions doctrinales sur le prix à reconnaître à la transpiration évoquées plus haut (Cour Suprême, Feist vs Rural Telephone, 27 mars 1991).

8.2 Reste que les disparités de philosophie ne sont pas dépourvues d'incidence. On en donnera un exemple positif et un exemple prospectif.

8.2.1 Donnée positive : partant de visions proches mais manifestant des sensibilités très différentes aux nouvelles technologies, les deux juridictions les plus élevées dans l'ordre judiciaire, en Allemagne et en France, ont donné, sur la question de la protection des logiciels, des réponses aux effets diamétralement opposés. Le Bundesgerichtshof, le 9 mai 1985 (arrêt Inkassoprogramm), a, en effet, conservé une attitude, conforme à la tradition, très exigeante, écartant par là même du bénéfice de la protection légale le plus grand nombre des logiciels; on a dit que désormais ne pouvait accéder à celle-ci que "la crème des crèmes" (Rättinger). La Cour de cassation française a choisi, tout au contraire, le 7 mars 1986, au rebours de la tradition du droit national, d'objectiver le critère d'originalité en exigeant seulement du programme qu'il porte "la marque de l'apport intellectuel de son auteur" (arrêt Babolat c/ Pachot, rendu en Assemblée plénière); on peut penser que le plus grand nombre des logiciels peut donc en France être protégé. Mais une telle distorsion n'est évidemment pas favorable à la création d'un marché transnational - même seulement européen - du logiciel! Et la prise en compte de celle-ci n'est pas du tout étrangère au fait qu'il a été jugé nécessaire de définir dans la Directive communautaire ce que les Européens entendaient recouvrir du nom d'originalité (art. 1.3 : "Un programme d'ordinateur est protégé s'il est original, en ce sens qu'il est la création intellectuelle propre à son auteur").

8.2.2 Illustration prospective (la difficulté n'a pas encore affleurée dans la pratique, au moins au contentieux) des implications négatives des différences enregistrées entre droits nationaux : il paraît, en l'état, extrêmement difficile de concevoir un marché transfrontière de l'information électronique qui relève de règles fermes et claires dès l'instant où le même fonds informationnel peut ici se voir reconnaître protection et là non.

Le rapprochement de la politique communautaire en matière de banques de données et de la décision précitée de la Cour suprême américaine fait naître une telle inquiétude.

Plus concrètement, une étude que nous avons conduite pour le compte de la Commission des Communautés (Propriété intellectuelle et ensembles informationnels automatisés, 1989) fait nettement ressortir qu'au-delà du noyau dur constitué par les banques de données et autres fonds "créatifs" pour lesquels les attitudes nationales sont a priori assez homogènes, le consensus vole en éclat dès qu'il faut envisager la protection de compilations : les Danois (loi de 1961, section 49), et plus largement, hors Communauté européenne, les Scandinaves disposent de règles propres permettant de protéger ces compilations de manière originale ("catalogue rule"), les Britanniques les visent dans leur loi sur le droit d'auteur (voir supra n° 8.1), les Allemands connaissent une notion de "petite monnaie" ("kleine münze") correspondant à des créations qu'on pourrait dire de faible niveau qui pourraient servir à accueillir les compilations (Herberger), mais les Italiens paraissent bien hostiles à de telles idées comme les Français si l'on se réfère à l'arrêt de la Cour de cassation déjà cité (n° 8.1) de 1989, encore que curieusement la cour d'appel de Paris ait qualifié une réunion d'objets (de véhicules automobiles) d'"oeuvre de l'homme" devant recevoir une protection prétorienne (Cour de Paris 25 mai 1988)! Nous ne multiplierons pas les exemples mais tous les ingrédients sont là pour qu'une banque de données établie à Dusseldorf et interrogée à Milan n'ait pas le même statut juridique dans les deux Etats.

Cette conclusion, peu discutable, montre bien qu'il n'est pas possible de se satisfaire de cet état de choses.

9. Il est vrai qu'il est extrêmement difficile de dépasser le stade du constat.

Aussi ne nous risquerons-nous qu'à quelques observations.

La première est qu'il est une différence fondamentale selon qu'on entend protéger l'investissement ou l'acte de création, l'investisseur ou le créateur. Une clarification sur ce point est indispensable mais il n'est peut-être pas nécessaire de raisonner en termes d'opposition.

La seconde est que, en dépit de philosophies de départ bien différentes (voir supra n° 7), copyright et droit d'auteur ne recouvrent pas, aussi nettement qu'on pourrait l'attendre, la dualité investissement et création. A la vérité, l'interrogation traverse les familles de droit. Le droit d'auteur est en train d'évoluer vers un droit d'entreprise comme en témoigne la manière dont il appréhende non seulement la création logicielle mais aussi l'audio-visuel. D'un autre côté, et sans évoquer à présent la question du contenu des droits (voir plus loin), il est intéressant de relever, sur le terrain du droit américain, qu'à la décision de la Cour Suprême des Etats-Unis qui refuse de protéger les annuaires (voir supra 8.1) et paraît ainsi s'éloigner du souci de protection de l'investissement, on peut opposer cette décision, Ashton Tate, de la Cour de Californie du 12 décembre 1990 dans laquelle un juge prive une entreprise de son copyright pour n'avoir pas déclaré au Copyright Office sur quels produits antérieurs elle avait développé ses propres produits, suivant une démarche qui paraît relever d'une logique de type brevet, c'est-à-dire de nature industrielle.

De fait, tant que plusieurs logiques seront à l'oeuvre, il sera difficile d'aboutir à une régulation homogène, quelle que soit cette régulation.

Ce qui vaut au stade des conditions vaut évidemment au stade des effets.

B.- Quelle protection offre-t-on?

10. Quand on dit que l'on protège, il faut encore se demander ce que cela recouvre et veut dire dans le concret. Protection de forme? Protection pour la forme? Protection symbolique ou efficace? Qui offre tel ou tel moyen d'action? C'est ce qu'il nous faut examiner dans ce panorama des divers droits nationaux.

11. Un point acquis, commun à tous les droits, est que droit d'auteur comme copyright n'assurent la protection que de la forme, les idées restant, comme il a été dit (supra n° 2.1), "de libre parcours".

La notion de forme d'expression protégeable peut être différemment comprise : pour des pays africains (comme le Bénin, le Ghana, le Kenya, le Malawi,...) qui, dans leurs lois, font état de "forme matérielle quelconque", d'autres n'usent pas de formules si larges et c'est ainsi que, jusqu'à la clarification apportée par la loi de 1988 (qui répondit positivement), la question était débattue en droit anglais de savoir si un enregistrement devait être protégé au même titre qu'un écrit. Toutefois, l'idée dominante est bien que la forme (la forme de la forme...) fait peu à l'affaire : données en mémoire d'ordinateur ou fixées sur CD-ROM doivent recevoir protection, comme les images digitalisées plus haut évoquées (supra n° 3) ou la plus traditionnelle des créations (manuscrit ou peinture).

En revanche, que seule la forme soit appréhendée par les mécanismes de droit d'auteur ou de copyright révèle une distorsion majeure entre l'outil juridique utilisé et le propos recherché quand la création considérée met prioritairement en cause de l'information. Car la valeur réside alors normalement dans l'information même (information fonctionnelle "encapsulée" dans un logiciel et destinée à faire tourner une machine, ou information économique, technique ou scientifique contenue dans une banque de données et destinée à permettre la prise de décision, par exemple). L'utilisateur, le client potentiel, le concurrent par voie de conséquence, ne s'intéressent pas à la manière dont le logiciel est écrit ou dont la banque de données est structurée et présentée, mais à ce que l'un et l'autre apportent, à ce que le premier permet de faire, à ce que la seconde contient quelle qu'en soit la forme. Ce n'est pourtant pas ce qu'à travers le mécanisme de "réservation" mis en place, le droit permet de réserver! Voilà qui explique peut-être, au moins pour partie, la redécouverte du brevet à laquelle on assiste aujourd'hui (voir infra II).

12. Encore est-il que ce défaut est commun à tous les systèmes de droit. L'éclatement entre systèmes, lors même que tous appréhendent la forme, se retrouve vite. Un droit d'auteur ou un copyright n'offre pas ici ou là les mêmes moyens d'action.

Ce qu'il est aisé de vérifier en considérant tour-à-tour, suivant la structure du droit d'auteur consacrée par la Convention de Berne de 1886, prérogatives patrimoniales et prérogatives morales. L'objet même de cette étude et ses limites conduisant bien sûr à faire le choix de quelques données significatives, sans prétendre balayer systématiquement un champ d'investigation aussi important.

1.- L'octroi de prérogatives patrimoniales

13. Il est possible de dire, sans abus, que tous les droits s'accordent à reconnaître deux prérogatives, à caractère économique, de base qui sont le droit de reproduction et le droit de représentation.

Le droit de reproduction est parfois défini, comme tel est le cas en France (loi de 1957, art. 28 : "Fixation matérielle de l'oeuvre par tous procédés qui permettent de la communiquer au public d'une manière indirecte"). D'autres fois, les formules restent générales et laissent aux juridictions le soin de les mettre en situation : "Reproduction en nombre" dit la loi autrichienne, "reproduction sous une

forme matérielle quelconque" lit-on dans les textes algérien, camerounais ou sénégalais, "reproduction mécanique" précise le droit marocain. Il reste que tous procédés de fixation tombe normalement sous le coup de la loi et que, par exemple, à raisonner sur le secteur qui nous intéresse, une duplication sur disquette ou un télédéchargement devraient normalement être sanctionnés dans tous systèmes de droit.

Le droit de représentation est également visé quasi-universellement. La représentation directe est envisagée avec la représentation indirecte et, répondant aux "vieilles nouveautés" que furent la radiodiffusion puis la télévision, les droits considèrent, sous un vocable ou sous un autre, ces procédés de communication d'une oeuvre au public. Ce sont plutôt, comme pour la reproduction, les procédés législatifs qui diffèrent : visa générique ou énumération des divers moyens de communication. Certaines législations (comme celle de la Côte-d'Ivoire) font spécifiquement allusion à la diffusion dans des lieux publics, tels que cafés, restaurants, hôtels,... coupant court ainsi à des difficultés dont d'autres droits n'ont pas su faire l'économie. Les procédés les plus récents de diffusion par satellites ou par câbles ne sont, par contre, expressément pris en considération que par quelques rares droits et point toujours dans les mêmes termes (Etats-Unis, Espagne, France, Portugal, Royaume-Uni). L'Espagne semble seule à ce jour avoir songé à la diffusion télématique en tant que telle, en mentionnant, parmi les actes de communication publique, "l'accès public à des bases de données informatiques par des moyens de télécommunication, lorsque ces bases contiennent ou constituent des oeuvres protégées" (loi de 1987, art. 20.2.h)

14. Au-delà de cette approche générale qui, somme toute, fait apparaître plus de distorsions de forme que de fond, il convient, cependant, de tempérer ce premier sentiment, sans doute un peu fallacieux, de convergence, par l'observation qu'à entrer dans le détail des choses, les prérogatives patrimoniales, droit de reproduction et droit de représentation, autres droits éventuellement (comme le droit de destination que connaissent certains systèmes juridiques) sont tout à-la-fois moins nettement dessinées et beaucoup plus hétérogènes qu'il n'y paraît, ceci sur quelques points importants, susceptibles en particulier d'intéresser l'instauration d'un marché de l'information. Nous raisonnerons, brièvement, sur trois exemples.

14.1 Le droit de reproduction permet-il ou non de s'opposer au reverse engineering ? Des décisions de sens contraires peuvent être produites aux Etats-Unis même et, en France, la doctrine s'est nettement partagée, certains tenant la pratique pour légitime (Gaudrat, Huet), d'autres la jugeant condamnable (Le Stanc, Vivant). En outre, pendant plus d'un an, la bataille fit rage au niveau européen pour savoir si la directive qui devait être adoptée sur la protection des programmes devait ou non permettre cette ingéniérie inverse. Finalement, la décompilation (tel est le terme retenu) est autorisée pour autant qu'il s'agit d'assurer l'interopérabilité des systèmes (art. 6) et à des conditions strictes. Mais l'intéressant est de noter que la logique du droit d'auteur avait pu être sollicitée dans un sens comme dans l'autre et que l'essentiel des oppositions entre acteurs du marché, à Bruxelles, se fondèrent sur des considérations strictement économiques. Nul ne peut être assuré d'obtenir la même réponse à Buenos-Aires, Paris et Washington.

14.2 L'existence du droit de représentation oblige-t-il celui qui consulte une banque de données à verser des royalties à celui qui se serait vu reconnaître des droits sur ladite banque ? A y voir une communication au public, personnellement nous le pensons. Mais, en particulier faute de savoir ce qu'est exactement le public et si l'on doit raisonner en termes d'effectivité (la personne utilisatrice devant l'écran) ou de potentialité (on ignore combien de personnes peuvent être là pour lire l'écran), le contraire a été soutenu par des auteurs belge (Triaille) ou français (Martin). A quoi se fixera

la réponse juridique et sera-t-elle en tous lieux la même?

14.3 Dernière interrogation enfin dans la ligne annoncée : à un titre ou à un autre, le titulaire des droits sur une oeuvre peut-il s'opposer à sa location (ou encore au prêt de celle-ci) ? Point n'étant besoin de souligner l'importance de la question pour le marché de l'information si l'on songe que cela concerne au premier chef bibliothèques et médiathèques, livres classiques mais aussi cassettes vidéo, disquettes ou CD-ROM. Les Communautés européennes ont entrepris de s'attaquer à ce problème mais, à leur échelle, elles manifestent bien les divergences qu'on peut rencontrer à l'échelle de la planète : Danemark, Espagne, Portugal, Royaume-Uni connaissent un droit de location, l'Italie le connaît en fonction du support utilisé, l'Allemagne, l'Irlande et les Pays-Bas l'ignorent, les autres pays reconnaissent un droit de destination au titulaire des droits qui lui permet de contrôler la location... On n'évoquera pas le problème du prêt. La Commission se propose, quant à elle, de mettre en place des structures juridiques sur lesquelles "l'industrie culturelle pourra ... se baser". Ce qui vaut pour le marché européen en termes de besoins vaut évidemment pour le marché mondial.

15. Des remarques du même ordre peuvent être faites à considérer non plus comment se définissent positivement les prérogatives offertes aux titulaires de droits mais négativement quelles exceptions au monopole sont reconnues.

15.1 Il est déjà une opposition nette dans l'esprit quand on parle de "fair use" ou de "fair dealing" ou quand on vise nommément un certain nombre d'actes qui seront seuls et précisément légitimés. Encore que les actes permis, au titre du fair dealing, peuvent fort bien être indiqués dans la loi (cf., par exemple, loi britannique de 1988, art. 28 et ss.).

15.2 Mais, en pure technique juridique, des différences aux retombées concrètes importantes peuvent encore être relevées. On en fournira quelques exemples simples.

15.2.1 La copie privée (copie à usage privé du copiste) est normalement admise par tous les droits mais l'encadrement légal n'est pas toujours le même et cela est lourd d'implications : une seule copie possible pour le droit brésilien, une appréciation de l'importance de la partie utilisée par rapport à l'ensemble de l'oeuvre pour le droit américain... La copie privée a, par ailleurs, vécu en Europe pour ce qui est des logiciels (ne subsistant plus que la possibilité pour l'utilisateur légitime de faire du programme une unique copie de sauvegarde). Et certains, dans une perspective plus large, dénoncent cette faculté de copie privée comme un archaïsme. Qu'en penser, en effet, si aucun élément de quantification à l'américaine n'est retenu, quand l'oeuvre à reproduire est une banque de données en ligne ou un CD-ROM ?

La démultiplication des moyens de duplication qui permettent en un instant d'avoir un double qui vaut l'original a, d'ailleurs, conduit de nombreux législateurs à travers le monde à mettre en place un droit à rémunération, à caractère fiscal ou non, perçu, sous une forme ou sous une autre, au moment de l'achat des supports vierges permettant la reproduction (Autriche, Congo, Finlande, France, Hongrie, Suède...) et parfois des appareils de reproduction eux-mêmes (Allemagne, Islande, Portugal). C'est une évolution notable des systèmes de droit d'auteur sous l'influence des nouvelles technologies, dont il faut avoir conscience et qui peut inspirer sur de nouveaux media de nouvelles évolutions. C'est aussi un gauchissement certain de la matière au point qu'on a pu se demander si n'était pas instauré ainsi une sorte de domaine public payant inavoué (Vivant). Enfin, ce n'est pas nécessairement un remède miracle car, si partout la mise en place de ce système a été présentée comme devant assurer la compensation des pertes enregistrées par les créateurs (ou entreprises créatrices), encore faut-il savoir qui bénéficie effectivement des sommes encaissées.

15.2.2 Autre illustration : certains Etats connaissent, à des titres divers, un droit de

reproduction à fins pédagogiques (Norvège, Pologne, Royaume-Uni) qu'ignorent totalement d'autres pays (comme la France où la proposition d'instaurer une telle exception pour ce qui est des logiciels a provoqué les réactions les plus vives de la part des professionnels). Comment gérer ces disparités législatives quand l'information quitte les véhicules traditionnels du livre ou du journal pour circuler en temps réel de Washington à Tokyo ?

15.2.3 Autre illustration encore (et qui sera la dernière) : le droit de citation - d'emprunter à une oeuvre pour la citer - est très diversement reconnu d'un pays à l'autre. En France, le dogme reçu est qu'il ne peut y avoir de citation qu'en matière littéraire stricto sensu (plusieurs fois les tribunaux l'ont rappelé). Mais les "citations" d'images, pour ne parler que d'elles, semblent bien possibles dans des pays comme l'Espagne (dont la loi contient une disposition parfaitement large pouvant s'appliquer aussi aux "citations" musicales), les Pays-Bas ou le Portugal (art. 75 f Code des droits d'auteur). Que penser donc de l'exploitation transfrontière d'une banque d'images ? A la marge, on relèvera que le Royaume-Uni connaît une règle bien particulière qui veut qu'une émission de télévision ne viole pas le copyright d'un tiers quand elle inclut incidemment, accidentellement, des oeuvres protégées (musique jouée à l'occasion d'un match de sport).

16. Disparités donc et incertitudes à considérer les prérogatives patrimoniales. Ce sentiment ne peut qu'être renforcé à basculer dans l'observation des prérogatives morales, où l'on retrouve, assez sinon bien marquée, l'opposition entre droit d'auteur et copyright.

2.- L'octroi de prérogatives morales

17. L'opposition entre systèmes est ici flagrante et c'est une banalité que de la rappeler. Il faut pourtant le faire car cette opposition qui est une réalité peut avoir des incidences économiques certaines. Dans le monde de l'audio-visuel, la preuve en a été rapportée de manière remarquable avec la condamnation récente par la Cour de cassation française de la colorisation des films (Cour cass., 1ère ch., 28 mai 1991), considérée comme contraire à l'ordre public français, alors qu'elle n'est pas jugée par principe illicite aux Etats-Unis (étant laissées de côté ici certaines dispositions spécifiques hors copyright sur la "préservation" des films).

On retrouve l'idée selon laquelle, dans la philosophie du droit d'auteur, l'oeuvre c'est l'auteur et porter atteinte à l'oeuvre c'est porter atteinte à la personne même de l'auteur (voir supra n° 7.1). Dans cette conception, le droit moral se présente comme un complexe de droits : droit à la paternité (droit d'être cité comme l'auteur) et droit au respect de l'oeuvre, qui sont les deux prérogatives minimales reconnues par la Convention de Berne aux auteurs (art. 6 bis), droit de divulgation (qui est plutôt le droit de ne pas divulguer), droit de repentir ou de retrait qui permet à l'auteur de "récupérer" l'oeuvre livrée au public (c'est-à-dire son support) s'il éprouve quelque "scrupule" (Colombet) à la laisser en l'état à la disposition de celui-ci. On discerne bien le jeu de ces prérogatives au bénéfice du peintre ou du sculpteur qui veut donner de lui et de son oeuvre une certaine image. Les choses sont moins nettes dès l'instant qu'il est question d'industries de la création et moins encore d'industries de l'information qui sollicitent fortement la technique.

L'optique du copyright est profondément différente. Certes, les opinions des auteurs de langue anglaise sont très nuancées comme l'est la pratique des pays de common law (sans devoir même évoquer certaines évolutions législatives récentes qu'ont connues ces pays : sur celles-ci, voir infra n° 19). La solution retenue aux Etats-Unis à propos de la colorisation des films que nous avons évoquée plus haut le montre bien. Et si, dans l'esprit, l'idée pourrait sans doute se retrouver dans le droit de la plupart des pays, il est significatif que, dans les systèmes de copyright, puissent être très simplement évoquées des limitations

"naturelles" au droit au respect ("inherent limitations to the right of integrity" : Dworkin & Taylor).

18. Respect, intégrité, inviolabilité de l'oeuvre (pour citer ici le mot utilisé par les législations soviétique, roumaine ou tchécoslovaque) : manifestement une telle exigence - pour ne retenir que celle-ci - est difficilement compatible avec l'exploitation dynamique d'une oeuvre informationnelle qui, technique dans son support et fluide dans son objet, a pour nature d'être évolutive et, plus encore, peut difficilement ne pas l'être. Comment concevoir un logiciel, un système-expert ou une banque de données figés ?

Dans le domaine de l'audio-visuel où pointe la technologie, les conceptions les plus strictes s'assouplissent, d'ailleurs, sensiblement. Et il n'est pas rare de voir la jurisprudence tolérer, à l'occasion, en particulier, de l'adaptation d'une oeuvre littéraire pour le cinéma, que certaines libertés soient prises avec cette oeuvre, quand même ce n'est pas la législation qui le prévoit comme au Chili par exemple. Le droit chypriote comme le droit portugais visent même comme justifiées les modifications qui peuvent être apportées à l'oeuvre d'origine pour des raisons expressément qualifiées de techniques.

Mais plus nettement encore, en matière de logiciel, c'est-à-dire au coeur de ces technologies de l'information qui sont notre propos, les Européens ont choisi de considérer la faculté d'adaptation comme la règle, en posant notamment que l'acquéreur légitime d'un programme (du support, en vérité) a le droit de procéder à "l'adaptation", "l'arrangement" et à "toute autre transformation" nécessaires à une utilisation du programme conforme à sa destination (directive communautaire précitée, art. 4 et 5). Et les droits espagnol et français, pourtant fortement attachés à la notion de respect de l'oeuvre, s'étaient déjà auparavant orientés en ce sens sans réserve.

C'est dire qu'au risque de créer une véritable rupture entre ces nouveaux besoins et la philosophie traditionnelle qui anime certains droits, parfois douloureusement ressentie par certains, il paraît, plus que difficile, quasiment impossible de conserver intactes les vieilles conceptions.

19. Il est vrai qu'en sens inverse, les droits de la famille du copyright découvrent le droit moral, du moins de manière formelle, qualifié comme tel. C'est le Copyright Act de 1988 qui a expressément incorporé dans le droit britannique les prérogatives reconnues par la Convention de Berne (art. 77 et ss. nouveaux). L'adhésion des Etats-Unis à cette même Convention, en 1988, a revêtu une charge symbolique toute particulière. Encore est-il que les interprétations quant aux effets réels de cette adhésion ne sont pas unanimes. Le porte-parole de la Coalition to Preserve the American Copyright Tradition (nom symptomatique) défendit devant le Sénat et continue à défendre l'idée que doit être rejeté le concept de droit moral et privilégiés la dimension économique des droits et leur caractère d'incitation à l'investissement. Il n'en demeure pas moins qu'on a pu aussi déceler dans la situation américaine des "signes avant-coureurs d'un avenir plus propice au droit moral" (Dietz).

20. En conclusion sur ces droits d'auteur et copyrights, est-ce à dire que des droits ancrés dans des traditions bien distinctes se rapprochent finalement ?

20.1. La réponse est, à notre sentiment, très certainement positive. Elle l'est plus encore, et par nécessité, quand sont en cause des enjeux tout à fait concrets tels que ceux qui naissent de l'usage des hautes technologies qui nous préoccupent et sont liés à un marché de l'information. Car les problèmes ne sont pas alors plus japonais qu'américains ou plus helvétiques que brésiliens. Ils sont, à l'évidence, les mêmes sous toutes les latitudes. Une seule réserve peut être faite pour le cas des systèmes économiques qui récusent le marché mais on sait que ceux-ci sont de moins en moins nombreux...

Les droits les plus divers se

rejoignent sur ce qui sera peut-être l'équilibre de demain entre le souci de protéger le créateur et l'égal souci de protéger celui - investisseur - qui permet à sa création, sinon de voir le jour, au moins de vivre.

20.2. Les divergences fondamentales qui subsistent aujourd'hui tiennent à ce que le mouvement à l'instant évoqué est loin d'être achevé et que substantiellement restent encore face à face deux logiques : une logique du droit d'auteur entendue au plein sens du terme (droits de l'auteur) et une logique du ou des "droits de l'entreprise" (cf. déjà supra sur une idée proche n° 9). Opposition qui n'est pas neuve, puisqu'elle était déjà présente à l'aube de ces droits au XVIIIe (grand débat entre libraires - entendez : éditeurs - et auteurs), mais qui conditionne bien des choses. Ne serait-ce que la question de la titularité des droits qui n'a pas jusqu'à présent été évoquée mais aurait pu l'être : le salarié est auteur et donc normalement titulaire des droits dans un système de droit... d'auteur, l'employeur est normalement investi des droits sur la création dans un système de copyright. Tout est loin donc d'être joué.

20.3. Reste que certaines évolutions s'imposent liées soit au mode industriel de création soit au caractère de la création faite, industrielle et ici plus précisément dans le champ de l'information.

Ce sont des évolutions qui doivent concerner les conditions mises à l'octroi des droits sur la création, l'attribution de ceux-ci, leur définition qui nous semble devoir prendre en compte au premier chef le caractère évolutif de semblables créations,... Sauf, refusant cela, à choisir de sortir du droit d'auteur (peut-être du copyright), mais c'est une autre histoire...

Reste aussi que droit d'auteur ou copyright, même reconsidérés, peuvent paraître inadaptés ou d'un intérêt insuffisant, ne serait-ce que parce qu'ils n'appréhendent que la forme (voir supra n° 11). Cela explique sans doute pour une part la redécouverte (partielle) du brevet.

II.- LE BREVET COURTISE

21. Courtisé, le brevet l'est indiscutablement aujourd'hui, même lorsque par l'effet de la jurisprudence ou de la loi il semblait radicalement exclu, comme il en est en matière de logiciel, tant en Amérique qu'en Europe (cf., aux Etats-Unis, en particulier la fameuse affaire Diamond vs Diehr de 1981).

Sans doute faut-il encore que l'objet à breveter paraisse raisonnablement brevetable (étant évident que les zones où règnent les certitudes - brevet sur une machine, de traitement ou de transmission de l'information par exemple - ne méritent pas ici notre attention).

Mais les cas de figure "classiques" laissés de côté, le fait est que, même si les professionnels du brevet ont de plus en plus tendance à considérer que, de part et d'autre de l'Atlantique, on brevète n'importe quoi (telle est l'expression par eux la plus souvent utilisée), il est difficile de penser qu'une banque de données ou une encyclopédie électronique puisse être sérieusement brevetée. Les erremements du droit du Honduras qui permettent la prise de brevets pour des livres, des compilations, des sermons ou des opéras (loi du 1er avril 1919, art. 1er) ne peuvent être tenus pour représentatifs du droit mondial!

En dehors des hypothèses reçues, la voie du brevet est explorée là où le champ technique est suffisamment prégnant pour qu'elle paraisse, à tort ou à raison, naturelle. C'est ainsi qu'on joua très tôt sur l'ambiguïté du firmware, défini (pour la circonstance ?) - si l'on peut parler de définition -, comme du software dans la forme du hardware, pour déclarer d'autorité celui-ci brevetable... au bénéfice vraisemblable du hardware qu'il était censé être pour partie. Et, de fait, aujourd'hui où les masques (vocable américain) ou topographies (vocable européen) de semi-conducteurs bénéficient d'une protection spécifique (voir infra n° 29), les "puces", ou "chips", sont effectivement dans un très grand nombre de cas brevetées. Les logiciels le sont de plus en plus, pourvu que certains tabous soient respectés (ne pas parler de "brevets de logiciel") et c'est un point

particulièrement remarquable en Europe où la Convention de Munich du 5 octobre 1973 dite sur le brevet européen, qui s'étend au-delà de l'Europe communautaire en embrassant des pays comme l'Autriche ou la Suisse, pose, en termes exprès, que "ne sont pas considérés comme des inventions ... les programmes d'ordinateur" (art. 52).

22. Nous nous arrêterons, un instant, à ce cas, intéressant du point de vue pratique puisque la réalité n'est pas celle voulue par les législateurs mais aussi, et peut-être plus encore, d'un point de vue fondamental car, en Europe précisément, la question du statut de l'information sous-tend cette acceptation déviante de la brevetabilité.

22.1. Il faut savoir que l'interdit est posé pour les logiciels considérés "en tant que tels" (texte précité), les logiciels "nus" selon une formule doctrinale (Vivant et Le Stanc).

22.2. La prohibition n'est donc pas sans limite...

C'est clairement la voie ouverte à des brevets pris pour des inventions dont la dimension logicielle n'est qu'une part constitutive, chose qui fut jugée, de manière très satisfaisante, en France et consacrée ultérieurement à l'échelle européenne par l'Office Européen des Brevets.

C'est aussi la porte ouverte à de nouvelles interprétations, moins peut-être du droit des brevets, que de la réalité technique. La Division d'appel du Conseil des Brevets néerlandais avança ainsi dans une décision fort intéressante du 12 septembre 1985 la notion de machine virtuelle, considérant l'ordinateur dans la mémoire d'opération duquel était introduit un programme nouveau comme une machine nouvelle au sens du droit des brevets. L'écho s'en retrouve dans plusieurs décisions de l'Office Européen des Brevets (en 1986, 1987, 1988) tenant pour une invention brevetable la combinaison d'un programme d'ordinateur et d'un "calculateur universel généralement connu" amené ainsi à fonctionner "d'une manière différente".

Au-delà, l'interrogation de l'Office européen, confronté à cette question de la brevetabilité des programmes, prit un tour singulier, portant sur la notion même de technique. L'invention étant considérée comme la création à caractère technique, vint, en effet, l'instant où il fallut se demander ce qu'était la technique. Et l'on vit l'Office distinguer la méthode mathématique ou l'algorithme d'une part et le procédé technique d'autre part comme étant abstraits pour les premiers et s'appliquant à une entité physique pour les seconds, mais entité physique dont il était précisé qu'elle pouvait être... une image (Décision Vicom du 15 juillet 1986). Des messages affichés sur écran (bien qu'ils ne fussent pas autre chose qu'une certaine image pour la machine) furent, en revanche, réputés échapper au domaine technique comme ne traitant que de l'information (Décision I.B.M. du 5 octobre 1988). D'où l'on peut tirer l'idée, pour les industries de l'information, qu'il y a information et information et que le brevet risque fort d'être octroyé ou refusé selon la perception très subjective qu'auront les examinateurs de la technique en général et de l'invention en particulier. Matière à spéculer en tout cas... Ouverture indiscutable aussi, fût-elle à géométrie variable, de la voie du brevet.

23. En conclusion donc de ces quelques mots sur ce brevet (ce n'est pas le lieu d'aller plus loin), on retiendra que, dans le secteur des industries de l'information, le brevet revient là où on ne l'attendait pas même s'il ne concerne que certains types de créations (logiciels ou topographies), qu'il revient en force, qu'il revient aussi tâtonnant et d'une manière telle qu'il est difficile de savoir a priori si ceci ou cela peut être breveté, ce qui ne va guère dans le sens de la sécurité juridique en général ni davantage de la sécurité d'un marché international de l'information...

Que les intéressés cherchent ailleurs et notamment sur le terrain du droit commun ne doit donc pas surprendre.

III.- LE DROIT COMMUN REVISITE

24. Le droit commun que nous voudrions évoquer ici est celui qui permet de maîtriser une création ou une information sans aller jusqu'à la propriété : droit des contrats, droit pénal, droit de la responsabilité civile,... Classique et a priori de moindre efficacité

que les mécanismes jusqu'à présent étudiés, il est aujourd'hui redécouvert, sans, au vrai, avoir jamais été oublié. Appelé non seulement à conforter ces propriétés (comme il en est du savoir-faire venant en appui du brevet) mais aussi à suppléer leurs carences, il est, à l'occasion, repensé et remodelé à l'effet de mieux répondre aux besoins ressentis par la pratique.

Polymorphe, de mise en oeuvre plus ou moins facile, d'efficacité plus ou moins grande, ce "droit commun" doit être appréhendé dans sa diversité.

25. Le contrat, l'"outil" juridique peut-être le plus plastique qui soit, est évidemment ce à quoi il faut songer en premier. Il n'est certes point question de se livrer ici à des observations systématiques sur ce thème. En revanche, nous mettrons en avant deux ou trois idées, simples peut-être mais importantes.

La première est que le contrat est le plus sûr moyen de mettre en place des obligations de secret et de non-concurrence qui permettent déjà, par elles-mêmes, de maîtriser une information. Certes, il est des informations dont on ne saurait exclure la divulgation (ni davantage l'exploitation), sans doute pour des raisons juridiques mais tout autant pour des raisons de bon sens et de logique économique : on ne peut ainsi prétendre imposer le secret à celui qui reçoit une information diffusée de manière publique (par un canal télévisé ou télématique ouvert à tous, par exemple). Mais le secret - pour ne parler que de lui - peut, hors ces situations exceptionnelles, être invoqué (imposé) dans les cas de figure les plus divers. Il est même remarquable que, s'agissant de programmes d'ordinateur, il peut venir se surajouter au droit d'auteur (ou au copyright), un programme pouvant être mis sur le marché sans que son écriture soit accessible à son utilisateur (ce qui n'est pas le cas de l'oeuvre littéraire traditionnelle!) et sans que son utilisation soit pour autant perturbée; s'il est vrai que le statut du reverse engineering peut être jugé indécis (voir supra n° 14.1), la stricte délimitation, par la directive communautaire de 1991 sur les programmes, des conditions dans lesquelles peut se faire une décompilation licite démontre bien que ce cumul du secret (non-lisibilité) et du droit d'auteur (ou copyright) n'est plus discutable dans le cadre de l'Europe communautaire. Encore n'est-ce qu'une situation singulière. Il convient de songer au secret au stade des pourparlers contractuels, dans l'exécution des contrats qui portent sur la diffusion d'informations ou sont l'occasion d'accéder à des informations, dans les contrats de travail,... Les conditions d'utilisation d'une information livrée peuvent aussi être précisées dans les documents contractuels... L'utilisation d'un code d'accès et/ou d'un mot de passe peut être imposée...

* "Toutes informations communiquées pendant la négociation seront couvertes par le secret".

* "Le bénéficiaire s'engage à considérer comme strictement confidentielles toutes informations communiquées sur la base du présent contrat".

* "Je m'engage à ne divulguer, ni communiquer à quiconque en dehors d'I.B.M., ni utiliser autrement que pour les affaires d'I.B.M., aucune information confidentielle d'I.B.M. et notamment, sans que cette liste soit limitative, aucune information, connaissance ou documentation qu'I.B.M. a désignée comme la sienne propre et/ou qui est relative aux méthodes de fabrication, procédés techniques, produits, programmes ou recherches d'I.B.M., à moins d'en avoir reçu l'autorisation écrite de mon employeur" (engagement qu'I.B.M. France fait signer à ses salariés).

La force indiscutable du contrat est qu'il trace - et avec une grande liberté - le cadre à suivre et tente de prévenir les difficultés à venir. Sa faiblesse évidente est qu'à quelques réserves près, il n'engage que les parties contractantes et qu'il n'assure aucune réservation "objective" de l'information.

Aussi, à utiliser largement et sans complexe, il ne peut être considéré comme apte à régler tous problèmes.

26. L'incrimination de tel ou tel comportement peut, de la sorte, paraître apporter cette objectivation qui manque au contrat. Mais qui dit incrimination, dit droit pénal, et la règle présente dans tous les Etats libéraux est celle de la légalité des délits et

des peines, prolongée et confortée par la règle d'interprétation stricte. Il ne suffit donc pas de considérer un agissement comme moralement, socialement ou économiquement condamnable pour qu'il puisse faire l'objet de sanctions. Il faut qu'un texte existe, support d'une éventuelle sanction.

S'il est peut-être ici encore plus difficile qu'en matière de propriété intellectuelle stricto sensu de dresser un panorama de situations nationales extrêmement variées, en dépit de forts travaux comparatifs menés en particulier sur le terrain du droit de l'informatique (Sieber), il ne semble pas abusif de dire que, si les incriminations qui atteignent des "dévoiements" ou des "soustractions" (ces mots pris sans acception technique) d'informations ne manquent pas, peu peuvent être tenues pour efficaces dans la perspective de la régulation d'un marché de l'information, au demeurant national comme international.

26.1. Dans la perspective tracée, l'incrimination la plus largement répandue à la surface de la planète est vraisemblablement celle de l'espionnage qui frappe une fuite illicite d'informations, d'un pays vers un autre. Mais point n'est besoin de souligner qu'elle n'a qu'assez peu de rapports avec l'instauration d'une économie de l'information.

S'il est un espionnage qui doit être réprimé pour fixer une règle du jeu entre entreprises, c'est bien plus l'espionnage industriel. Or les approches nationales sont à cet égard très diverses. S'il est des pays où la "misappropriation" des secrets d'entreprise ("trade secrets") est pénalement sanctionnée, et sans la moindre difficulté (Allemagne, Autriche, Suisse, Etats fédérés membres des Etats-Unis d'Amérique,...), il n'en est pas toujours ainsi et on peut citer comme droits ayant envisagé le problème mais lacunaires les droits belge, italien, luxembourgeois, français même qui recèle un texte (art. 418 du Code pénal) qui permettrait une large appréhension des situations critiquables mais que la jurisprudence s'obstine à interpréter restrictivement en ne reconnaissant de protection qu'aux secrets de fabrication.

26.2. Ce sont parfois alors des incriminations spécifiques qui ont pris le relais dans la législation récente : "dérivations" des réseaux de télécommunication, captations indues (notamment dans le cas de télévisions cryptées), pénétrations dans les systèmes informatiques (Etats-Unis et notamment, outre la législation fédérale, Californie, Delaware, Floride, Pensylvannie,...; Canada; Danemark; France; Grèce;... Lichtenstein même). L'infraction est évidemment mesurée par le texte incriminateur et le débat qui s'était instauré en France au moment de l'adoption de la loi sur la fraude informatique, en 1988, a valeur générale : fallait-il raisonner sur une technique (ce qui a été finalement retenu) ou sur une valeur : l'information, sans considération particulière de la manière dont elle est traitée ?

26.3. A vouloir appréhender globalement l'information, la tentation est d'en faire un bien comme un autre et de sanctionner tout détournement de celle-ci au titre du vol.

La Cour suprême de l'Etat de Californie a tour-à-tour admis et refusé cette qualification ("theft"). La cour d'Arnhem aux Pays-Bas, le 27 octobre 1983, a retenu, dans un arrêt remarqué, la qualification de vol, comme, ultérieurement, en Belgique, la cour d'Anvers, le 13 septembre 1984. La Cour suprême du Canada, en 1989, dans l'affaire Stewart, a, tout au contraire, jugé qu'il ne pouvait y avoir vol d'information.

A devoir prendre parti, cette position nous semble la seule justifiée. Il ne suffit pas de dire que l'information est une valeur pour lui octroyer le bénéfice de n'importe quelle protection, au mépris, qui plus est, des libertés publiques. Il ne suffit pas davantage de mettre en avant une conception dynamique de la propriété. Si l'information (selon le statut de base qui est le sien : voir supra n° 2.1) n'est pas objet de propriété, il est intellectuellement inacceptable et socialement critiquable de retenir la qualification de vol dans tous les systèmes où le vol est défini comme une atteinte à la propriété. Si l'information est, en revanche, appropriée, au moins de manière indirecte (spécialement à travers un

des mécanismes examinés précédemment aux points I et II), il existe en règle générale des infractions particulières pour sanctionner les agressions dont elle peut être l'objet : contrefaçon, infringement, et il est au mieux inutile de "doubler" celle-ci par l'infraction de vol et au pire contraire aux principes de le faire dans tous les systèmes où il est admis que la règle spéciale déroge à la règle générale. Plus radicalement, si le vol suppose la dépossession du volé, il est clair qu'en matière d'information, il n'en va pas ainsi puisque celui-ci qui se voit subtiliser une idée ou un savoir conserve celle ou celui-ci. La qualification de vol n'est pas pertinente.

Il reste possible d'envisager l'incrimination de pareils agissements mais, si l'on ne veut pas ignorer les contraintes qui sont celles d'un système juridique libéral, d'un point de vue purement prospectif. A ne pas piétiner certains principes, un droit pénal de l'information reste à faire (du moins si on le souhaite).

27. Le droit civil et, en l'occurrence, le droit de la responsabilité civile offrent évidemment des libertés bien plus grandes.

Là encore il faut cependant prendre la mesure des différences existant entre droits nationaux.

27.1. Quant à la forme (des actions envisageables), il est possible de distinguer trois sortes de systèmes : les droits qui contiennent des dispositions spécifiques destinées à assurer le bon comportement des acteurs du marché (comme l'Allemagne), ceux qui recèlent des dispositions à portée générale susceptibles d'assurer une telle fonction (comme, au premier chef, la France) et ceux qui ménagent un accueil restreint à des actions sanctionnatrices d'un certain comportement (comme les pays de Common Law dont certains ont même dit, au moins pour le Royaume-Uni, qu'ils n'avaient pas de doctrine générale de l'"unfair competition" : Birds). Il est évident que l'obligation de raisonner en termes de catégories pré-établies : breach of confidence, breach of duty of care,... n'offre pas la même plasticité que lorsque le droit national est prêt à sanctionner tout comportement étranger à l'"homme raisonnable" (pour reprendre une formule du droit québecois).

27.2. Quant au fond, et dans le prolongement de la dernière observation faite, ce ne sont donc pas les mêmes agissements qui pourront être poursuivis en un lieu ou un autre.

Il faudra ici que les entreprises soient dans un rapport de concurrence et là cela ne sera pas nécessaire.

Plus intéressant : on voit monter en force dans tous les droits continentaux l'idée que le parasitisme, défini comme l'exploitation sans droit du travail (lisez : de l'investissement) d'autrui, doit être sanctionné, c'est-à-dire concrètement appeler réparation. Des décisions allemandes, belges, françaises (à propos notamment de la réédition d'un vieil ouvrage ainsi protégé bien que de longue date tombé dans le domaine public) peuvent venir appuyer cette opinion. L'argument a été tout spécialement utilisé dans un arrêt "Informationsdienst" du Bundesgerichtshof du 10 décembre 1987 qui devait sanctionner le fait pour un journal d'avoir recopié chez un concurrent une information non couverte par droit d'auteur. Dans le cadre de l'étude menée pour les Communautés européennes, plus haut évoquée (supra n° 8.2.2), le recours à cette "théorie du parasitisme" a ainsi été spécialement mis en avant par la plupart des contributeurs nationaux comme possible moyen de protéger les banques de données de simple compilation difficilement couvertes par un droit d'auteur (voir supra ibidem). Il est notable que des auteurs anglais (Chalton) ou irlandais (Tierney) partagent ce sentiment. Reste que le mécanisme est à utiliser avec prudence si l'on ne veut pas reconstituer de manière en quelque sorte clandestine des propriétés intellectuelles en dehors des prévisions de la loi. Nombreux sont les auteurs exprimant cette crainte (Poullet notamment en Belgique) et il est quelques décisions pour y faire écho.

28. En conclusion il est certainement sage de reconnaître qu'il est bien difficile de sortir du binôme : protection selon les canons de la loi au risque de laisser des zones sans protection, protection large de l'information comme telle au risque de créer des zones de protectionnisme plus ou

moins légitimes.

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29. Ce pourrait être le mot de la fin, s'il ne fallait ajouter, pour être aussi complet que possible, dans ce rapide panorama international des propriétés intellectuelles confrontées à l'information, qu'il reste une ultime voie : celle qui consiste à élaborer, pour les besoins de la cause, une ou des protections sui generis.

Il en fut beaucoup question à une certaine époque à propos du logiciel, l'Organisation Mondiale de la Propriété Intellectuelle élabora en 1977 des "dispositions types" puis en 1983 un projet de traité, certaines institutions nationales suivirent une démarche analogue. A ce jour cependant, seule la Bulgarie fit le choix d'une législation réellement spécifique (loi n° 49 de 1979) mais, véritablement très spécifique et marquée par une option politique apparemment dépassée, elle fait déjà figure de curiosité. Il est vrai - il faut le dire - que certains pensent encore à l'adoption de règles particulières.

Les choses prirent cependant un tour autrement concret avec les topographies de semi-conducteurs lorsque les Etats-Unis choisirent en 1984 de promulguer une loi spécifique, contraignant quasiment leurs partenaires (s'ils voulaient pouvoir bénéficier d'une protection sur le territoire américain) à adopter des législations analogues, ce que firent les Japonais les premiers dès 1985 puis, à la suite de l'adoption d'une directive communautaire en 1986, les différents pays de la Communauté et d'autres encore. Les "puces" relèvent ainsi d'un régime nouveau, à bien des égards assez fruste, mais qui peut coexister curieusement avec le brevet ou le droit d'auteur selon les cas.

Les "cable programs", au Royaume-Uni, les programmes télédiffusés, en France, font encore l'objet, comme tels et indépendamment de leur contenu, de dispositions particulières.

Faut-il poursuivre cette politique d'émiettement ? A plaider pour un droit du "coup par coup", une réponse positive s'impose. On s'est ainsi demandé s'il ne fallait pas songer à des dispositions propres aux systèmes-experts. La question est débattue aujourd'hui par les experts qui travaillent auprès de la Commission des Communautés à propos des banques de compilation dont nous avons dit qu'elles étaient difficiles à appréhender à travers le droit commun de la propriété littéraire et artistique (supra n° 8.2.2 et 27.2). Si, toutefois, on croit que le droit - spécialement le droit légiféré - ne doit pas se perdre dans le détail de toutes les particularités, ce n'est peut-être pas la meilleure démarche.

La multiplication des régimes de droit emporte des chevauchements, des contradictions, des exclusions, fait naître des problèmes qui sans elle ne se seraient pas posés... Dans une perspective internationale, deux pays voisins, et de culture proche, comme la France et l'Italie, peuvent admettre, le premier un cumul de protection au titre du droit d'auteur et des dessins et modèles, et le second le prohiber - ce qui n'est guère satisfaisant.

Aussi, la création de règles ad hoc doit, à notre sentiment, être maniée avec prudence. Vertu juridique, s'il en fût.

.../...

EN CONCLUSION

30. En conclusion, peut-on de tout ce qui a été dit tirer quelques **enseignements** ? Il faut l'espérer mais on reconnaîtra que, dans une situation foisonnante, marquée par les disparités entre familles de droits, voire entre systèmes nationaux, ce n'est guère facile.

Dans l'idée d'assurer des conditions satisfaisantes au développement d'un marché international de l'information, il nous semble cependant que s'imposent :

1°) un rapprochement des divers droits nationaux, au moins des pays à économie développée (car il paraît exclu de jouer un même jeu s'il n'y a pas de règle commune);

2°) une double interrogation, à cet effet, sur les valeurs qu'on entend protéger et la place à reconnaître à l'acte de création et à la décision d'investir, au créateur et à l'investisseur (ce qui suppose la remise en cause de traditions nationales et d'idées reçues et la recherche d'un équilibre, mais point pour autant l'adoption sur chaque difficulté nouvelle de dispositions propres);

3°) dans l'immédiat enfin une utilisation des différents moyens offerts par le droit qui doivent être considérés comme autant de protections complémentaires.

A tout prendre le droit n'est certainement pas plus fuyant que l'information à laquelle on prétend l'appliquer...

Michel VIVANT

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Intellectual Property and Information
A comparative international overview

by

Michel Vivant
Dean of the Faculty of Law and Economic Science
at the University of Montpellier
39, rue de l'Université
34090 Montpellier
France

Expert to the Commission of the European Communities
Consultant

1. There is no doubt that it is audacious to claim to give an international overview of national intellectual property systems in order to discern their conception or likely conception of information and how they regulate the information products and services market.

1.1 The very notion of information is vague and may be defined narrowly or so widely that it includes a very broad range of "items": newspapers and books, software and expert-systems, data banks and television broadcasts, patentable techniques — in that a technique that is divulged constitutes information for firms present on the market — and distinctive symbols such as trademarks, in that these amount to information for the consumer. Not forgetting that the term information can refer to information about individual citizens or employees for example. In our context here, it is clear however that the notion has to be viewed from a narrower point of view. The information referred to here is information processed by advanced technology, transmitted by modern communications systems: electronic data processing in the widest sense of the term and telecommunications, electronic press, for example — if one has to refer to press — but certainly not press in its traditional hard copy form.

1.2 Contrary to first impressions, the notion of intellectual property is not perfectly defined either, at least not at the international level. "Propriedad intelectual" in Spanish and under Spanish law refer solely to the right to literary and artistic property (copyright and "droit d'auteur"), whereas, in French law, the equivalent expression, "propriété intellectuelle" covers the same field of literary and artistic property but also that of industrial property. In addition it should be noted that two further definitions of these words are also possible from the French point of view: the first, being the narrow definition just referred to, which restricts the term to what a lawyer of the "continental" school would classify as property "strictu senso" ("private reservation"), and the second, a wider definition closer to Anglo-American practice tending to consider all legal mechanisms appropriate for providing for "control" of a commercial asset, whether contractual mechanisms, mechanisms such as "délits" (offences) under continental laws or torts in common law systems or the mechanisms of ownership as such.

In order not to restrict our field of investigation to too great an extent, it will be reasonable here to adopt the widest view, particularly in that, although everybody knows that copyright and "droit d'auteur" are used to cope with difficulties arising in these new sectors of the information industry, they are also bound to be aware that this is not the one and only method. A less open approach would result in a restricted view of the real situation.

2. Intellectual property and information: we will therefore endeavour to examine how the various different national legal systems try to respond to the unexpected challenges of the new information and communications technologies. We will attempt to highlight the common features of what is at stake and the steps taken to cope with these identical challenges. At the same time we shall point out the divergencies in philosophies and practices which may be sources of division between various regions of the world or even from one country to another and thus run counter to the establishment of a sound and steady information products and services market. The constant play of variants and similarities from one system to another and between the solutions chosen within a given system, are proof enough of the uncertainties which reign even now.

2.1 However, a general reminder, which is applicable to the whole field, can and must be made before we go on to develop the subject, namely that the starting point is non-protection. An adage that is commonly accepted in France, but is valid for every country, states that "les idées sont de libre parcours" ("there is no copyright in an idea") (Desbois). Information, as such, belongs to nobody or to everybody (as you like). The law can intervene to confirm a de facto reservation in order to ensure secrecy when the owner chooses this method for providing for control of the information (this is the well-known status of know-how or "savoir-faire"). It can only provide that information with a different status, depending on the particular rules applicable to that type of information, if the information has a particular characteristic: inventive nature, "customization", etc.

2.2 After this general reminder, and leaving aside "peripheral" types of protection such as the law of trademarks which, by identifying one particular information product or another, enables a firm to develop and retain a set of customers but does not provide any rights with regard to the creation as such, we are left with certain mechanisms which remain in practice, and which appear to have a curious dialectic relationship with one another as if, each time, the inadequacies of one compel practitioners and legislators to opt for one of the others. Thus, although it is clear, as we have specified already, that copyright and "droit d'auteur" are dominant at world level in the field of information technology, it is also blatantly obvious that resort to patents, which was thought to have been eliminated

is reappearing on the scene, and likewise that resort to common law, reappraised as necessary, is increasingly the case for, not forgetting, of course the method of "sui generis" types of protection.

We therefore intend to study the following questions in turn:

- first choice: copyright (I);
- wooing the patent (II);
- common law revisited (III),

before saying a word, in the form of a final question, about possible new lines of thought.

I – FIRST CHOICE: COPYRIGHT

3. Copyright and "droit d'auteur" have what one might term a natural position in a certain number of cases where it is easy to transpose the old to the new, the transition from one to the other taking place as it were by stealth. Just as in a previous era photography was viewed as an extension of painting (although it should not be forgotten that certain people felt that the "mechanical" side of photography made it devoid of any artistic characteristics and even today, one or two vestiges of this sort of notion can be found in our legislation).

This is the case of the digitalised image, which although the subject of special processing, remains a picture first and foremost, or electronic publishing, in which the change of media clearly does not affect the quality of publication. Thus learned legal opinion in the Netherlands has underlined that the fact that a digitalised form is used does not affect the written characteristics of work ("Meijboom") and French law makes the electronic press subject to the general law relating to the press, both in the case of the direct aspects of copyright and for example in the case of any questions of liability which may arise.

4. After a hard fight, copyright and "droit d'auteur" have won or are in the course of winning a similar status for software and data banks.

With the reform of the Copyright Act in 1980, the United States led the way so far as programs are concerned. Chile, France, Germany and Japan adopted similar laws from 1985 on. By means of legislation or case law precedents, most countries, both developed nations or at least those desirous of taking part in the dialogue between nations, rallied to this solution (Canada and Mexico on the American continent, the United Kingdom in Europe, etc.) although there was occasionally a certain reluctance (Australia or Brazil). Where there is no other source, the opinion of learned writers has generally followed the same line (in countries as different as the Congo, Luxemburg and Peru). In May 1991, the Commission of the European Communities adopted a directive whereby programs are classed as literary works which, subject to certain special rules, should be treated as such.

In the case of data banks, although few states apart from the Dominican Republic have expressly accorded them protection as literary and artistic property, there is a consensus of opinion in favour of recognizing this kind of protection and in some countries court decisions along these lines may well be sought. Moreover, the EC authorities are working on a draft directive upholding this choice.

5. Such consensuses do not settle everything however, far from it.

Although the fact that the examples given should not hide the existence of uncertainties (what to say, for example, about an expert-system?) cannot be over-emphasized, it is clear that the fact of finding oneself in agreement on a number of highly evocative words: protection, copyright (or "droit d'auteur"), originality, etc., does not imply that one actually speaks the same language and has in practice set up systems of law which, if not exactly the same, at least have the same underlying spirit and are appropriate for enabling the genuine establishment of an international information products and services market.

Specialists in this field are well aware that the philosophies underlying the various systems and especially in the field of "droit d'auteur" ("derecho de autor", "diritto d'autore", etc.) on the one hand and in the field of copyright on the other hand, are very different, and this has led to totally dissimilar practices. Neither the conditions of the protection offered, nor the effect of such protection take the same form from one region of the world to another, or even from one country to another.

It will be fairly easy to demonstrate this by giving this approach in terms of conditions and effects a more practical aspect, by means of two questions: what creations are protected? What protection is offered? We shall leave to one side strictly procedural disparities: whether there is a need for filing or not, whether there is any requirement of a specific indication claiming a right in respect of the creation, etc.

A – What creations are protected?

6. Here, it is not simply a matter of wondering whether a particular software item or any particular type of creation is protected, but rather of asking what is the justification for intervention of the law, on what grounds a National Office (if there is such an office) or a judge will agree to allow or disallow protection to a given creation, whether an item of software or otherwise. The question therefore, if one wishes to view things in this way, relates to the philosophy of law and rights, but it is also clear that it is very practical, since, depending on the answer to the question, the same item may be held entitled to protection or not, with everything that this may imply from the point of view of the market.

7. When all laws make the condition of originality (originality of the work), a precondition for its protection, it should then be asked what this covers in practice.

7.1 The philosophy of copyright "strictu senso" clearly appertains to the person.

Originality is thus defined by traditional French learned writers (Desbois and Colombet), and by Spanish, Italian and Greek (Koumantos) writers, as the imprint of the author's personality present in the work, over the idea — which has been the subject of discussion in philosophy (cf. Hegel) — whereby the work is "a constantly active emanation ... of the individual" (Saleilles). The work is protected because it is an extension of the author. It therefore can only be protected if the author is "present" in the work to be protected. One can see that such a conception is more appropriate to a painting by Picasso than to a software creation.

7.2 On the other hand, although it has been stated: "Copyright is a property right which authors have in relation to the works which they create" (Dworkin & Taylor), it cannot be concluded from this that a similar personal link between the work and the author is required in this system of the law of copyright.

This is particularly clear when one reads the opinion of the

authors quoted above that the requirement of originality means, in the case of literary works "not copied" or that another author speaks in general terms of "skill and labour" (Chalton). We also know that, for some, protection is or should be the price of the "sweat' of the brow". The application to "industrial" works (whether in the case of the information industry or other industries) is clearly more appropriate in this view of the matter than in the foregoing case.

7.3 Less weighted in either direction, other laws reveal median choices.

Under Turkish legislation, it is thus a question of "intellectual creation reflecting the author's personality". And this wording should be noted since it is the start of a gradual transition away from personality (the individual consideration as a whole) which is still referred to in France, for example, towards the intellect (which is only one dimension of the person). It appears that this notion is also present in Germany when it is a matter of "personal intellectual creation". In Panama, alongside artistic creation, reference is made to production resulting from a "personal effort of intelligence". In the Netherlands, emphasis is still on the personal choices — impliedly intellectual — made by the author.

7.4 It is clear that the various national laws are not equally prepared to welcome creations in which the technological dimension seems to dominate and the work of the investment is more important than creativity.

8. However, it is certainly essential to avoid absolute and over-dogmatic systematisation.

8.1 The practical consequences can be unexpected. For example, although British law expressly provides protection for compilations such as directories and catalogues (1988 Act, art. 3.1), whereas in 1989 the French Cour de Cassation (Supreme Court) (Cour de Cassation, 1st chamber, 1 May 1989), held that they were not protected, the fact remains that lists of sporting events have been protected in the United Kingdom and a directory has in France! Very curiously, in a copyright system, the United States Supreme Court recently refused to allow copyright protection to a directory, in the course of their decision disagreeing with the opinion of learned writers on the price of the "sweat of the brow" referred to above (Supreme Court, Feist v. Rural Telephone, 27 March 1991).

8.2 The fact remains that disparities of philosophy are not devoid of consequence. We will give a concrete example of this and an example of a situation that may arise in the future.

8.2.1 Positive example: on the question of the protection of software, starting off from the basis of similar perceptions but showing very different approaches to new technologies, the two highest courts in Germany and in France have given replies the effects of which are diametrically opposed. On 9 May 1985, the "Bundesgerichtshof" (appeal court judgment Inkassoprogramm) in effect maintained a very demanding attitude along traditional lines, thereby disallowing legal protection to most software items; it has been said that now that only "the crème de la crème" will be allowed protection (Rättinger). Quite to the contrary, the French Cour de Cassation on 7 March 1986, running counter to the tradition of the national law, decided to make originality an objective criterion by solely requiring that the program should bear "the mark of its author's intellectual contribution" (judgment in Babolat v. Pachot, rendered by the Full Assembly of the Cour de Cassation); one would imagine that most software programs in France must therefore be protected. However, this kind of distortion is clearly not favourable to the creation of a transnational software products market — even only a European one! And this was indeed taken into account when it was considered necessary to define in the EC Directive what the Europeans intended to cover by the term "originality" (art. 1.3: "A computer program is protected if it is original, in the sense that it is the actual intellectual creation of its author").

8.2.2 Illustration of a possible future problem (the difficulty has not yet arisen in practice, at least not in the courts) of the negative implications of the evident differences between national laws: in the circumstances it seems extremely difficult to conceive of a cross-border market in electronic information which is based on firm and clear rules once the same information medium can be granted protection in one place and not in another.

The comparison of the EC policy with regard to data banks and the decision of the United States Supreme Court quoted above give rise to concern about this.

From a more practical viewpoint, a study that we carried out on behalf of the Commission of the European Communities (Propriété intellectuelle et ensembles informationnels automatisés, 1989) clearly shows that over and above the hard core of data banks and other "creative" media towards which national attitudes are a priori fairly uniform, consensus shatters once it is necessary to envisage protection of compilations: the Danes (Law of 1961, section 49), and more generally outside the European community, the Scandinavians, have particular rules for protecting such compilations in an original manner ("catalogue rule"), the British refer to them in their Copyright Act (see supra n° 8), the Germans recognize a notion of "small change" ("kleine Münze") corresponding to what one might term low level creations which might include compilations (Heberger), whereas the Italians seem very hostile to such ideas as do the French, if one considers the 1989 judgment of the Cour de Cassation quoted above (n° 8.1), although curiously enough the Paris Cour d'Appel has classed a set of objects (automobiles) as "the work of man" and hence entitled to protection of the courts (Paris Cour d'Appel, 25 May 1981)! We will not give any further examples, but all the ingredients lead to the assumption that a data bank established in Düsseldorf and accessed in Milan will not have the same legal status in both states.

This highly likely conclusion clearly shows that it is not possible to allow this state of affairs to continue.

9. True, it is extremely difficult to get beyond the stage of findings of facts.

Accordingly we will only attempt one or two comments.

The first is that there is a fundamental difference depending whether the intention is to protect the investment or the act of creation, the investor or the creator. Clarification on this point is essential but it is perhaps not necessary to reason in comparative terms.

The second is that, despite entirely different philosophies at the outset (see supra n° 7),"droit d'auteur" and copyright do not cover, as clearly as one might expect, the twin aspects of investment and creation. In truth, the question crosses the two legal systems. "Droit d'auteur" is in the course of developing towards a "right to undertake": witness the way in which it includes not only the creation of software but also

that of audio-visual creation. On the other hand and without yet raising the question of the content of the laws (see below), it is interesting to note, in the field of American law, that in contrast with the United States Supreme Court decision which refused to protect directories (see supra 8.1) and thus appears to move away from the concern to protect investment, one can compare the Ashton Tate case in the California Court of Appeal on 12 December 1990 in which a judge deprived an enterprise of its copyright because it had failed to declare to the Copyright Office the earlier products that its own new products were based on, in accordance with a procedure which seems to follow a logic somewhat similar to a patent, in other words logic of an industrial character.

In fact, so long as several logics are in action, it will be difficult to arrive at uniform regulation, whatever that regulation is.

What applies to conditions obviously also applies to effects.

B — What protection is offered?

10. When one speaks of protection, one also has to ask what the protection covers and means in practice. Protection of form? Protection for form's sake? Symbolic or effective protection? Which provides one particular means of action or another? This is what we have to examine in this overview of the various national laws.

11. One established point, that is common to all the laws is that both copyright and "droite d'auteur" only provide protection of the form, and, as specified above (supra n° 2.1), "there is no copyright in an idea".

The notion of the form of expression that can be protected may be understood differently: certain African countries (such as Benin, Ghana, Kenya, Malawi, etc.) refer in their legislation to "material form of any kind", whilst others use more restrictive expressions. Thus until the clarification introduced by the law of 1988 (which replied in the affirmative), in English law it was debated whether a recording had to be protected in the same way as a written document. However, the dominant idea is indeed that form (the form of the form...) has little to do with the matter: data in a computer memory or fixed on CD-ROM should receive protection, as should the digitalised images referred to above (supra n° 3) or the more traditional types of creations (manuscripts or paintings).

On the other hand, the idea that form alone should be taken into account by the mechanisms of "droit d'auteur" or copyright law reveals a major distortion between the legal tool used and the aim sought when the creation in question involves the information first and foremost. For the value is then usually contained in the information itself (e.g. functional information "encapsulated" in an item of software and intended to make a machine work, or economic technical or scientific data contained in a data bank and intended to enable decision-taking). Users, potential customers or even competitors are not interested in the way in which the software is written or the data bank is structured, but in what they both contribute, in what the former enables them to do and in what the latter contains, whatever the form. This content however, is not what the law is designed to protect by means of the established mechanism of "reservation of rights"! This is perhaps at least a partial explanation of the rediscovery of the patent which we are witnessing today (see infra II).

12. Yet this defect is common to all legal systems. Even though all the systems comprehend the form, one soon finds that there is a disparity between systems. Copyright or "droit d'auteur" do not offer the same means of action everywhere.

This is easy to verify if, following the structure of copyright sanctioned by the 1886 Berne Convention, we consider separately proprietary rights and "moral" rights. In view of the aim of this study and its limitations we have had to select a number of significant data rather than claiming to give an exhaustive account of the whole field of investigation, which is very wide.

1 — *The granting of proprietary rights*

13. It is possible to state, without exaggeration, that all the laws recognize two basic rights of a commercial nature: the right of reproduction and the right of performance.

The right of reproduction is sometimes defined, as it is in France (Law of 1957, art. 28 as "The material fixation of the work by all processes which enable it to be communicated to the public indirectly"). In other cases, the wording remains general and leaves it up to the courts to apply the law to each particular situation: "Reproduction in number" says the Austrian law, whereas the Algerian, Cameroon and Senegal legislation refer to "reproduction in any material from whatsoever", and Moroccan law specifies "mechanical reproduction". The fact remains that as a general rule all fixation processes fall within the ambit of the legislation and, for example, in the sector with which we are concerned, duplication on diskette or downloading would generally by sanctioned in all legal systems.

The right of performance is also targeted in virtually all countries. Both direct and indirect performance (display) are envisaged and, in response to the "established newcomers"; radio and then television broadcasting, the laws cover, under one name or another, such processes of communicating a work to the public. It is rather — as in the case of reproduction — the legislative processes that are different: reference to a whole class, or listing of the various methods of communication. Certain legislations (such as that of the Ivory Coast) specifically refer to broadcasting in public places, such as bars, restaurants and hotels ... thus putting paid to difficulties which other laws have not spared themselves. The most recent broadcasting methods such as satellite or cable transmission, on the other hand, are only taken into consideration expressly by one or two laws and not alway in the same terms (United States, Spain, France, Portugal, United Kingdom). Spain alone to date seems to have envisaged telematic transmission as such, by including in the list of acts of public communication "public access to computer data bases by means of telecommunication, when such bases contain or constitute protected works" (Law of 1987, art. 20.2h).

14. Over and above this general approach, which, all in all, reveals more disparities as to form than as to substance, this first impression of consensus — doubtless somewhat mistaken — should however be qualified by the observation that once one goes into greater detail, proprietary rights, the right of reproduction and the right of performance and any other related rights (such as the right of destination found under certain legal systems) are both less clearly defined and much less uniform than would appear at first sight, from certain important points of view, and these are particularly liable to affect the establishment of an information products and services market. We shall present our arguments briefly, on the basis of three examples.

14.1 Can the right of reproduction be used as a means of protection against reverse engineering? Decisions to the

contrary can be found even in the United States and, in France, the opinion of learned writers is divided, some holding the practice to be legitimate (Gaudrat, Huet) and others considering it actionable (Le Stanc, Vivant). In addition, for more than a year, battle has been raging at European level as to whether the draft directive relating to the protection of programs should allow reverse engineering or not. Lastly, reverse engineering or "decompilation" (this is the term chosen) is authorised insofar as it is a means of ensuring interoperability of systems (art. 6) and subject to strict conditions. But it is interesting to note that the logic of copyright law could have been resorted to in either sense and the main basis of the arguments advanced by opposing factions at Brussels were strictly commercial considerations. Nobody can be certain of obtaining the same answer in Buenos Aires, Paris and Washington.

14.2 Does the existence of the right of performance oblige a person who consults a data bank to pay royalties to the person who claims proprietorial rights over the data bank? If one views it as a communication to the public, personally we think that this is the case. But, particularly in the absence of knowing who exactly the public is and if one has to reason in terms of actual users (the individual user at his screen) as against potential users (one does not know how many individuals there are who can read the screen), the contrary has been maintained by a Belgian author (Triaille) and a French one (Martin). We do not know what the legal answer will be finally and whether it will be the same everywhere.

14.3 Finally, the last of our three questions: can the owner of rights in a work raise any objection to its hired out (or even to its being loaned) on any grounds? There is no need at all to underline the importance of this question for the information market if one considers that this concerns above all libraries and record libraries ranging from the traditional books and records to video-cassettes, diskettes or CD-ROMs. The European Communities have promised to deal with this problem, but the evidence seen at this level demonstrates the divergences which are likely to be met on a worldwide scale: Denmark, Spain, Portugal and the United Kingdom all recognize a right of hiring, Italy recognizes such a right depending on the medium involved, whereas this right is not recognized in Germany, Ireland and the Netherlands, whilst the other countries recognize a "right of destination" to the owner of the rights enabling him to exercise control over hiring ... We will leave to one side the question of lending. The Commission itself is proposing to establish legal structures that "the cultural industry will be able to ... base itself on". What applies to the European market in terms of need obviously applies equally to the international market.

15. The same type of comments can be made when we turn to the question not only how to define the rights offered to rights owners from the positive point of view, but also how to define the exceptions to the general rule from the negative point of view.

15.1 There is already a clear contrast in the mind when one speaks of "fair use" or "fair dealing" or when one refers by name to a certain number of acts which alone are to be legitimate. Although the acts allowed under the heading of fair dealing can certainly be referred to in law (cf, for example the British law of 1988, art. 28 and following).

15.2 But, from the point of view of legal technique alone, there are still a number of disparities which can have an important practical impact. We will set out a few simple examples of these.

15.2.1 Private copying (copying for the copier's private use) is usually allowed by all laws, but the legal context is not always the same and this has serious implications: a single copy is allowed under Brazilian law, while an assessment of the size of the part used in comparison with the whole of the work applies in the case of American law... Further, the private copy has existed in Europe in the software context (though all that remains of it is the legitimate user's right to make a single back-up copy of the program). Certain people, in a wider context, criticize this right to a private copy as archaic. What is one to think, indeed, if one does not use an element of quantification, as the Americans do, when the work to be reproduced is an on-line data bank or a CD-ROM.

The increasing number of duplication methods which enable virtually instant production of a duplicate equivalent to the original has, moreover, led many legislators worldwide to institute a right to remuneration. This can take the form of a tax or other payment, collected in one way or another, when blank reproduction media are purchased (Austria, Congo, Finland, France, Hungary, Sweden etc.) and sometimes in the case of reproduction machines themselves (Germany, Iceland, Portugal). This is a noteworthy development in copyright systems under the influence of the new technologies which should be borne in mind and which may inspire new developments in the case of new media. This is also a definite distortion of the true situation, to the point that one may well wonder if this has not resulted in the institution of a sort of hidden public domain for which there is a charge (Vivant). Lastly, this is not necessarily a miracle remedy, since, although wherever this system has been established it has been advocated as being bound to ensure compensation for losses suffered by the creators (or creator-companies), it is still necessary to know who actually receives the benefit of the money collected.

15.2.2 Another illustration: certain states recognize, under various headings, a right of reproduction for educational purposes (Norway, Poland, the United Kingdom) which is not totally unknown in other countries (such as France where the proposal to set up such an exception in the case of software led to heated reactions from the professionals). How are such legislative disparities to be controlled when information has left the traditional vehicles of the book or the newspaper and is circulating in real time from Washington to Tokyo?

15.2.3 Yet another illustration (the last): the right of quotation — to borrow from a work in order to quote from it — is recognized in a wide variety of ways from one country to another. In France, it is accepted that only literary works strictu senso can be quoted from (the courts have held this on a number of occasions). However, turning to the question of "quotations" from images, these certainly seem to be possible in certain countries such as Spain (where the law contains a very wide provision which can also apply to musical "quotations"), the Netherlands or Portugal (art. 75 f Copyright Code). What is one to think therefore of cross-border exploitation of a data bank? On the borderline, it should be noted that the United Kingdom has a very special rule to the effect that a television broadcast does not infringe a third party's copyright when it incidentally and accidentally includes protected works (music played during a sports match).

16. Disparities and uncertainties therefore from the point of view of proprietary rights. This feeling is bound to be reinforced when we turn to the question of "moral" rights,

where we find a fairly or very marked contrast between "droit d'auteur" and copyright.

2 — *The grant of "moral" rights*

17. Here the difference between systems is blatantly obvious and reference to this is simply stating a truism. It is essential to do so, however, since this disparity, which is a reality, can have definite commercial results. In the audio-visual sector, evidence of this has been seen in the recent judgment of the French Cour de Cassation condemning the colouring of films (Cour cass., 1st ch., 28 May 1991), which was held to be contrary to public policy, whereas it was not deemed to be illegal in principle in the United States (leaving to one side here certain specific provisions outside the field of copyright relating to the "preservation" of films).

Here we find the notion whereby, in the philosophy of "droit d'auteur", the work is the author and attacking the work is the equivalent of attacking the very person of the author (see supra n° 7.1). According to this point of view, the moral right appears to be a whole complex of rights: right of paternity (the right to be quoted as the author) and right to integrity of the work, which are the two minimal rights of authors recognized by the Berne Convention (art. 6 bis), the right to secrecy (i.e. the right of non-divulgation), the right to repent or withdraw which enables the author to "take back" a work that has been made public (in other words its medium) if he feels certain "scruples" (Colombet) about displaying it to the public in its present condition. One can clearly see the impact of these rights to the advantage of the painter or sculptor who wishes to present a certain image of himself and of his work. Things are less clear once the creation industries are involved and even less so in the case of the information industries which are strongly dependent on technical know-how.

The viewpoint of copyright is profoundly different. Certainly, the opinions of the English authors are full of qualifications, in accordance with practice in the common law countries (leaving to one side for the moment certain recent legislative trends in these countries; which will be referred to below infra n° 19). The decision in the United States regarding the colouring of films which we referred to above is evidence of this. And although the notion may no doubt be found, in spirit, in the law of most countries, it is significant that, in copyright systems, "inherent limitations to the right of integrity" (Dworkin & Taylor) can be very simply referred to.

18. Integrity, respect, inviolability of the work (to quote here the word used by the Soviet, Romanian or Czechoslovak legislations): clearly this requirement on its own is not easily compatible with the dynamic exploitation of an informational work that is both technical in its medium and fluid in its subject matter, which has a natural potential for evolving and, what is more, it would be difficult for it not to. Can one imagine an item of software, an expert-system or a data bank that is rigid?

In the audio-visual sector, where technology holds sway, the strictest concepts are becoming more flexible, noticeably so. And, particularly in the case of the adaptation of a literary work for the cinema, it is not uncommon to find case law precedents tolerating the taking of certain liberties which the work, even when the legislation does not provide for this, as in Chile for example. Cypriot law and Portuguese law even allow modifications to the original work for reasons expressly classed as technical.

But clearer still, in the case of software, in other words at the heart of our subject of information technology, the Europeans have decided to consider the right of adaptation to be the rule, notably by laying down that the legitimate purchaser of a program (in reality of the medium) is entitled to make any "adaptation arrangement" and "any other transformation" necessary for exploiting the program in accordance with its intended use (EC directive cited above, arts. 4 and 5). And Spanish and French law, both of which are strongly attached to the notion of respect of the work's integrity, had already unreservedly taken up a stance in this direction.

In other words, at the risk of causing an actual breach between these new requirements and the traditional philosophy underlying certain laws, which is sometimes painfully resented by certain people, it appears difficult in the extreme, not to say impossible, to preserve the old concepts intact.

19. It is true that, a contrario, the rights under the copyright system reveal rights classed as "moral rights", formally at least. The 1988 Copyright Act expressly incorporates into British law the rights recognized by the Berne Convention (new arts. 77 and following). The United States' adherence to the said Convention in 1988 took on a particular symbolic weight of its own. Yet interpretations as to the real effects of the said adherence are not unanimous. The spokesman for the Coalition to Preserve the American Copyright Tradition (a name loaded with meaning) defended before the Senate and continues to defend the idea that the concept of moral right should be rejected and gives priority to the commercial dimension of rights and their investment incentive aspect. The fact remains nonetheless that in the American situation it has also been possible to detect the "precursors of a more favourable future for moral rights" (Dietz).

20. In conclusion on the question of "droits d'auteur" and copyright, can it be stated that rights anchored in entirely separate traditions are finally coming closer?

20.1 In our view, the reply is definitely in the affirmative. It is even more so, of necessity, when the questions at stake are entirely practical matters such as those arising from the use of information technology and are linked to an information products and services market. For the problems are no more Japanese than they are American and no more Swiss than they are Brazilian. It is clear that they are the same everywhere. One single reservation can be made in the case of those economic systems that are not based on market mechanisms, but as we know the number of these is dwindling.

A very wide variety of rights are coming together into what will perhaps be the future balance between the concern to protect the creator and the similar concern to protect the person — the investor — who even if he did not give birth to his creation, at least provided the wherewithal for it to live.

20.2 The fundamental divergences which exist today spring from the fact that the movement referred to above is far from complete and basically still remains confronted by two lines of reasoning: one logic of "droit d'auteur" understood in the full sense of the term (the author's rights) and another logic of the "right to undertake" (cf supra on a similar idea n° 9). The disparity is not new, since it was already in existence at the dawn of these rights in the 18th century (great debate between book sellers — namely: publishers — and authors), but it influences many things. If

we think only of the question of ownership of rights which has not been referred to up to now, but which could have been: the employee is the author and therefore usually owner of the rights in a "droit d'auteur" system, whereas in a copyright system the employer is, as a general rule, vested with rights over the creation. Accordingly the game is far from over.

20.3 The fact remains that certain changes are necessary, linked either to the industrial method of creation or to the nature of the industrial creation made, more precisely in the field of information.

These are changes which should relate to the conditions prior to the granting of rights over the creation, the allotment of the rights and their definition, which in our view should take into account first and foremost the evolutive nature of such creations, ... The alternative is to decide to leave the field of "droit d'auteur" (or perhaps copyright) but that is another story...

The fact also remains that "droit d'auteur" or copyright, even if remodelled, may appear inappropriate or of insufficient interest, if only because they only protect the form (see supra n° 11). This is no doubt in part the explanation for the (partial) rediscovery of the patent.

II – WOOING TO THE PATENT

21. There is no doubt that the patent is indeed courted nowadays, even when it seems radically excluded by case law precedents or legislation, as it is in the case of software, both in America and in Europe (cf., in the United States in particular the famous case of Diamond v. Diehrin, 1981).

No doubt it is still essential for the item to be patented to appear to be reasonably patentable (obviously, the areas of certainty — patent on a machine for processing or transmitting information, for example — do not deserve our attention here).

However, leaving "classic" scenarios to one side, the fact is that, even though specialists in the field of patents on both sides of the Atlantic are increasingly tending to consider that anything and everything can be patented (this is the expression they most often use), it is difficult to credit that a data bank or electronic encyclopaedia can be actually patented. The vagaries of the law of Honduras which allow patents to be taken out for books, catalogues, sermons or operas (law of 1 April 1919, art. 1) cannot be taken to be representative of world law!

Aside from mere assumptions, the patent method is explored in situations where the technical field is sufficiently implicit for this method to appear inherently natural, whether rightly or wrongly. Accordingly, great play was made early in the day on the ambiguity of the term "firmware", defined (for the occasion?) — if one can call it a definition —, as "software in the form of hardware", in order to declare authoritatively that it was patentable ... apparently to the advantage of the hardware that it was supposed to be in part. And, in fact, today when semiconductor masks (to use the American term) or topographies (to use the European term) benefit from specific protection (see infra n° 29), integrated circuits or "chips" are actually patented in a great many cases. Software items are increasingly being patented too, provided that certain restrictions are respected (not to speak of "software patents") and this is a particularly remarkable fact in Europe where the Munich Convention of 5 October 1973 on European patents, which extends beyond the frontiers of the European community and includes countries such as Austria or Switzerland, lays down expressly that "computer programs ... shall not be deemed to be inventions" (art. 52).

22. We shall pause for a moment to consider this case, which is interesting not only from the practical standpoint, since the reality is not what the legislators wanted, but also, and perhaps more still, from a fundamental point of view, since in Europe, in fact, the question of the status of information underlies this unorthodox acceptance of patentability.

22.1 It needs to be pointed out that the prohibition is laid down for software items "as such" (legislation quoted above), and "naked" software according to a definition put forward by academic lawyers (Vivant and Le Stanc).

22.2 The prohibition is therefore not unlimited ...

This clearly leaves the way open to patents taken out in respect of inventions whose software dimension is only one constituent part, a matter which was decided by the courts in France most satisfactorily and subsequently approved at the European level by the European Patents Office.

This has also opened the door to new interpretations, less perhaps relating to the law of patents, than to technical reality. The Appeals Division of the Dutch Patents Council, for example, in a very interesting decision dated 12 September 1985, put forward the notion of "a machine to all intents and purposes", considering the computer into whose operational memory a new program is introduced as a new machine within the meaning of the law of patents. Echoes of this are found in a number of decisions by the European Patents Office (in 1986, 1987 and 1988) holding that the combination of a computer program and a "generally known universal calculator" thus made to function "in a different way" was a patentable invention.

Over and above this, the European Office's discussion when confronted with this question of the patentability of programs took an unusual turn, relating to the very notion of technique. As the invention was deemed to be a creation of a technical nature, the moment in fact arrived when it had to ask what the technique was. And one found the Office drawing a distinction between the mathematical method or algorithm on the one hand and the technical process on the other hand, the former being abstract and the latter being applied to a physical entity, it being specified that the physical entity could be ... an image (Vicom decision, 15 July 1986). Messages displayed on a screen (although they are none other than a certain image for the machine) were, on the other hand, deemed not to fall within the technical domain as they only related to information (I.B.M. decision, 5 October 1988). Hence one can draw the conclusion for the information industries that there is information and information and that there is a serious risk that whether the patent is granted or refused will depend on the examiners' very subjective perception as regards the technique in general and the invention in particular. A matter for speculation in any case ... But also an indisputable opening — though of variable dimensions — towards the patent method.

23. Accordingly, to conclude these few words about patent (this is not the place to go into greater detail), as has been pointed out, in the information industries sector, the patent is coming back into vogue in unexpected places although it only relates to certain types of creation (software programs or masks), it is returning in force, it is also returning by trial and error and in such a way that it is difficult to know a priori

if one particular item or another can be patented, which is hardly likely to provide for legal security in general nor the security of an international information products and services market...

The fact that the parties concerned are turning to other methods, in particular in the field of the general law should therefore come as no surprise.

III — COMMON LAW REVISITED

24. The Common law to which we wish to refer here is the law which enables control over a creation or an information product without going to the extent of ownership: law of contract, criminal law, law of civil liability, etc. Although classic, and a priori less effective than the mechanisms we have considered up to now, it is currently being rediscovered without, in fact, its every having been forgotten. Called upon not only to support these proprietary rights (like know-how in support of the patent) but also to fill in any gaps in them, it is where necessary rethought and remodelled in order to provide a better answer to the needs felt in practice.

Multiform, being relatively easy to implement, effective to a greater or lesser extent, "Common law" should be considered in all its various guises.

25. The contract, probably the most flexible of all legal "tools", is obviously what we should turn to first of all. Here there is naturally no question of setting out a whole list of systematic comments on this subject. On the other hand, we intend to put forward two or three ideas, simple perhaps, but important nonetheless.

The first is that the contract is the most certain method of establishing obligations as to secrecy and non-competition which even on their own enable control over an item of information. True, there are items of information which cannot be prevented from being divulged (nor from being exploited either), no doubt for legal reasons but also for reasons of common sense and commercial logic. Thus, one cannot claim to impose secrecy on a person who receives information that is distributed publicly (by a public television or communication channel, for example). However, apart from such exceptional situations, secrecy — restricting ourselves to this for the moment — can be invoked (imposed) in a very wide variety of scenarios. It is even noticeable that in the case of computer programs, it can be combined with copyright (or "droit d'auteur"), as a program can be offered for sale in a form whereby its written formula is not accessible to its user (which is not the case with the traditional literary work!) and without its user being at all disturbed by this. Although it is true that the status of reverse engineering can be considered indecisive (see supra n° 14.1), the strict delimitation, by the 1991 EC Directive on programs, of the conditions in which reverse engineering can be carried out legally is clear evidence that this combination of secrecy (non-readability) and copyright (or "droit d'auteur") is no longer in question in the context of the European Community. However this is one particular exception. Secrecy should be borne in mind at the stage of contractual negotiations, during the performance of contracts relating to the transmission of information or providing an opportunity for access to information, in contracts of employment, etc. The conditions of exploitation of information delivered may also be specified in the contractual documents... The use of an access code and/or a password can also be laid down...

- "All information communicated during the negotiations shall be covered by secrecy."
- "The beneficiary undertakes to consider all information communicated on the basis of this agreement to be strictly confidential."
- "I undertake not to divulge to any person outside I.B.M., nor to use other than for I.B.M.'s business, any confidential information belonging to I.B.M. and in particular, although this shall not be an exhaustive list, any information, knowledge or documentation that I.B.M. has indicated as being its own property and/or which relates to I.B.M.'s manufacturing methods, technical processes, products, programs or research, unless I have received written authorisation to do so from my employer" (undertaking that I.B.M. France requires its employees to sign).

The undoubted strength of the contract is that it traces — with a great deal of freedom — the framework to be followed and tries to prevent future difficulties. Its obvious weakness is that, apart from a few exceptions, it is only binding on the contracting parties and provides no "objective" reservation of the right to the information.

Thus, it should be used extensively and without reservation, but it cannot be considered appropriate for settling all problems.

26. Declaring one particular type of behaviour or another to be an offence may, thus, seem to provide that objective pinpointing which is lacking in the contract. But the word offence has connotations taken from criminal law, and the rule in force in all liberal states is the legality of crime and punishment, extended and supported by the rule of strict interpretation. Therefore it is not sufficient to class a particular action as a moral, social or commercial offence for it to be the subject of criminal sanctions. There has to be legislation in force, to back up any sanction.

Although here is it perhaps even more difficult to give an overview of extremely varied national situations than it is in the case of intellectual property strictu senso, despite the considerable comparative studies carried out especially in the field of data-processing law (Sieber), it does not seem an exaggeration to state that although there are no lack of criminal offences in the area of "disclosures" or "extractions" (taking these words in a non-technical sense) of information, few can be held to be effective from the standpoint of regulating an information products and services market, whether national or international.

26.1 Along the lines we are following, the most widespread offence worldwide is obviously that of espionage, that is an illegal leak of information from one country to another. But there is no need to underline that it bears very little relationship to the institution of an information products market.

If any form of espionage should be pressed into laying down the rules of the game between companies, it is rather industrial espionage. Yet national approaches to this are very varied. Whilst there are countries where misappropriation of trade secrets are sanctioned by criminal law without the slightest difficulty (Germany, Austria, Switzerland, the separate states of the United States, etc.), this does not apply everywhere and one can quote as examples of laws which have foreseen the problem but failed to deal with it, the laws of Belgium, Italy, Luxemburg and even France which has a law (art. 418 of the Penal Code) which apparently includes a wide range of offences in this

area, but which case law precedents seem determined to interpret restrictively by only recognizing a right of protection to manufacturing secrets.

26.2 Sometimes specific offences have filled in the gaps in recent legislation: "diversions" of telecommunications networks, illegal reception (in particular in the case of encoded television messages), hacking into computer systems (United States and in particular, also federal legislation in California, Delaware, Florida, Pennsylvania, etc; Canada; Denmark; France; Greece and even Liechtenstein). The scope of the offence is obviously dependent on the wording of the statute laying down the offence and the debate which started in France in the course of the adoption of the Law on Computer Fraud in France in 1988 is of general application: should the argument relate to a technique (this was finally opted for) or to an asset: the information, with no particular consideration of the way in which it is processed?

26.3 In the desire to cover the whole sphere of information, the temptation is to make it an asset like any other and to sanction any misappropriation of it as theft.

The Supreme Court of the State of California has both allowed and refused this classification ("theft"). The Appeal Court of Arnhem in the Netherlands, on 27 October 1983, in a noted judgment held that theft applied, as subsequently did the Antwerp (Belgium) Court of Appeal on 13 September 1984. On the other hand the Canadian Supreme Court, in the Stewart case held that there could be no theft of information.

If we have to take sides, this position seems to us the only one justified. It is not sufficient simply to state that information is an asset in order to grant it the benefit of some sort of protection, in disregard, what is more, of public freedom. It is not enough either to put forward a dynamic conception of property. If information (in accordance with its basic status: see supra n° 2.1) is not the subject of ownership rights, it is intellectually unacceptable and doubtful from the social point of view to hold that theft has been committed in all those systems where theft is defined as an infringement of ownership. If, on the other hand, the information is appropriated, at least indirectly (specifically by means of one of the mechanisms examined above under points I and II), there are as a general rule specific offences aimed at penalising attacks on it: infringement, "countrefaçon", and it is at best unnecessary to duplicate this by the offence of theft and at worst contrary to principles to do so in all those systems where the special rule is allowed as an exception to the general rule. More radically, if theft presupposes the dispossession of the person whose property is stolen, it is clear that in the field of information this does not apply since the person who has an idea or knowledge spirited away retains that idea or knowledge. The offence of theft is not relevant.

It is still possible to envisage criminal proceedings in respect of such actions but, unless we wish to ignore the restrictions of a liberal legal system, only from the standpoint of futurology. Without riding roughshod over certain principles, a criminal law of information remains to be drawn up (at least if one is wanted).

27. Civil law, and in this case, the law of civil liability clearly offers much wider freedom.

Here too, it is necessary to take the measure of the differences between national laws.

27.1 From the point of view of form (of the actions that can be envisaged), it is possible to draw a distinction between three types of system: those laws that contain specific provisions to ensure the good behaviour of the contracting parties (as in Germany), those which contain provisions with general scope which provide for this (as in the case of France) and those which make provision for a limited welcome to acts sanctioning a certain type of behaviour (like the Common law countries some of which have even ruled — at least in the case of the United Kingdom — that they have no general doctrine of "unfair competition": Birds). It is clear that the obligation to reason in terms of pre-established categories: breach of confidence, breach of duty of care, etc. does not offer the same flexibility as when the national law is prepared to sanction any behaviour that is not that of the "reasonable man" (to use an expression used in the law of Quebec).

27.2 From the point of view of substance, and as an extension of the previous comment, the same actions cannot be brought in every country.

In some places companies have to be competitors, whereas in others this is not necessary.

More interesting: there is a rising tide of opinion in all continental laws to the effect that parasitism — defined as the unauthorised exploitation of another person's work (for "work" read "investment") — should be sanctioned or, in practical terms, should give rise to compensation. Decisions in support of this view have been rendered in Germany, Belgium and France (notably with regard to the republication of an old work which had been out of copyright for many years). The argument was particularly used in a judgment "Informationsdienst" of the "Bundesgerichtshof" dated 10 December 1987 which sanctioned the fact that a newspaper recopied information not covered by copyright from a competitor. In the context of the study carried out for the European Communities referred to above (supra n° 8.2.2), resort to this "theory of parasitism" has been particularly advanced by most of the national contributors as a possible method of protecting data banks which contain simple compilations of data that are not easy to cover by copyright (see supra ibidem). It is noteworthy that the English author (Chalton) and the Irish author (Tierney) are of the same opinion. The fact remains that the mechanism should be used with caution if one wishes to avoid reconstituting intellectual property rights which go beyond the expectations of the law in a somewhat clandestine fashion. Many authors have expressed this fear (notably Poullet in Belgium) and there are a few decisions echoing this.

28. In conclusion, it is certainly advisable to recognize that it is very difficult to avoid anomaly: protection according to the canons of the law at the risk of leaving certain areas unprotected, or a wide range of protection of information at the risk of creating areas of protectionism that may or may not be legitimate.

29. This might be the final word if it were not necessary to add — in order to cover as much ground as possible in this short international overview of intellectual property rights in the information sector — that there is one further method: to draw up one or more forms of sui generis protection, to suit the requirements of the particular circumstance.

At one time there was much discussion of this à propos software. The World Intellectual Property Organization

drew up "standard form" provisions in 1977, which were followed by a draft treaty in 1983, and a number of national institutions took similar steps. To date, however only Bulgaria has chosen genuinely specific legislation (Law n° 49 of 1979) but, as it is really extremely specific and marked by an apparently out-of-date political stance, it already looks like a mere curiosity. Despite this, it is true — and this has to be stated — that certain countries are still considering adopting specific rules.

However, matters took a more practical turn in the case of semiconductor masks when in 1984 the United States decided to pass a specific law virtually compelling their trading partners to adopt similar legislation (if they wished to benefit from protection in the United States). The Japanese were the first to do so in 1985, then, following the adoption of an EC directive in 1986, the various member states of the European Community and other countries did so in their turn. Thus "chips" fall under a new legal regime, fairly crude from many points of view, but one which is able to exist alongside the patent or copyright, depending on the case.

Both cable programmes in the United Kingdom, and television broadcasting in France are still the subject of special provisions which affect them as such and independently of their content.

Should this policy of fragmentation be continued? If one is in favour of a law drawn up one step at a time, a reply in the affirmative should be given. Thus it has been suggested that special provisions should be provided for expert systems. This question is currently being debated by the experts working with the European Commission on the question of data banks in the form of compilations, which as we have pointed out are difficult to cover by means of Common law on literary and artistic property (supra n° 8.2.2. and 27.2). If however, one takes the view that the law — especially statute law — should not get lost in the detail of a whole mass of special cases, this is probably not the best step.

The increasing number of legal regimes bring with them overlaps, contradictions and exclusions and give rise to problems which would not have arisen in their absence... From the international standpoint, two neighbouring countries, with a similar culture, France and Italy, are able in the one case (France) to allow a whole range of copyright protection including copyright in drawings and models, and to prohibit it in the other (Italy) — which is hardly satisfactory.

Thus, to our mind, the creation of ad hoc rules should be handled with caution — a thoroughly legal virtue.

IN CONCLUSION

30. In conclusion, is it possible to draw certain lessons from everything that has been said? It is to be hoped so, but it is acknowledged that, in a situation of turmoil, marked by disparities between families of laws, or even between national systems, this is not at all easy.

If we are to provide satisfactory conditions for an international information products and services market it seems to us that the following factors are essential:

(1) Harmonisation of the various national laws, at least of those countries with developed economies (for it is not possible to play the same game unless there are common ground rules);

(2) Two questions, to this end, relating to the assets it is intended to protect and the status to be granted to the act of creation and the decision to invest, to the creator and the investor (which presupposes calling into question national traditions and established ideas and a search for balance, but not however the adoption of individual provisions to cover each new difficulty).

(3) Lastly, in the immediate future a use of the different methods provided by the law which have to be considered as so many complementary forms of protection.

Taken as a whole, the law is certainly no more elusive than the information we claim to apply it to.

SECTOR BASED LOGIC AND PRACTICE OF INTERNATIONAL COMPANIES IN THE FIELDS OF DATA MANAGEMENT AND TECHNOLOGY TRANSFER

by

Robert W. Beckham
Head of Intellectual Property Department
Defence Research Agency
Empress State House
London, SW6 1TR
United Kingdom

1. INTRODUCTION

I am Robert Beckham, Head of the Intellectual Property Department of the Defence Research Agency in Great Britain. The Agency is responsible to the Secretary of State for Defence for the conduct of much research in the defence sector of the UK, both internally and by contract. Previously, I have held other posts in the UK involving extensive interaction with industry in the intellectual property field. I have an Honours Degree in Engineering Science, am a qualified UK Patent Agent and European Patent Attorney, and presently am on the UK Professional Council and Chairman of their Designs and Copyright Committee.

Our previous speaker has provided us with a very helpful overview of the International Scene in Intellectual Property and in information management. It is fair to say that one of the key elements in the logical approach of Companies to data management and technology is the strength, or otherwise, of the intellectual property systems in protecting their interests.

In my presentation, I intend to interpret the word 'data' as covering information in the general sense. However, before getting into such detail, we need to consider rather more fundamental base motivations of industry (and indeed of human nature as a whole).

For industry, the basic driving mechanism is money, or profit, and in considering our subject today, we have to recognise that, in well-managed organisation, attitudes to information management and technology transfer will be driven by consideration of whether the matter concerned will contribute to profit or not. This will not only be considered in the shorterm, but as a longer-term issue: for example, will release of a particular piece of information give competitors key details as to how a company strategy is developing?

However, restricted policies as such are not necessarily sensible as particularly in areas of high technology, it can well be necessary to provide some information to the public or to Governments to ensure that markets and market expectations are aroused to provide the right environment for the launch of a new project.

One illustration of this approach might be seen in the provision of catalytic converters for cars, where those involved in the development in catalytic converters and supplying materials for such converters made available considerable amounts of information on the practicality and performance of such devices, with a view to encouraging the legislators to introduce controls on exhaust emissions, which would directly benefit companies manufacturing devices. This was a clear case of use of information as a means of developing and opening up a market. Release of information and data was not driven by the availability or otherwise of intellectual property protection, but more by the clear need to promote a market for a product which in itself would increase rather than reduce car prices and thereby bring no tangible benefit to the consumer. The data management policy had to be governed by what was necessary to convince the legislators of this need. However, if you examine closely those manufacturers of catalyst materials, who were largely responsible for the initiative, we see that these manufacturers were careful to not not go so far as to disclose how their catalytic materials were made. This is a very simple example of information management in use in industry; we can all think of many others.

Perhaps I could now move on to consider various issues in more detail.

2. THE LEVEL OR PROXIMITY TO THE MARKET

The first important issue to consider is the level of the information: is it pre-competitive basic research information, applied research, development, or production information? In general, the closer the information is to production, the greater the restrictions which will be applied to its release: the closer the information is to production information, the more beneficial it is to competitors and the more difficult it is to detect misuse of information with the result that it will be more tightly controlled.

(a) Precompetitive Research

In my experience, industry, as opposed to universities and research organisations such as the one for which I work, is involved little in basic precompetitive research. Such work in the fundamentals of science and engineering is almost invariably made available within the usual range of papers found in open literature, and , generally no restrictions are placed on its circulation. At the basic level, invention is comparatively rare, and, if they do arise, the only realistic protection available is by patent. Attempts to suppress inventive details at this stage are almost certainly doomed to failure because of the need to ensure that the invention concerned goes through the development and production phase. Whilst confidentiality arrangements could be used, the need to inolve several organisations in the transition phase means that such a practice is unlikely to succeed.

Thus, only delay in release of innovative information at this stage is often only that which is necessary to ensure that full and adequate patent protection is provided. Because this phase of the cycle to production tends to take place in non-industrial organisations, it is hard to detect real differences between industrial sectors or in national approaches.

(b) Applied Research

A far greater part of applied research is carried out in industry or research and development organisations, with, in consequence, a smaller percentage of the whole in Universities. Again, it is common to protect innovations by patent, but in those areas where patent protection is difficult and some secrecy apparent: this may be particularly true when the professional patent advisor has indicated that the innovation is perhaps lacking in inventive steps; then, there will be a tendency to try to secure advantage by keeping innovations quiet until a product has reached the market place. But, on the whole, it appears that information disclosure is still relatively liberal at this stage, and the patent literature becomes an incresingly important source of information on innovation, in addition to the scientific literature: it is also apparent that release of information through the scientific literature is not as free, particularly within competitive industries.

(c) Development and Production

We now move closer to the market place and find that the information-flow is much more restricted, thus, by the time one gets to the stage of production information, there is little or no disclosure. Any information released will normally be by way of a Technology Transfer Agreement.

Some information may be available by way of patents. Use by industry of patents in this area will depend on enforcibility. For example, where details of a particular production process can easily be traced - for example traces in the product or marked improvement in output - the patent system may be used. Where, on the other hand, it is impossible to detect infringement, production technology will not be openly published. Thus, we see that one determinant in publication decisions is the availability of appropriate patent production, and that production technology is more closely guarded than research information.

The availability of effective intellectual property laws in individual countries appears to be a determinant in decisions on technology transfer, and more of this later, but not in the publication of basic research information.

3. THE SECTOR

Proximity to market is one area which will influence technology disclosure; another is the area of technology.

Major companies in different areas do behave differently.

In the pharmaceutical and chemical industries, almost all disclosures concerning the formulations of new chemicals and drugs will be found in the patent literature. However, the major companies will positively encourage disclosure of research results on efficacy, safety and such matters as will materially influence the acceptability and performance assessments in the medical and sientific community pertaining to a new drug or chemical. It can thus be argued that such companies use and manage information as a vital part of their own markeitng and publicity effort. The pharmaceutical industry particularly uses the patent system to protect its investments and it has been noticeable that that industry has been very vociferous in looking to expand patent terms: it is also clear that the industry will not invest in countries in which the patent system is deemed weak, for example when recently the Canadian Government proposed compulsory licensing arrangements for pharmaceuticals, the industry reacted by promoting a virtual boycott on new investment, persuading the Canadian Government to backtrack on its proposals.

Like other industries, the pharmaceutical and chemical industries will not generally release know-how openly.

The Electronics Industry, particularly in the USA and Japan, again uses the patent system for disclosure and protection of inventions. The weaknesses of the patent system and, in the same countries, of the copyright system in preventing the plagiarism of new semiconductor chip designs, led to the introduction of semiconductor chip design protection. US and Japanese countries appear to be using this legislation to protech chip designs released to the public, and I am aware that a number of licensing arrangements have been agreed between US Corporations and Japanese Companies on chip design and technology. It is not so clear what use has been made in Europe of the equivalent legislation, as in countries like Great Britain, the protection system does not involve registration, and it is impossibloe to identify usage. Certainly, there appears to be no strong licensing activity in Europe in the field. Like other fields, production technology, unless it is clearly patentable, will be maintained as a trade secret.

By contrast to the pharmaceutical, chemical and electronics industries, the mechanical and electrical engineering industries, being more mature, do not have the extent of inventive work of these first three industries, and their actions appear to be driven more by the availability of protection. In countries such as Germany and Japan where a strong second-tier patent of utility model system exists, industries use the system to protect their work, and at the same time, in essence, published material on it. In other countires, and Great Britain is perhaps a good example, publication os what is in essence design work, is delayed until product launch, and protection, if it is available, is through a copyright-like system.

Interestingly, it appears notable that the countries which have atrong utility model protection systems are also those which are often associated with strong engineering sectors. To speculate further on any correlation is outside the scope of my talk - but no doubt could be an interesting study for my academic colleagues here today.

The Aerospace Industry is another sphere which does not use the patent system to quite the same extent as the electronics, pharmaceutical or chemical fields. It is an industry which again uses information disclosure as a means of generating markets, and raising expectations both amoung the public and suppliers. Perhaps a very obvious example of information used in this way was the release by the industry five or so years ago of conceptual ideas for sub-space travel in the next century - project information, such as Hotel, was released - although specific designs were the subject of patent applications.

It will be seen, therefore, that in each of the secotrs which I have discussed, release of information can be seen as a compromise between relative openness, where strong patent or utility model protection can be obtained, and secrecy, where patent or like protection cannot be obtained. However, this compromise is overridden by the need for a certain degree of openness in encouraging the market, the legislature, and to stimulate investment. However, whatever the case, production technology is hardly ever published. For academic work, publication is vital, as it is through publication that the value of an academic's work - and (probably) his further funding - is judged. Then, unless an academic is tied by contract, he will normally publish his work.

I have not discussed the defence sector as a separate entity. In general the firms dealing in the defence sector will behave in a manner identical to their main business area; for example, aerospace or electronics. In every case, publication may be delayed to avoid alerting competitors to new work in a field.

You will note that I have made little mention of copyright. In terms of information disclosure, the existence of copyright protection is for the most part of little relevance. Once industry or the academic has decided to publish, onward control is not seen to be vital: copyright will only be relevant if blatent plagiarism or misquotation occurs. Companies will, however, ensure that, in any publication contracts, they remain free to use and to copy the information concerned. For that reason, companies will not relinquish all rights of copyright in material published incorporating their information.

There are a number of sectors of industry, however, where my general comment concerning copyright relevance to data or information management is not correct. The first is the computer software industry. The patent laws as applied to computer software are still in a state of flux, although, following recent decisions in the United States, these appear to be quite robust there, and in Japan the laws appear to be similarly robust. In Europe, things still remain a little less clear. The recent IBM decision before the European Patent Office seems to make it clear that a computer adapted by means of a programme to produce a new technical effect is patentable, but a mere dtatbase is not.

The decisiono n patentability in the IBM case was only published last year, and it remains to be seen if national Courst within Europe uphold patents granted by the European Patent Office on what are essentially computer programmes. Until this occurs, the computer software industry will continue to treat the European patent system with some caution. Copyright remains the effective way of handling software piracy.

The second industry in which copyright plays an important part is the dataaand information management industry itself. By this industry, I mean those Companies which specialise in compiling databases and information bases which are then made available to the public. Copyright protection plays a vital role in the ability of such Companies to invest in their products, and to protect that investment. Interestingly, western film producers are reluctant to make copies of films availabel to USSR because of the reluctance of the authorities to enforce copyright legislation against copies. I am not aware that any of the large database Companies have made their products available in the USSR, but I am sure that the difficulties which have occurred in the film industry will not have escaped notice in any investment decision.

Copyright, of course, is vital for publishers in all sectors, including science, although I have indicated that in the scientific world itself, the author or his sponsoring Company would not be strongly concerned to control use of the information. The publshing industry will be concerned, firstly to ensure that it is free to publish the material concerned - and it will normally expect an appropriate arrangement and indemnity from the author or his Company, and secondly to prevent copying of the publication (but not use of the information) by others. No doubt Mr Clarke will discuss this more fully this afternoon.

Thus far, I have discussed the management of open publications and disclosures. Let us now turn to closed information transfer.

4. TECHNOLOGY TRANSFER

In this section I am taking the expression 'technology transfer' to mean a transfer privately between two or more parties. Of course, open publication is a form of technology transfer, and it should not be forgotten that the publicaiton mechanism is a very important form of technology transfer. Perhaps as an illustration, I could use an example from Great Britain. In 1982, a new liquid crystal effect was found and a patent filed. Subsequently, the inventors published details of the effect in scientific literature with the result that a number of Companies took up the technology. That observation now forms the basis of virtually all new portable computer displays, it was the publication of a particular observation and

the realisation of its importance that made practicable the portable computer. It was not possible to keep the secret as know-how, as it could be described in a very few words, and the effect used identified as soon as a first device came onto the market. Thus, it was decided to effect the technology transfer by publication, and to use the patent system to bring benefit to the innovation.

Technology transfer is the art of enlightening the unenlightened - one organisation telling another something it does not know.

Let us look at some of the principles which Companies might take into account. We have already considered rights; another factor is the competence of the receiving organisation both technically and in maintaining confidences; a third is the technical field of the possible transfer; a fourth is a possible wish to secure standards; a fifth, the location of the transfer, and finally, the adequacy of the reward to both partners?

(a) Rights

Intellectual Property is an important consideration in technology transfer. As I indicated earlier, production-level technology will be guarded most closely by Companies. Transfer will only take place if, by a combination of intellectual property and contractual arrangements, the discloser is legally secure. Transfer will not occur if the potential discloser feels at all insecure as to his legal posiiton.

(b) Competence

Technology transfer can only take place successfully if the receiving Company is competent, both technically and in handling commercially valuable information. If a potential discloser feels that, in transferring production technology, the receiving party is incapable of performign adequately, the failure could easily reflect badly on the quality the technology and the reputation of the disclosing company

For this reason, irrecpective of market sector, Companies will take care to ensure that the recipient will make good use of the technology. For his part, the recipient will wish to be assured that he can actually put the technology into practice, and that he can adequately cost the task before him.

As a result, it is quite usual in a technology transfer arrangement for staging, often many stages. to be implemented. A first stage, involving limited information to enable an initial assessment to be made, is followed by one or more further stages, perhaps involving stage payments in which complete transfer will take place. In a complex transfer, the recipient will expect the disclosure to demonstrate that the technology works in the recipient's environment, or that promises made by the disclosure are met. At each stage, greater trust will be established, and each stage will provide the opportunity to leave the deal if expectations are not realised. It will be appreciated that this is a complex area, and each technology transfer proposal will be constructed to suit the technology, the parties, and the market.

(c) The Marketplace

The marketplace is an important factor. Questions Companies will ask when considering particular markets are whether it is a market that they can be sensibly addressed. For example, if the market is in perishables, it is not sensible to meet the market from overseas. Similarly, if the product concerned is difficult or expensive to transport, local manufacture may be better.

In this regard, it is also very important to realise that, in some marketplaces, local manufacture and product support is important: if this is a very strong factor, and the intellectual property position is not watertight, this may be sufficient to tempt an indigenous manufacturer to chance his arm to meet the demand for local manufacture: the Company with the original technology may find ti more preferable to transfer technology to a friendly local manufacturer to meet the market and market opportunity than to consider a fight with a hostile opponent. If his local sales and marketing organisation is insufficiently strong to support a product, discontent with performance is not only damaging to reputation, but will also tempt a potential competitor: a weak market presence may be a good reason to consider technology transfer.

(d) Standards

One often overlooked reason for a Company to consider technology is to promote standards. A Company could well be in a better position if it transfers technology to others to enabel others to work to the same standards. Failure to do so can mean that competitors may adopt their own technology and operate it to a different standard, with the result that the original Company can be marginalised and eventually squeezed out of the market for its products. Fairly obvious examples of this have been video recorder standards and compact disc (CD) players.

It is a brace manager who will agree to effect technology transfer for this reason, but history shows that managers have been prone to underestimate the technical strengths of competitors.

(e) The Country

The country of the proposed transfer is important. Many countries, particularly developing nations, have enacted compulsory licences and local partnership legislation, or have little or no protection for key technologies, such as chemicals or drugs. Companies are reluctant to transfer modern technologies, to such countries for fear of loss of control. Of course, it is open to question whether such a transfer would always be effective, but it is clear from my discussions with Companies that weak or harsh legal systems can act in a counterproductive manner. Certain countries require indigenous manufacture if the aim is to sell to a local market; this leads to the establishment of local manufacturing units, particularly in the chemical and pharmaceutical areas and in order to meet the

demand in such a markt, it is necessary to carry out transfer of technology from the parent Company to a partly-owned local Company. The effect is often that the technology involved can be somewhat dated; the countries concerned would themselves argue that these protections are necessary to prevent foreign Companies from dominating the market and thereby suppressing any opportunities that may arise for locally=generated industry to grow. One suspects that both comps may be right to some extent, and the controversy will continue.

(f) Money

Finally, in my list of factors contributing to successful technology transfer, and certainly those affecting the attitudes of International Companies, money is a key one. No matter what sector of industry is involved, unless the technology transfer is profitable to both disclosures and recipient, it will not succeed.

5. CONCLUSION

In conclusion, therefore, I believe that, in whichever sector is discussed, the decision-making process operates similarly in both data/information control and technology transfer. Essentially, technology transfer is a profit-orientated process, and any action taken will be one deemed to be in the Comapny's best interests. There are apparent differences in the perceived application of this policy to different sectors, but these can be attributed to differences in the manner in which intellectual property is protected, and to those in the market demand.

ABSTRACT

In considering data management and technology transfer, it will be found that different areas of industry and other organisations operating in technological fields will have developed policies which will best reflect the environment, both legal and national, in which they operate. Furthermore, attitudes of individual companies are coloured by the attitudes of immediate competitors. In this talk, consideration will be given to the effectiveness of legal protection mechanisms in various parts of the world. It should be particularly noted that legal mechanisms specifically intended to promote technology transfers, particularly systems of compusory licensing, often have the opposite effects, both restricting the availability of information and technology transfer.

REPRODUCTION: LEGAL LICENCE AND CONTRACTUAL PROCEDURES
Principles and Practice

by
COLIN P. HADLEY
Chief Executive
Copyright Licensing Agency
90 Tottenham Court Road, London, W1P 9HE

1. INTRODUCTION

Scientific information as such is not protected by copyright, only the scientific book or the journal is protected.

Protected by whom against what? Copyright is the right in law of the **individual** creator to determine the use to which his or her creative thoughts set down in material form may be used or not by others and at what charge and on what conditions.

The Berne Convention on copyright [1] to which most developed nations are signatories lays down that copyright is a personal right; the contracting states were "constituted into a union for the protection of the rights of authors over their literary and artistic works". That's all well and good but how does the individual exercise this right as we fast approach the 21st century and in a world dominated by large and powerful institutions. It is a variation on the David and Goliath theme; it is therefore concerned with the interaction between the individual and the user; and, it is also about the ability and desirability of the individual, in some measure to impede the advance of science, education, government and industry. So there are moral imperatives too: there is the duty of powerful institutions to pay for what they use so that creativity can be further encouraged and there is the obligation of the individual not to thwart progress for the general good.

As its title indicates this paper is concerned as much with the practice as with the principles of licensing facsimile reproduction of copyright material.

I propose to examine the principles of collective licensing first and in this I am indebted to CLA's legal adviser, Mr Charles Clark [2], and I draw heavily on his work in this area. I shall then move on to the practice and the day-to-day running of a collecting society. And, finally, I shall look at electrocopying and the technologies being developed by CLA to deal with this and other new advances in communication.

Jan Struther [3], in her book Mrs Miniver, that felicitous collection of pre-war reflections of the English way of life wrote:

> "You cannot successfully navigate the future unless you keep always framed beside it a small clear image of the past".

I think that's rather apposite so I am going to start with a backwards glance and to a moment of recorded history and the words of Lord Mansfield [4] in a legal case decided over two hundred years ago which involved the rights and wrongs of the copying of maps, Sayre v Moore, in 1785:

> "We must take care to guard against two extremes equally prejudicial: the one, that men of ability, who have employed

> their time for the service of their community, may not be deprived of their just merits, and the reward of their ingenuity and labour; the other, that the world may not be deprived of improvements, nor the progress of the arts be retarded".

Plus ca change! The task of reconciling the interests of those who create copyright works, that is authors and their business partners, publishers, with the interests of those who use copyright works through copying them, - students, teachers, researchers, people in the professions and in business, is still with us.

It was, of course, the invention of the Xerox machine in the early 1950's that opened the door to massive infringement of the rights of creators.

Easy access to photocopying machinery has made **individual control** of the creators' rights of reproduction **impossible**, so that collective control and reward through collecting societies has become not just desirable, but necessary.

It is important, also, by way of introduction, to grasp the sheer size of the issue. One recent estimate put the global figure for illicit copy pages at more than 300 billion per annum.

There are indications that in the advanced economies of Western Europe something in the order of 200 copy pages per head of population would be a reasonable estimate of annual use of copyright works. And in the UK we know, as closely as we can from detailed log sheets, that the state schools system uses approximately 110 million copy pages of copyright works per year. In the university sector, an audit of Macquarrie University, in Australia in the mid-80s yielded an average of 2.1 million acts of copying per annum in four successive academic years, the equivalent of 14 copy pages per student per month; and the uses by British commerce and industry of copyright works amounted, in an exploratory study in 1988, to approximately 1.7 billion copy pages per annum. The role of collective administration of rights in literary works is not therefore peripheral to the copyright system. It is rapidly becoming the copyright system's central strategy in reconciling creator and user interests. Lord Mansfield's dictum holds true for developed countries today and will hold true for developing countries tomorrow.

Ironically, it may well turn out that the moment of technology which totally changed the context of reprographic reproduction, that is the invention of the Xerox machine, will provide through the vehicle of the computer the means to collectively control photocopying and to distribute the rewards to rights holders in a manner that truly reflects intensity of use.

2. PRINCIPLES

The following propositions identified by Charles Clark, there are ten of them, are drawn from several sources - the Recommendations of the Committee of Ministers of the Council of Europe, adopted in April 1990, on this subject; the Principles adopted by those members of the International Federation of Reproduction Rights Organisations - IFRRO [5] - who are located in the countries of the European Community (May 1991); the Report prepared by the International Bureau of the World Intellectual Property

Organisation (WIPO) for a group of consultants, dated December, 1989; the continuing work of the Copyright Licensing Agency (CLA) in the United Kingdom and other individual sources.

Proposition One

The collective administration of acts of reprography stems from the **exclusive right** which an individual author of a work he or she has created holds to authorise or not reproduction of the work, as a right created by national law.

Commentary on Proposition One

It is an **individual right**, whether exercised individually or collectively, and this must be stressed at the outset. The right of reproduction is a primary and exclusive right of copyright law, recognised by the Berne Convention, under Art. 9 (1), with exemptions limited under Art. 9 (2), and set out in the national copyright law of every member of Berne as a condition of membership.

In the United Kingdom, alongside this right of the author of a work recognised by copyright, the Copyright, Designs and Patents Act of 1988 protects also a right of the publisher who invests both creatively and financially in the literary work prepared by the author, in converting it into an article, a book or a journal issue, for example - which is offered for sale or for subscription.

This form of `publisher's right' gives to the publisher a right in copyright itself which is of particular importance in the collective administration of reprographic reproduction rights. Under UK copyright law [6], therefore, the publisher has a legal right in copyright to be at the bargaining table. He is not a willingly (or unwillingly) invited guest. He has a right to be there since the very nature of his right in the published edition is to authorise, or not, the making of a facsimile copy of the typographical arrangement of a published edition [SS.1 (i) (c), and 17(c)].

Proposition Two

Collective administration of the right of reproduction is justified wherever that right **cannot be exercised practically on an individual basis.**

Commentary on Proposition Two

The best exercise of rights is an individual one, by an individual publisher, acting as assignee of the copyright from the author, or as exclusive licensee of certain rights from the author, who negotiates the best terms he can get for his author and himself. The border beyond which individual control and exercise of rights is not feasible will vary from right to right. In the case of control and exercise of the reprographic reproduction right (that is, facsimile reproduction in paper form) it is unanimously agreed that the border was crossed many years ago.

Proposition Three

"1. States should, in their legislation on copyright, **limit exceptions** to the exclusive rights of copyright owners,

according to the letter and spirit of the relevant provisions of the Berne Convention. This should especially be the case where exceptions are made to the exclusive rights of authors but are not accompanied by remuneration.

2. States should, having regard to Article 9 of the Berne Convention, carefully examine whether reprography in their respective countries is carried out in a way and to an extent that conflict with the normal exploitation of works or otherwise unreasonably prejudice the legitimate interests of right owners. In case of such conflict or prejudice, states should seek to take appropriate measures".

Commentary on Proposition Three

This proposition is taken verbatim from the text of the Council of Europe Recommendation of 25 April 1990. Art. 9(2) of the Berne Convention states the framework for any exemptions from the principle of Art. 9(1): thus-

"Article 9

(1) Authors of literary and artistic works protected by the Convention shall have the exclusive right of authorising the reproduction of these works, in any manner or form.

(2) It shall be a matter of legislation in the countries of the Union to permit the reproduction of such works in certain special cases, provided that such reproduction does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author".

There are several comments to be made here. First, while the general principle of Art. 9(2) does not change, the context of what is "a normal exploitation" does. The copyright community has tended to see these words only in the context of interference with the sales or subscription potential of a work: that context may open the door to massive amounts of unauthorised copying because of the great difficulty in quantifying interference - at what act of copying of a book or journal can it be shown that a loss of sale or subscription takes place?

If, however, authors and publishers in the 1990s, as a normal practice, mandate a collecting society to obtain remuneration or compensation of copyright of their works through the technique of collective licensing, then they as the copyright holders are exercising `a normal exploitation' of their works. The scope for copying within the `exceptional principle' of Art. 9 (2) is therefore greatly narrowed.

Under Art. 9(2), however, such exceptions will always be a feature of national laws, and the Council of Europe is right to draw attention of the special importance of limiting exceptions: "when exceptions are made to the exclusive rights of authors but are not accompanied by remuneration". This principle should be interpreted by authors and publishers with particular vigilance where, as in the UK, the law enshrines the notion of `fair dealing', which allows certain acts of copying to be done by users without payment at all.

Proposition Four

Collective administration should, if possible, be based on voluntary negotiation between copyright holders and copyright users, for remuneration to the copyright holders from the copyright users; but it may alternatively be based on non-voluntary conditions, for compensation to the copyright holders from the copyright users.

Commentary on Proposition Four

The terms `remuneration' and `compensation' in the above context are consistently used in this presentation in order to bring home the degrees of derogation represented by, first, collective voluntary income and, then, by collective statutory income, from the standard of `reward' which is the hallmark of the copyright system where the individual exercise of rights is preserved.

The existence of many systems demonstrates there is not a simple choice between voluntary negotiation and state imposition. The British approach of voluntary negotiation with statutory back up, e.g. the intervention of the newly created Copyright Tribunal, probably suits the British temperament.

Proposition Five

Collective administration involves licensing for the use through copying, the monitoring of use, the setting of fees, collection of fees, distribution of fees as remuneration to the rights holders, and enforcement on behalf of the rights holders. In the case of compensation for non-voluntary licensing, collective administration is a preferred system for many of these tasks.

Commentary of Proposition Five

This proposition is largely self-evident, but it is worth pointing out that societies such as WORT in Germany that operate with a high degree of state intervention as to setting of fees do nevertheless have great autonomy negotiating and operating other central features of collective administration.

Proposition Six

In any one country there should, in the field of reprographic reproduction, be only one collective agency, co-operating, where desirable, with other collective agencies in associated fields of rights and categories of works.

Commentary on Proposition Six

The law may need to limit the number of collecting societies to ensure that users are not faced with different conditions for the licensing to them of any one category of copyright works. Even within the field of reprography, the licensing of literary works may involve considerations different from those relevant to the licensing of artistic works. The user's principal fear is burdensome administration. He craves for a copyright oasis and is now demanding a simple system for copyright clearance, a one-stop operation which can deal accurately and swiftly by telephone, fax or letter with all of his permission requests.

Proposition Seven

A national RRO must make available to users under licence from it as comprehensive a repertoire as possible.

Commentary on Proposition Seven

If users are to be required, outside the exceptional terms of `fair dealing', `library privileges', and similar concepts, to copy only under the conditions of collective licensing, then they are entitled to have available to them the repertoire of works that they need. As to a national repertoire, the UK Act of 1988 contains a whole chapter, Chapter VII, entitled Copyright Licensing. An important purpose of Chapter VII is to encourage collective licensing in general, and in particular to nudge into the repertoire of a collecting society (a) individual works whose authors and/or publishers are `members of the awkward squad' and so unreasonably refuse to license their works and (b) a whole class of works, access to which is not offered by the rights holders. This fairly draconian view of users' needs is limited to the field of reprographic licensing for educational establishments, where social policy towards user interests is particularly favourable.

At this point we should note also the Nordic countries' use of the system of `extended collective agreement licensing'. Where a major user group e.g. education establishments, has entered into an agreement with a collecting society which specifies the conditions and the remuneration for use of all works whose reprographic copying rights belong to the members of the society, it is reasonable, so the argument runs, to presume that the conditions and remuneration will be satisfactory to non-member authors of the same kind as the member authors. The right to copy on such terms is therefore extended to non-members, for the considerable convenience of users.

As to the international repertoire, this is as important for users, especially in world language copyright works, e.g. English or Spanish language works, as is the national repertoire. The Nordic system has its impact here also (in the shape of what the Scandinavians call "the problem of the outsider)". The main device that the collecting societies have developed is a network of bilateral reciprocal agreements in which society A in country X grants its national repertoire to its counterpart Society B in country Y in return for Society B's repertoire. There is an obvious danger that the societies create a `cat's cradle' of bilateral reciprocity of the kind that on the much larger stage of copyright itself in the mid-nineteenth century led to the creation of the Berne Convention in 1886. IFRRO has begun to tackle this difficult issue, and has drafted a set of Principles for Bilateral Agreements.

The provision of a facility is one thing, the take-up is quite another! Availability of and access to a vast repertoire of copyright texts does not mean that it is all going to be copied. Far from it. Pareto's theories [7] of elites and residues (the 80-20 rule) apply just as much to reprographic reproduction as to anything else with 80% of the copying or more being taken from 20% of the repertoire or less. So whilst users demand access to a wide repertoire in point of fact they copy from only a relatively small part.

Proposition Eight

The remuneration or compensation collected by an RRO should - after deduction of costs of administration and other sums for such purposes as may be authorised by the rights holders - be distributed among individual rights holders either directly or through their representative bodies.

Commentary on Proposition Eight

The costs to be deducted are usually settled by and supervised by the governing bodies of the collecting societies. `Other sums' refers particularly to deduction from gross income of a modest percentage for social and cultural benefits of the national authors of a society; Which is the case in Germany for example. The exact manner of distribution will depend, broadly, on whether a society measures use by survey or by sample. Societies that depend on survey will gain quite detailed knowledge about the categories of works being copied, but usually have no information about what individual works are being copied. Distribution to authors and publishers is often, therefore, made through grants from their representative associations in membership with the RRO.

Societies that depend on sample will have information about what individual works are being copied, but the sample is only a sample, and an element of `rough justice' has be accepted as the price for distribution to authors and publishers according to intensity of use of those works that are recorded in the sample.

Proposition Nine

Collection of remuneration or compensation on behalf of foreign rights holders should be on the same basis as collection on behalf of national rights holders. Distribution to foreign rights holders should be on the same basis as distribution by the RRO in the country of which the foreign right holder is a national.

Commentary of Proposition Nine

It is important to spell out what `national treatment' should mean for foreign rights holders at each of the collecting and distributing ends of the collective licensing system. There are, however, difficult problems where a survey system society, having collected income, wishes to pass the proportion due, according to its survey, to foreign rights holder via a corresponding sample system society. The survey will not have identified individual works or intensity of use, (it is difficult enough for the survey to identify even individual foreign countries with any accuracy), so that distribution to individual rights holders according to intensity of use (which is national treatment in the country of distribution of a sample system society) is not possible. The sample system society must either put the income to some general use, e.g. enforcement of the society's mandated rights, which is agreed by the survey systems society, or, again in agreement with that society, it may `top-up' domestic payments. The problem is a serious one for societies that export heavily the use of their repertoire, e.g. because their repertoire contains learned scientific literature in a world language. It is a serious matter also for a society whose licensees use heavy imported repertoires.

Proposition Ten

The public interest requires both the encouragement in law of the work of collective licensing societies and also the accountability in law of such societies.

Commentary of Proposition Ten
Encouragement

The Council of Europe Principles say that states should consider "facilitating voluntary licensing schemes. The effects of such schemes could be reinforced if necessary, by appropriate statutory provisions". We have noted at the Commentary on Proposition Seven above the reinforcing provision in Chapter VII of the UK law of 1988, and the Nordic `extended collective licensing agreement' system. Should the state go further? Should it erect a legal presumption that a collective rights society has the power to authorise use on behalf of all national rights owners? Such a presumption to be coupled with an appropriate warranty/indemnity to users in the event of claims by national rights holders who have not mandated the collective rights society? The UK law of 1988 does not erect a legal presumption, but it does require that those offering licensing systems for reprographic copying must indemnify licensees in respect of any infringing copy which is within the apparent scope of the licence (s.131). This provision had its origin, interestingly, in the early contracts between the CLA and the UK's local education authorities.

Accountability

In its very important Report of 7 December 1989 entitled "Collective Administration of Copyright and Neighbouring Rights" WIPO has this to say about state support for and supervision of the setting up and operation of collective administration organisation:

"277. The approval of the establishment of a collective administration organisation, of course, is not a sufficient guarantee in itself for the appropriate operation of the collective administration system. Therefore, the competent authorities, although they should not unnecessarily interfere in the actual administration of rights, should regularly supervise certain key elements of the collective administration systems, such as whether the actual activities correspond to the approved articles of association; whether the rules of collecting and distributing fees are correct; whether the costs of administration are reasonable; and whether the distribution and transfer of fees actually take place as prescribed.

278. The supervision of the establishment and operation of collective administration organisations should guarantee, inter alia, the following: the availability of the collective administration system for all right owners who need it; reasonable terms of membership; an appropriate role of the right owners, or of bodies representing them, in important decisions that may concern the administration of their rights; a correct monitoring, collection and distribution system which does not contain any elements of discrimination between right owners, members or non-members, nationals or foreigners; the availability of concrete and detailed information for the right owners and for the foreign organisations with which mutual representation contracts exist in respect of certain basic data on the administration of the rights in their works or in their repertoire, respectively."

Finally, on Proposition Ten, the WIPO Report touches on the potential, in the conduct of collecting societies, for abuse of the quasi-monopolistic power which they exercise: what are "the concrete conditions and limits of the application of anti-trust measures in case of collective administration of copyright and neighbouring right?" This issue arises most frequently (at least in the minds of users) over the determination of fees and conditions. Disputes which concern alleged arbitrary and abusive fees and conditions may be left to the courts (a very lengthy and very expensive procedure is most countries) or may be settled by special copyright tribunals, or, of course, may be pre-empted by the approval of tariffs and conditions by the relevant state authority, of a Ministry of Justice, or of Culture, or of Trade.

3. PRACTICE

Given the protection of international conventions and the framework of national legislation just how do the owners of intellectual property in practice protect their rights and enforce them if need be?

Not surprisingly, I shall be using the United Kingdom as my example. The concept of copyright is well established in the UK. Between 1556 and 1640 the decrees of the Star Chamber held printers and importers in check. Control was maintained through the Licensing Act (1662-1679) and various ordances until the first Copyright Act (The Statute of Queen Anne) in 1709. A succession of Copyright Acts - 1814, 1842, 1911, 1956 and the latest The Copyright, Designs and Patents Act 1988 have graced the Statute Book in their turn. Regrettably, the 1956 Act did not anticipate the advent of the photocopying machine!

In the United Kingdom eighteen years have passed since 1973 when interest groups started to prepare submissions to a government-appointed committee under the Hon Mr Justice Whitford about ways of regulating copying from books, journals and periodicals. These interest groups, representing owners of copyrights, were seeking both a mechanism of control and just recompense for authors and publishers while at the same time continuing to satisfy the reasonable demands of a modern information-driven society.

When it was eventually published in 1977, the Whitford Report on **Copyright and Designs Law** (Cmnd 6732) suggested, as the best likely solution to the problem, a collective administration system for copying right organised by the rights holders themselves. This recommendation spawned first the Wolfenden Committee [8] that brought together representatives of authors' societies and publishers' associations, and then, the de Freitas Committee [9] that hammered out a mutually acceptable constitution for such a licensing body. The outcome was the formation of the Copyright Licensing Agency (CLA) in April 1982 and its incorporation in January 1983 as a non-profit making company limited by guarantee. The Agency which is primarily concerned with licensing 'heavy user' groups issued its first licence in May 1984.

CLA is 'owned', inasmuch as a company without shares can be owned, by the Authors' Licensing & Collecting Society (ALCS) and the Publishers Licensing Society (PLS) in that they are its only members. ALCS' members in turn are The Society of Authors (SoA) and the Writers' Guild of Great Britain (WGoGB); PLS' members are The Publishers Association (PA), the Periodical Publishers

Association (PPA) and the Association of Learned and Professional Society Publishers (ALPSP) broadly representing book, magazine and journal interests. All are represented on CLA's board of twelve directors, six being ALCS nominations and six PLS. The ultimate owners are, of course, the individual authors and the individual publishers in membership of these organisations.

CLA has six main functions and these are:

* To obtain mandates from publishers and authors in association with PLS and ALCS

* To license users for copying extracts from books, journals and periodicals.

* To collect fees from licensed users for such copying

* To implement a system of record-keeping sufficient to provide statistically-acceptable information on which to calculate a fair apportionment of the distributable income

* To pay ALCS, PLS and foreign RROs, with whom CLA has reciprocal or bilateral agreements, their correct shares of the distributable income and to provide sufficient data to enable these societies to pay individual authors and publishers

* To institute such legal proceedings as may be necessary for the enforcement of the rights entrusted to the Agency.

CLA sees its principal licensing areas in the UK as being **education, government and industry.** Each of these broad categories has three or four sub-groups:

EDUCATION	**GOVERNMENT**	**INDUSTRY**
General Education	National Government	Trade
Further Education	Local Government	Industry
Higher Education	Public Bodies	Commerce
Charities & Churches		Professions

In company with nearly all other RROs around the world CLA started licensing in the general education sector. The first major development occurred in April 1986 when three year voluntary licensing agreements with the country's local education authorities (LEAs) came into effect; copying in all 30,000 or so state primary and secondary schools and tertiary colleges is now covered by such licences. The Agency also licenses the private education sector through its licensing scheme for independent schools as well as language schools.

With general education (5 to 17 years) covered, CLA next turned its attention to higher and further education (HE & FE) and during 1989 and 1990, after several years of negotiating, finalised an arrangement whereby universities, polytechnics and independent voluntary colleges all became licensed from 1 January 1990. Three year licences once again were the norm.

Having successfully negotiated copying licences for the local education authorities CLA is now trying to license the non-educational parts of local government e.g. surveyors' and engineers' departments etc.

It is the Agency's intention to deal with national government on a ministry by ministry basis starting with the National Health Service (NHS) which, with 1.25 million employees, is the largest employer in Europe; the Department of Trade and Industry (DTI) as the architects and guardians of the Copyright, Designs and Patents Act 1988; and the Department of Education and Science (DES) because educational institutions are already licensed.

Public Bodies, i.e. those organisations for which government ministers have some accountability, may have to be dealt with in various non-collective ways. The first Public Body to be licensed by CLA was The British Library of which the British Library Document Supply Centre at Boston Spa in West Yorkshire is only part. This particular licence, came into operation from 1 April 1991, and is transactional. BLDSC, as it is known, supplies about 2.3 million copies of journal articles each year!

Trade, industry, commerce and the professions, because of their size and diversity, present CLA with its greatest challenge. A first step has already been taken, however, with the setting up of a joint task force with the Confederation and British Industry (CBI). This CBI/CLA working party, chaired by an industralist, is examining the best way or ways forward, concentrating initially on manufacturing industry and with particular emphasis on research and development driven sectors such as pharmaceuticals, chemicals, engineering, electronics, aerospace and oil fuel. CLA is also discussing with The Law Society the most appropriate way to license solicitors in England and Wales.

Basically, CLA is a banking operation with legal overtones: it collects fees from licensed users in respect of acts of photocopying from books and serials and, after deducting its administration cost and any reserves or provisions the Board may decide, distributes the balance to ALCS and PLS for them to pay to individual authors and publishers; and to foreign RROs, for them to distribute in accordance with their own customs and practices.

CLA aims to offer each sector of the user community the most appropriate form of licensing, and to that end it is always prepared to be flexible when discussing proposals for licensing.

Certain core principles, however, always apply:

1) CLA's responsibility to copyright holders is paramount and it must exercise care not to undermine the value of the rights entrusted to it.

2) All licensees have access to the full repertoire of works handled by CLA.

The Copyright, Designs and Patents Act 1988 introduced a statutory framework for licensed copying in the UK and CLA has to operate within that framework. The law provides for licences to be offered by Licensing Bodies such as CLA either separately or as part of a Licensing Scheme.

CLA licenses closed user groups and very large users directly, with licences negotiated individually. The Agency also operates some Licensing Schemes, such as its Licensing Scheme for Independent Schools. It is obliged by law to make licences under this scheme

available to all of the 2,350 independent schools in the UK. Within this broad framework, CLA's licences are of two basic types:

* Transactional Licences that require users to record each copy as it is made; fees are paid on a straight cost per copy page or cost per copied article basis, returns are sent to CLA at regular, agreed intervals and a self-billing system generally employed.

* Sample-based Licences that usually involve an agreed pre-paid copying fee, which is distributed to rights holders on the basis of a sample of sectorial copying. It is a feature of sample-based licences that not every copy made by every licensee need always be recorded; instead, only a small rotating group of representative licensees, chosen by the Agency, is required to record every copy made during a sample period.

The sample is carefully structured and CLA uses a Consultant Statistician, an academic and a fellow of the Institute of Statistics, to ensure that only the smallest sampling error pertains.

Experience so far, both in the UK and overseas, has shown that transactional methods are practicable only in a very few special cases. But that is about to change! The most important example of transactional licensing is document delivery, where the copying transaction is recorded in any case as the central activity of the licensee.

By concentrating on a sample-based system in most other cases, CLA can ensure that record-keeping is maintained to a high standard. In the Agency's experience well-kept sample records produce a more accurate overall picture than poorly-enforced total record-keeping.

The copying level on which the licence fee is based is determined, initially, by consultation and negotiation with a representative body and a global fee agreed. Wherever possible, CLA negotiates on a collective basis with a representative body mandated to negotiate formally on behalf of a closed membership. These collective agreements form the bedrock of CLA's present operations in education, and provide administrative savings which can be passed on to licensees.

Where the central body is only broadly representative and unable to commit its constituent members (e.g. English Language Schools), CLA will usually sign a Memorandum of Understanding with that body before launching a Licensing Scheme aimed at individual licensees within a particular closed user group. However, in this case there are few administrative savings and costs to the user are somewhat higher.

Importantly, from the user community's standpoint, CLA indemnifies all licensees against inadvertent infringement of copyright. [See Commentary on Proposition Ten]

Right from outset, the authors' representatives insisted first that writers should benefit individually and directly from the copying of their works, rather than for the money to go to authors' societies for `social benefit' purposes, as is the case in some parts of the world (see Proposition Eight). Secondly, they

insisted that the individual authors' shares should be paid to them directly, and not through the accounting systems of their publishers, which prevents this secondary income being off-set against unrecouped advances.

In order to fulfil these requirements CLA had to devise a title-based distribution system and a form of record-keeping suitable for a stratified and statistically-sound sample of the licensees.

Controlled record-keeping is crucial to CLA because the statistical information extracted from these records of copying is used as the basis for making payments to rights' holders whose works have been copied. Once a licence has been issued, it has been relatively simple, so far, to collect fees. It is quite another matter, however, to edit, process, and analyse the returns of copying, and to calculate the correct amounts due to copyright holders.

The Bible has it (Acts 20.35) that it is more blessed to give then to receive; CLA's experience is that it is unquestionably easier to receive than to distribute!

On return to the Agency, the record-keeping forms, which are regarded and treated as strictly confidential documents (some are actually deemed to be `personal data' under the Data Protection Act of 1984) are:

* Checked by the licensing officer responsible to ensure that the conditions of the licence are being adhered to
* Scrutinised by the data preparation department to validate the information being submitted, e.g. missing ISBN/ISSNs etc. are searched for
* Keyed for computer analysis
* Subjected to final edit for data quality
* Results analysed and summaries produced showing pages copied, by ISBN/ISSN, by title, by author, and by publisher
* Apportionments calculated, statements produced and cheques drawn.

Whilst manual record-keeping works perfectly adequately in schools, which on the whole are very structured and disciplined organisations, it has to be admitted that it works less well in universities, polytechnics and other colleges of higher education where a freer and more rebellious spirit reigns! The indications are that the keeping of log sheets would also be resisted both by government departments and industrial concerns. To counter this resistance CLA is presently developing a rapid copyright clearance service (CLARCS) to deal with permission requests from industry and government on a transactional basis.

The existence of the International Standard Book Number (ISBN) and the International Standard Serial Number (ISSN) systems is a great benefit to CLA and makes the Agency's task that much easier than it would otherwise be.

The CLA Board decided that the first distribution to members would be £1.4 million (US$2.3 million) and would be paid in two parts; the first tranche of just over £500,000 in October 1987, and the balance of around £900,00 in March/April 1988. Thereafter, payments to rights owners would be made every six months. At the

time of writing CLA has distributed over £6 million to members and foreign RRO's:

Year	Amount £
1987	518,264
1988	1,399,104
1989	1,155,602
1990	1,813,489
1991 (Part)	1,165,934
	6,052,393

The returns submitted by state colleges and schools on CLA's structured sample enabled the Agency's statistician to confirm that copying from copyright books and serials by this sector, is now in the order of 110 million pages per annum, which supports the estimates produced by earlier surveys and on which the initial global fee for LEAs was based. [See Introduction]

It must be emphasised that a CLA licence is not a carte blanche to unrestricted copying. The conditions are clearly set down and are required to be displayed alongside every copying machine within the control of the licensee. The wording of the notices may vary slightly depending on the category of the licensee but the core message is alway the same! CLA also produces various User Guides for issue to employees and there is a warning sticker that goes on top of the machines to act as a reminder to copier users.

Of course, the broader the repertoire an RRO can offer its licensees the better [see Proposition Seven], and it is a priority of CLA to secure reciprocal agreements with similar organisations overseas, particularly those in English-speaking countries where British books, journals and periodicals are being widely and extensively copied, and, equally, where much publishing in the English language takes place.

For CLA there is comfort in community and in knowing that it is not alone in pioneering the collective administration of copying rights.

Counterpart organisations to CLA are now operating in seventeen other countries - Australia, Austria, Canada, Denmark, Finland, France, Germany, Iceland, Italy, The Netherlands, New Zealand, Norway, South Africa, Spain, Sweden, Switzerland and The United States, nearly all of them in membership of IFRRO, the International Federation of Reproduction Rights Organisations; RROs are also presently being formed in Belgium, Ireland and Japan. Indeed, at its Eleventh Meeting, held in Heidelberg on 26 April 1986, to coincide with the centenary of the signing of the Berne Convention on Copyright, IFRRO made the following declaration:

> "We hereby declare our intent to encourage any joint attempt by authors and publishers in any national to establish national collecting societies in the field of reprography. We are ready to offer co-operation to this establishment in a positive spirit".

If the user community is fair, then RRO's are reasonable. However, if the user community is unfair and serious copyright infringement

is uncovered, it may be necessary to put an iron fist inside the velvet glove of reasonableness.

From time to time rights holders have found it necessary to resort to legal action in order to protect their intellectual property. Well-reported photocopying cases in the UK include the action taken in 1984 by the Music Publishers Association (MPA) against Oakham School in Leicestershire in which the school had to pay £4,250 in damages and costs for copying songs and musical scores without permission; even more punitive was the £50,000 in damages and £25,000 costs that Manchester City Council had to pay the Publishers Association and others for gross infringement of copyright by one of the authority's secondary schools. In a 1988 judgement in Australia (Moorehouse and Angus & Robertson vs University of New South Wales) it was ruled that institutions on which coin-operated photocopying machines were sited were themselves responsible for any illegal copying done on the machines.

Earlier this year in March, eight American publishers took the Kinko's Graphics Corporation, which runs a chain of campus copyshops, to court in New York for gross infringement of copyright and were awarded $510,000 damages plus costs; the effects of this judgement which Kinko's have decided not to take to appeal will have wide repercussions not only in the USA but in other parts of the world too. Expected soon in the United States is the judgement in the legal action that the Association for Copyright Enforcement (ACE) has brought against Texaco.

Critics of collecting societies say that they spend pounds to distribute pennies. From the start, this is a potential criticism of which the CLA directors were acutely conscious and as far back as November 1982 the board designate set down in its minutes that on no account were CLA's operating costs to exceed 20% of the fee income. The Agency has done much better than that: CLA's deduction for administration purposes is currently 12.5% of the copying fee income, and it continually strives to reduce that level whenever possible. It is, however, in the business of handling large numbers of documents and processing a great deal of information, and to do so efficiently in this day and age a high degree of office automation is required, and technological wizardry does not come cheap.

CLA's aim is to distribute as much as it can, as fast as it can, and as efficiently as it can. It believes that over £6 million, distributed between October 1987 and August 1991, speaks louder than any words, and demonstrates better than anything else, the Agency's resolve to achieve its objectives.

4. FUTURE DIRECTIONS

I started by reflecting on what Lord Mansfield had to say about copyright in 1785 and I am going to round off my presentation by peering ahead. Looking forward perhaps to a time when photocopying in significant measure will have been replaced by electrocopying.

Photocopying extracts from books and journals no longer satisfies user demand in either education, government or industry. All these sectors have already invested, and are continuing to invest in equipment capable of electrocopying (principally desk-top publishing and electronic filing).

There is a valid distinction to be made between electropublishing and electrocopying, and the following broad definitions are suggested:

Electropublishing: The distribution (commercial or otherwise) to the public in electronic form of copies of whole copyright works; e.g:

- CD-Rom
- Online publication

(note: publications distributed in paper form are not electropublished, even though an electronic process is used in their preparation)

Electrocopying: making, and/or retaining, in electronic form, a copy of the whole or part of a previously published copyright work; e.g:

- typing into a word-processor
- scanning into a computer
- displaying on screen
- downloading to or from a network

(note: the printed paper output of an electrocopying process is not therefore an electrocopy, but the copy stored in the memory from which the final output is produced is an electrocopy).

It is evident that the user community wants to electrocopy within the law and is willing to pay a fair price to do so. It is neither willing nor able to seek written permission from **individual publishers** on every single occasion that it wants to copy.

Rightsholders have made it clear that whilst they have reluctantly accepted blanket licensing and unitary pricing as an interim measure to deal with photocopying from copyright works they are not prepared to go down that road again with electrocopying and another solution has to be found. A solution that reflects the value which the rightsholders themselves place upon the work i.e. transactional licensing with variable fees.

In CLA's view the effective electrocopying licensing system will need to accommodate six salient features:

1. Control The copyright holder must retain final control over the exclusive right to authorise (or deny) electrocopying.

2. Proper Remuneration It must be able to provide rightsholders with proper remuneration because electrocopying cannot simply be prevented.

3. Variable fees Rightsholders should be able to set their own fees as far as is practicable.

4. Electronic control Only electronic record-keeping can be used because pen and paper record-keeping is unacceptable with this technology.

5. Simplicity for rightsholders It should avoid generating a myriad of requests because rightsholders cannot economically

handle large volumes of permission requests.

6. Simplicity for users It should provide some uniformity of contract, because users cannot be expected to deal with the fine print of a hundred different agreements.

CLA believes that it is in a position to provide a solution which satisfies these key points, by making full use of the resources it has at its disposal for handling photocopying such as its computer systems and its publications databases (520,000 serials and 50,000 books).

Current thinking is that a collective administration agency (preferably CLA in the UK!), will appoint authorised electrocopying outlets which will monitor usage of copyright material through obligatory audit software and invoices will be raised and sent out at appropriate intervals. Given the support of rightsholders, it is CLA's view that such a system could be available within eighteen months to two years and easily adaptable for use almost anywhere in the world but certainly throughout Europe.

NOTES

[1] Berne Convention for the Protection of Literary and Artistic Works (Paris Act, 1971).

[2] Charles Clark (b. 1933) Publishing Law Adviser; General Counsel, International Publishers Copyright Council; Legal Adviser, The Publishers Association; Legal Adviser, Copyright Licensing Agency; author Publishing Agreements: A Book Of Precedents (3rd ed.) pub Unwin, Hyman, London, 1988.

[3] Jan Struther (Joyce Anstruther) newspaper columnist; author Mrs Miniver, pub. Chatto and Windus, London 1939.

[4] Lord Mansfield [Earl of] (1705-1793), Chief Justice at the King's Bench of Great Britain (1756-1788); sought to make the international law of commerce an integral part of general law of England, both common law and equity.

[5] IFRRO, the International Federation of Reproduction Rights Organisations. Founded in 1980 as the IPA-STM working group on copyright collecting societies, it became the International Forum for Reproduction Rights Organisations in 1984 and a Federation in 1988.

[6] Copyright, Designs and Patents Act 1988. Came into force 1st August 1989 and replaced the Copyright Act, 1956.

[7] Vilfredo Pareto (1848-1923) Italian economist and social theorist renowned for his work on elitism and irrationalism.

[8] Wolfenden Committee (1977-79), chairman Lord Wolfenden (1906-1985) educationalist and librarian. Chairman of the Departmental Committee on Homosexual Offences and Prostitution (1954-57) which published the famous Wolfenden Report (1957); Chairman University Grants Committee (1963-68).

[9] de Freitas Committee (1980-82), chairman Denis de Freitas, OBE; Intellectual Property Lawyer; Life Member of CISAC; Solicitor General of the Federation of the West Indies (1958-62); Legal Adviser, Performing Right Society (1964-86); Chairman, British Copyright Council (1976-1989).

Electronic Information Services: Particularities and Self-Regulation (Contracts and Codes of Conduct)

Joe Bremner
President
Database Development
Shorewood, Wisconsin
USA

I. INTRODUCTION

Traditionally, users of electronic information services have signed "subscription agreements," which specify, not just what will be delivered, and the price, but state specific conditions on the use of the information. The basic intent of these agreements is to effect a license of the work--not a sale. While it may appear that the practices of database publishers and online hosts are awkward or unusual, they are based on sound business judgements.

Publishers and hosts have had to contend with an international distribution environment that outstripped the state of international intellectual property laws; hence they relied on contract law.

II. INDUSTRY BACKGROUND

In order to understand the legal and contractual concerns of database publishers and hosts, on should have a basic understanding of the industry environment. This background information has been published and discussed by the author at other European Information meetings, and much of it was incorporated in written testimony that was delivered to a Hearing of the European Commission.

The Early Years

The information services value chain, broadly stated, includes a process that takes original or pre-existing information and adds **value** to it.

Most databases are comprised of public domain or proprietary information sources that are processed--indexed, abstracted, keyed, and sometimes filmed or scanned...to create information services in a variety of media. Sometimes these services are sold directly to customers, and sometimes those same services or derivative information services are distributed through third parties--One of the things that distinguished Pergamon Infoline from its competitors in the early 1980's was that Pergamon would sell print products developed by database publishers, in cooperation with Pergamon Press, as well as carrying an online version on Infoline. Beyond online services, today's third-party "hosts" include CD-ROM services like Bureau van Dijk who will load and market a business database publisher's data.

Research conducted by the Commission of The European Communities cites projections of a world

market for electronic information services of up to 100 billion ECU by the year 2000. Where has the industry been, and how does the development of the industry affect its future?

Over time, many participants in the database publishing business have complained about a lack of standards. This defiance of standards has even extended to the terminology that we use in describing industry participants. At the outset, then, let us define some terms: We use the terms "host," "online service," and "online vendor" to mean the operator of an online system that may, or may not, also produce some databases. The vendors usually also license databases from database "publishers" or "producers."

When we use the term "intermediary" we mean librarians, documentalists, or other information professionals who conduct searches for "end-users" of the information. There have always been some end-users who have conducted their own searches on one or two systems that they knew well--or that were designed for inexperienced searchers. There are, however, over 800 online systems and nearly 6,000 databases. Even though many of these are very specialized, the sheer number of potential online information resources suggests that intermediaries will continue to play an important role in the distribution of online databases. At a minimum, these intermediaries will help users make decisions about information services they decide to use.

In the past, the major online retrieval systems grew up around a market; scientific and technical databases on systems like ESA-IRS (European Space Agency-Information Retrieval Service) were a natural development. Data Resources, Inc. (acquired by McGraw-Hill) and ADP Data Services developed by serving businesses' needs for numeric economic and financial data. Mead Data Central's LEXIS and West's WESTLAW started out serving the legal profession's needs for full-text primary resource materials. Only a few online vendors crossed these market boundaries. DIALOG was one of the few that successfully served the scientific & technical, business, and (to a lesser extent) legal markets.

From 1970 to around 1980 online services competed in fairly distinct markets. I.P. Sharp, Data Resources, ADP Data Services, Interactive Data Corporation, and others fought for a share of the market for numeric data. DIALOG, ESA-IRS, BRS, SDC-Orbit, and Pergamon Infoline (these latter three now making up Maxwell Online, Data-Star and a few others developed the market for bibliographic (indexing and abstracting) databases by selling their services to intermediaries. And the full-text market was primarily a contest for lawyers' research expenditures, dominated by LEXIS.

In recent years, as these markets have matured, online vendors have crossed these traditional boundaries in an effort to continue their growth. Mead Data Central, in 1979, introduced NEXIS, a full-text magazine database that carried some of the titles that were indexed and abstracted in databases offered by the bibliographic vendors. DIALOG later retaliated by licensing the full-text magazine database, known as Magazine ASAP, that had been developed by Information Access Company. DIALOG also licensed INVESTEXT, a full-text collection of Wall Street brokerage firms' research reports, that directly challenged EXCHANGE, a similar service offered by Mead Data. Mead, in turn, licensed a number of the most successful bibliographic business-oriented databases (all of which were offered by DIALOG) from the publishers of those databases. They marketed them as a group under the name THE REFERENCE SERVICE.

The competitive situation became more complex when DIALOG and Mead targeted the market for numeric financial and economic data. The numeric online vendors had not considered Mead, DIALOG or other systems to be serious competition because they did not have the software required to search, screen and format numeric data in the manner numeric users required. These weaknesses, however, were offset by personal computers' rapidly increasing processing speed and storage capacity. Users began to prefer simply searching for the numeric data--leaving screening and formatting to their now powerful personal computers. Microcomputer spreadsheet software, was ideal for this task. The downloading option provided control and an opportunity to experiment with the data. Of course, downloading also saved the processing and reporting charges that the online vendor would have assessed. This development hurt some of the traditional numeric online services, and it made it possible for DIALOG and others to compete in the numeric database market without developing sophisticated report generation software. DIALOG, among others, simply made it easy to download numeric values in a spreadsheet format.

DIALOG had carried some numeric databases from the U.S. Bureau of Labor Statistics and some other sources for a number of years. They also carried DISCLOSURE, a formatted numeric database extracted from filings of the Securities and Exchange Commission (SEC). As competition heated up, DIALOG, ICC's British Company databases, Moody's Investors Service Corporate Profiles, and even stock quotes on a 20-minute-delay basis. Numeric vendors made some attempt to meet the challenge by licensing

DISCLOSURE and several business oriented bibliographic databases, but most numeric vendors lacked adequate text-retrieval software. In this area of competition, DIALOG was the most successful because Mead Data has been slow to develop adequate software to search for numeric data.

While DIALOG was concentrating on competition with large U.S. competitors, Data-Star quickly loaded a series of full-text, numeric, and bibliographic business databases, including a number of full-text services published by McGraw-Hill's Datapro division. Emphasizing European content and carefully targeted its marketing efforts, Data-Star caught and surpassed DIALOG's usage in the European market.

Competitive Impact

The effect of these "growth" strategies, until recent years, demonstrates that the "growth" strategies of some online vendors were actually a series of attempts to cross the traditional market divisions to take market share from each other.

Another interesting development has been the creation of entirely new information services. A look at their introduction and growth is instructive. Their strategy was to target the end-user of business information.

Compuserve, which established a sales and support office in European market in late 1990 claim to be the "world's most popular information service." A claim that Minitel may dispute. But, with over one million users between them, Compuserve and Dow Jones News Retrieval are certainly important factors in the world-wide market for business information sold to individual business users. These services are distinguished by easy-to-use software and an emphasis on business news. After Dow Jones and Compuserve developed over hundreds of thousands of customers each, DIALOG attempted to get into the game by offering THE BUSINESS CONNECTION, which is essentially an easy-to-use interface that stands between the user and DIALOG's more complex command-driven software. DIALOG claim that the majority of their new users are end-users, not intermediaries.

Other services continued to enter the market: DataTimes and VU/TEXT are full-text online services based on newspapers; NewsNet is a full-text online service based on newsletters, and Predicasts has developed a full-text database collection of newsletters, which it licenses to online services to enable them to compete against NewsNet. As the new services proliferate, the old categories of

competitors become irrelevant.

McGraw-Hill introduced a service called Executive One, which had several unique characteristics. McGraw-Hill collects data from many sources; including its reporters and writers for M-H trade magazines, Standard & Poor's securities markets and financial reports, the Associated Press, Business Week, PR Newswire, Data Resources economic news and information, stock exchanges (for quotes), and other sources. Some of the stories provided by reporters never makes it to the pages of a McGraw-Hill publication. Deadlines, space constraints, or even the overall theme of a certain issue, may prevent an original story from being published in print. The new McGraw-Hill service made some of these stories available in electronic form.

VU/TEXT and DataTimes survived. Executive One went through several changes, and re-releases, but ultimately it was shut down. The Bank Administration Institute and International Thomson developed an excellent service, called Innerline, for the financial services industry. Despite good reviews and unique data, Innerline did not succeed, and the partners shut the operation down. The electronic business information services business has been filled with pitfalls.

The competitive environment is more diverse, and lines between competitors that are constantly changing. We will continue by looking at two of the most significant influences on that environment.

Consolidation, Technology and the Competitive Environment

Throughout the 1980's, an increasing number of large companies, joined the scientific and technical publishers in entering the electronic information services business. This group may be the most significant influence on the future of this business in Europe.

- Bertelsmann
- Bonnier Group
- Elsevier
- Hachette
- Maxwell Communications
- Reed International
- Reuters
- United Newspapers
- VNU
- Wolters Kluwer

And this consolidation continues, now on a larger scale. Within the past few years, the European market has seen:

- **Elsevier**

-Acquired Pergamon Press

- **Bonnier Group**

-Formed joint venture with Hoppenstedt
-Hoppenstedt-Bonnier acquired ICC

- **Reuters**

-Reorganised their Archival Information Services Division
-Acquired I.P. Sharp

- **Maxwell Communications**

-Announced substantial commitment to online business
-Acquired SDC/ORBIT & BRS Information Technologies
-Created Maxwell Online for Pergamon Infoline,SDC,and BRS

Some recent acquisitions of note in North America include:

- **Thomson Corporation**

-Acquired Valorinform SA

- **Knight-Ridder**

-Developed VU/TEXT and Knight-Ridder Financial
-Acquired Dialog Information Services

- **Ziff Communications**

-Acquired Predicasts

Meanwhile, the pace of technological change increased. And these technology trends offer new opportunities for information retrieval and distribution. Some of the important trends are

- Artificial intelligence/ expert systems
- Relational database software
- 32-bit microprocessors
- Electronic Publishing Systems
- Optical media/CD-ROM
- Telecom/ISDN
- Distributed data processing

Electronic publishing systems may well be the most interesting development on the list because they hold the promise of making the publisher more efficient while, at the same time, providing more flexible distribution for customers. They also provide persuasive evidence that the "online business" is becoming part of the larger publishing industry.

The Association of American Publishers' Electronic Manuscript Project, with the cooperation of the Borsenverien Des Deutschen Duchandels (the German Book Publishers' Association), has created a system for intellectual "tagging"or coding of manuscripts that will be independent of any photocomposition system. Publishing systems developers are adapting to publishers' vision of the system of tomorrow. (See Exhibit 1.)

The author produces text with standard tags, hopefully, on a personal computer floppy disk. The disk can be loaded into an intermediate database that can be used:

- for producing a tape or transmission for on-line vendors or direct licensees,

- to provide input for premastering and mastering of a CD-ROM,

- as input for software that will process the data to add photo composition codes and create a new photocomposition database that will produce camera ready copy.

Consider some examples of the integration of publishing input and output from the perspective of photocomposition system developers and publishers.

R.R. Donnelley, provides the service bureau approach to photocomposition and printing systems. Many large publishers use Donnelley to provide complete service, including printing at regional printing centers.
The heart of Donnelley's service is the Donnelley Composition System, which has been modified and improved constantly. Also, within the past two years Donnelley's Electronic Graphics Division has developed the capability to provide the services outlined in Exhibit 1 along with another interesting capability:

- Graphics--anything from a photograph to a scanned
- image--can be held in vector format in a database that is stored separately from the traditional text file (complete with inverted indexes and boolean searching). When a "record" is displayed, the system (using accession number pointers) can go to the graphics file and display text and graphics on a single high resolution screen.

Donnelley has used this capability for a major electronics manufacturer's parts catalog--complete with on-demand photo-composed output to produce specialty catalogs or materials for a sales presentation. During 1991, Donnelley acquired a substantial minority interest in Dataware Technologies. Dataware is a CD-ROM software developer that started in Germany, initially developing software for Hoppenstedt and others.

Donnelley's recent system developments, and its interest in Dataware, are further evidence of the consolidation of the online business into the broader traditional publishing industry.

For publishers themselves, these developments mean more efficient production systems that minimize the need to rekey data to produce a print product, and more efficient output that enables publishers to produce derivative works - like databases - without added labor or key entry.

Moodys Investors Service is a leading financial publisher that has sold

looseleaf services that include basic financial information about corporations and other institutions that issue debt. Moodys may be best known for their bond ratings service.

Until a few years ago, Moodys used outside firms for photocomposition and printing services. When they decided to create an online database, they had to re-key substantial portions of the data because the only machine-readable version of the books were photocomposition tapes embedded with photocomp codes that were so numerous that it was cheaper and more effective to rekey than to attempt to strip out the codes, reformat the data, and add field tags.

Moodys retained a systems developer to design a complete in-house system that now holds all editorial work in a generic-coded system-independent database. This data is the processed as described in the model to produce a tape or transmission for the photocomposition system, a tape or transmission in the format required by one or more online vendors, as well as on-demand output to produce a prototype of a new publication or database.

These technology trends, combined with the investment capital of the large acquisitive information companies like International Thomson, Bonnier Group, and Maxwell Communications, are disrupting the traditional chain of distribution (See Appendix 2). For example, CD-ROM technology created a storage medium that allows database publishers to bypass online services. Specifically, successful database publishers like KOMPASS/U.K., Hoppenstedt, and UMI/Data Courier have repackaged their ASCII databases by storing them on a CD-ROM and delivering software that enables customers to search and retrieve information using personal computers.

CD-ROM also proved to be an attractive medium for micrographic publishers. Storing scanned page images on CD-ROM allows Disclosure to deliver actual copies of the original documents to customers, including pictures, charts, maps and other graphics, while full text versions like those provided to online services, with few exceptions, only include ASCII characters in the article.

These products are usually sold on a flat subscription basis, which allows subscribers unlimited access without the variable cost of hourly access charges that are common to most online vendors.

CD-ROM has also spawned a new generation of "online services" are repackaging multiple databases and delivering them to

customers on CD-ROM (See Appendix 5).

The Publishing Model

Competition for control of the customer relationship has intensified, and CD-ROM holds the potential to create a new information publishing model (See Appendix 7).

o The database publisher will use its own CD-ROM product for sale in its primary market (usually with data or capabilities that provide clear differentiation from downstream distribution channels).

o The publisher may have its own limited online service to update information on the CD-ROM, and

o Commercial online services will be used to get at occasional customers and secondary markets

Publishers will continue to distribute printed publications. For most this medium will continue to be the largest part of their business. It will be enhanced by systems like Donnelley's, which will allow customized "on-demand" printed publications to be produced at costs that are low enough to make publications for very small targeted market segments financially viable.

Meanwhile, electronic distribution will continue to grow, and publishers will license their works to large online distribution services. Many publishers will also distribute information on CD-ROM. They might send out a new CD monthly, but the information on the disc might need to be supplemented with more current information. For this purpose, publishers may develop their own online services through telecommunications lines or broadcast distribution. Broadcast systems would distribute the entire update to a powerful personal computer. Examples of broadcast technology include FM-Sideband and satellite distribution.

Another technological trend--substantial gains in computer processing capabilities at increasingly lower costs--is also contributing to the breakdown in the vertical distribution system. Single organizations are taking the so-called "tape lease" one step further. For many years, database publishers have "leased" a copy of the tape that they send to online vendors to large companies for in-house use. In the past, these companies simply batch-sorted the information by subject area and produced printed current awareness bibliographies or alerting services for employees. Today, however, cheaper computer power, and the increased availability of text-retrieval software, enable a growing number of companies to build

sophisticated online services of their own.

At Bellcore (Bell Communications Research), the Bellcore Information Research Center (IRC) has licensed several commercial databases, including ABI/Inform (a bibliographic business database) and The Computer Database (an abstract and index database covering the computer industry) and made them available on an in-house online service called TELARIS. TELARIS serves all of the regional Bell Operating Companies (RBOCs) on their own private online service (See Appendix 6).

Bellcore is the research arm of the operating companies and itself employs over 10,000 employees. It was formed by dividing Bell Labs, a portion of which AT&T was allowed to retain. The IRC also produces its own database, which covers the telecommunications industry. This system serves over 100,000 marketing and research managers in the RBOCs. The online system is based on licensed text retrieval software and has two user modes--one an easy-to-use menu-driven mode, and the other a more powerful command-driven mode. The latter is used by the IRC's staff of 20 researchers, and by the RBOCs' corporate libraries.

Systems like these allow database producers to serve major user groups directly, but this effort typically requires a more substantial sales and customer service effort. The cost/performance gains in computers and peripherals continue at a rapid pace, and now academic institutions have hardware and networks that can accommodate A&I databases online.

Today's Competitive Environment

These technological trends shape the current opportunities and its competitive environment. The model for successful secondary databases publishers will include multiple distribution media that are chosen based on the attractiveness of market segments, and the cost of getting share in those segments. Primary publishers will become significant factors in the so-called "archival" or "secondary" markets. ADONIS is a reality, even if its commercial success is not yet proven.

Another characteristic of today's competitive environment should also be apparent: The lines that separated micrographic publishers from database publishers and online services are all but gone, e.g., it is now economically feasible for full-text micrographic publishers to produce ASCII and raster scanned image databases. This makes the competitive environment more complex. There now seem to be at least five classes of competitors

engaged in This has created intense competition for access to the level of distribution closest to the customer and competition for the customer relationship itself. Some of the more important competitors and distribution channels include:

Traditional Online

Data-Star
Dialog
GENIOS
Pergamon Financial

Integrated Online

Dow Jones
ICC
Mead Data Central
Reuters
Thomson Financial

Emerging Online/CD

Silver Platter
Lotus
Bureau van Dijk

A&I Database Publishers

Predicasts
IAC
UMI/Data Courier

Integrated CD-ROM

Disclosure
Hoppenstedt
KOMPASS
Moodys

Gateway/Kiosk

Telebase/Aristotle
Minitel

Traditional Online Distributors

The major online hosts continue to be significant factors in the market as they ASCII full text materials directly from primary publishers (publishers, government agencies, etc.) and license databases from secondary (A&I) database publishers like Predicasts, who also license full-text their data from primary publishers. In some cases the hosts competitive potential has been increased by industry consolidation, e.g., DIALOG is now owned by Knight-Ridder, a primary publisher, who also developed the VU/TEXT full-text newspaper service, and Knight-Ridder Financial Information Services. Data-Star is owned by TeleColumbus, which has formed a joint venture with CompuServe to market and develop content for the European market. Although TeleColumbus has reduced their direct participation in the venture during 1991, the relationship continues.

Aside from the obvious technological differences between micropublishing and

CD-ROM, compared to online distribution, the marketing and sales practices of the businesses differ substantially. Online services are usually sold on a pay-as-you-go basis; typically hourly charges and charges for output. This makes it difficult to sell through a commissioned field sales force, and it requires constant "re-selling" to build usage. This ongoing selling effort takes the form of training and other customer support activities. Micrographics publishers and CD-ROM publishers have a business and pricing structure that easily supports aggressive field sales tactics.

Integrated Database Publishing: Online

"Integrated Online" refers to database publishers who have integrated the functions of database publishing and online distribution by operating their own online services. ICC has had their own Viewdata service for many years, and they recently developed an ASCII text retrieval system, using BRS/Search software, to accommodate their full-text brokerage house reports. (See Appendix 4)

Other organizations like Mead Data Central and Reuters Publishing entered the market as "integrated" services (developing and owning their content) and licensed third-party databases as they grew. Investext, owned by International Thomson is of particular interest. They have provided online access to their full-text Wall Street research reports for many years, and they have licensed their data to the traditional online services. Recently, they have expanded their online activities by introducing CORIS, and online service based on relational database software. CORIS includes information licensed from third parties--competing even more directly with online services, although they claim to be targeting end-users. Initial reports indicate difficulties in achieving market penetration. The service was formally introduced in 1991 in the depths of the recession in worldwide business information markets.

Emerging CD/Online Hosts

Some relatively new players are variations of existing industry participants. Bureau van Dijk and Lotus Information Services license databases from database publishers for distribution on CD-ROM. Lotus Development Corporation created the Lotus Information Services Division to distribute business and financial databases on CD-ROM. Considering the distribution structure of the database publishing industry, this is no different from online hosts licensing databases for distribution to their

customers. The primary difference is that online services usually charge on a pay-as-you-go basis; CD-ROM hosts charge a flat subscription price.

Because of the apparent success of CD-ROM, some online hosts are experimenting with flat fee pricing. Some large online hosts have offered such arrangements to large users on a confidential basis.

Integrated Database Publishing: CD-ROM

As discussed above, CD-ROM has provided an opportunity for database publishers to sell directly to customers. CD-ROM also shares many of the characteristics of microfilm: it provides a stable, relatively low-cost, distribution medium that can be sold on a subscription basis.

Hoppenstedt, KOMPASS U.K., UMI/Data Courier, and others are moving rapidly to consolidate their positions in their primary markets, which pits them against online services, the emerging online and CD-ROM distributors, and each other. (See Appendix 3).

The competition is at two levels: The first level is competition based on content--general business information, company information, or other subject areas. The second level is the competition for the "platform," which includes hardware and software. The intermediary/library market will not support an infinite number of dedicated personal computers with unique hardware and software configurations. All of the competitors are, therefore, engaged in a market penetration race to get at least one system installed in as many libraries as possible. Later, they will be able to sell additional subscription products/databases that use the same platform to the same customer group. As time passes, however, it is becoming increasingly difficult to sell a new CD-ROM "platform" to libraries that already supports two or three differing platforms, e.g., Bureau van Dijk/FAME, Silver Platter, Disclosure.

A&I Database Publishers

Finally, traditional database publishers like IAC and Predicasts are adding ASCII full text to their A&I database offerings. The increasing use of electronic publishing systems by primary publishers means that information developed for print media is more readily available for distribution in electronic form. It is no longer necessary to scan or re-key information from the print medium.

This helps the traditional A&I publishers, but it also may increase the tension with primary publishers; particularly publishers who are large enough to be tempted to create their own

full-text "databases" of their own publications. For the time being the business A&I publishers are somewhat insulated from real competition in this form because the coverage of their database includes thousands of journals, dating back twenty years or more. The pressure is more likely to come from rights and permissions conflicts and litigation.

III. INDUSTRY PRACTICES

With this background, let us examine the industry's peculiar legal problems. Legal issues come up at every point in the database publishing process, and it is difficult to discuss only the intellectual property issues. Perhaps the best starting point is the contractual relationships between database publishers, online services and users.

Contractual Practices

Many commentators have decried the electronic information industry's reliance on written contracts, and the common conclusion is that uncertainties regarding existing copyright laws are the cause. A better explanation might be found in looking at the nature of the transaction--this is not the simple sale of a book or magazine. On the contrary, after reviewing the industry background, it should be apparent that intellectual property considerations are only one set of issues that must be considered in this complex distribution environment. While many commentators refer to agreements between a database publisher and an online service as a "database license," I prefer "database distribution agreement" because so many business issues are covered by these agreements.

Nevertheless, let's begin by discussing the word "license." The concept of a license developed, under common law, from granting a right to use real estate without passing title--leasing or renting land and buildings. Today, then, a database publisher uses a written agreement to ensure that the online service (and the users) understand that limited rights are granted: limited rights to use the database, limited rights to extract information from it; both for a specific period of time. No sale of the property--the database--is intended.

What are some of the other reasons for the practice of using database distribution agreements? Let's take a look at allocation of risk and royalties; then, we can consider the intellectual property issues.

Allocation of Risk

Just as the database publisher has a strong interest in granting only specific rights, the online

service has a strong interest in being sure that liability for infringement, errors, inaccuracy, or misrepresentation is clearly allocated. If the database publisher makes a mistake, the online service usually wants a specific statement that the publisher is liable for that mistake.

As use of electronic information grows, disputes and litigation grow with it. Users of information have attempted to hold database publishers and online services liable for inaccurate, incomplete, or misleading information. So far, most courts have handled these cases simply as an extension of the long line of cases that have been brought against print publishers. Except in cases involving bodily injury or libel, courts have been reluctant to allow plaintiffs to recover for damages based on reliance on information from a specific publication. Courts are concerned that such broad generalized liability would inhibit free speech and transfer of information. Basically, courts have said that readers or users who are making important decisions are in the best position to determine how many sources they should consult before making their decision. The decision to go beyond the abstract to the full text of a scientific article, the decision to look at additional articles, the decision to confirm pricing or financial information received from a news feed or compiled database; these are all decisions that should be based on the importance of the question at hand--decisions best made by the user.

Nevertheless, online services will usually seek specific representations, e.g., that the database does not infringe on the copyright of any third party; and the service will seek warranties--statements that offer to guarantee that the representations are true. Further, the online service will usually seek indemnification in case any legal action covered by the warranties is brought against the online service. An indemnification clause usually states promises that the database publisher will defend any such lawsuit, pay all the costs of that defense, and pay the damages, if any are awarded.

In return for giving warranties and indemnification, the database publisher will often ask for certain limitations on remedies or damages that reflect the nature of the economic bargain. That is, distribution of the database with unlimited liability would mean that the price to the user might be substantially higher. Typically, these limitations attempt to specify a remedy for errors in the database, e.g., "The online service and its

users agree that the sole remedy for errors or omissions in the database will be correction of the error, or return of the money paid for the search. In no event shall the liability for any damages exceed 10,000ECU." How could all this be accomplished without a written agreement? How could the online service agree that users will be bound by a promise made in the database distribution agreement, without asking the user to sign a subscription agreement?

Royalties

A database publisher usually receives a royalty, which is some portion of the price paid by the user. The methods for calculating royalties have varied widely over time, and depending on the nature of the information used and depending on changing computer technology (faster mainframe computers and cheaper storage media). Some services that carried primarily numeric information--economic and financial data--had separate charges for use of the computers central processing unit (CPU). Seemingly simple screening requests could place heavy demands on the CPU, and others might require only seconds of actual processing.

In this complex business environment, terminology is critical. If a royalty is to be 35 ECU per hour, what is an hour? Is it calculated to the nearest one-hundredth of an hour, or the nearest hour? One easily see that the difference, calculated over thousands of hours, could be substantial. Other definitions that could cause disagreements in calculation of royalty (depending on the formula) might include; "search," "display," "off-line print," download", "database record", "profile", and "batch search."

A written agreement creates definitions that both parties can agree on in advance, and, by doing so, minimizes the chance of disputes. The problem for the industry is that there is no standard contract. Publishers and users must deal with a complex set of written documents, with varying conditions and restrictions. Surely, this represents an obstacle to continued growth of the industry. The distribution of databases (like software), works of intellectual property, is simply more complex that distribution of a book or magazine. The laws and court decisions based on those laws still leave questions unanswered.

The electronic information industry is beginning to seek solutions to these problems. Some argue that online services that are designed for use by millions of people can not bear the burden of millions of signed subscription

agreements. Are they right? Millions of subscribers to popular magazines sign subscription cards to give the publisher written authority to bill them. In the absence of written agreements, are so-called "shrink-wrap licenses" binding? These documents are simply unsigned contracts, distributed in, or on the face of, software packaging. Databases distributed on CD-ROM are likely to use similar licenses as they are distributed in retail stores.

Online services use an electronic version of the shrink-wrap license. On screen messages flash copyright and trademark notices, along with disclaimers and other restrictions and conditions. The user is directed to proceed no further unless he or she agrees to abide by the unsigned electronic agreement. Is a contract created, or is this wishful thinking on the part of the database publishers and online services? These are some of the questions that time and, unfortunately, lawsuits will resolve. Perhaps this situation is not be so different from the coming of the radio, the cinema, television, and the video cassette recorder. Copyright law states general flexible principles, and courts apply the principles to specific situations, thus providing guidance for others. Is this not how the system is designed to work in most countries? Only time will tell.

Right to contract

Most countries recognize the right of parties to create a contract that sets out specific conditions and limitations to the use of information. Where these contracts are overly restrictive, however, the contracts may violate public policy. The doctrine of "copyright misuse" is one example of the rationale courts might use to set aside unreasonably restrictive agreements.

Copyright misuse is related to the more well established doctrine of patent misuse, which is used as a defense in a patent infringement action. Essentially, the accused infringer says that the owner of the patent attempted to extend the patent beyond the scope of the patent grant with anticompetitive effect. Similarly, when the exercise of copyright rights results in anticompetitive behavior, courts will look closely to see if unreasonably extends the scope of the copyright, or uses ties access to the copyrighted work to the purchase of some other product or service. For example, if a software company sold a popular spreadsheet program for personal computers and insisted that any buyer agree to refrain from developing a spreadsheet

program, a court might find that to be copyright misuse.

Codes of Conduct

Some organizations have attempted to develop codes of conduct that encourage sharing of certain usage information, while protecting the rights of users. This topic raises privacy issues, which are to be discussed by another speaker in the lecture series. Here, I would only point out that policy makers and industry participants must exercise caution. Some industry participants cast deliberately cast the debate in the privacy framework to protect their own proprietary interests.

If you were an online service or telecommunications gateway at the level of distribution closest to the customer, you might find user identity information to be an extremely valuable asset. The knowledge of aggregated usage patterns and preferences is itself a valuable commodity in the television and radio broadcast industries.

A key distinction in the privacy debate is the desire of the user of information regarding privacy. On the one hand, one can act for all users by saying no information may be gathered or transferred. On the other hand, one can allow users to act for themselves by requiring electronic information services to allow users to "opt out," to specify at the time they subscribe that their name, address, and usage information be kept confidential. For example, this privacy option would prevent an information service from selling the user's name as a part of a mailing list of electronic information users. Heated debate is raging in Europe and North America, and the outcome is unclear.

IV. INTELLECTUAL PROPERTY ISSUES

The Green Paper

Certainly, publishers are driven to protect their intellectual property, whether in print or electronic form. The the uncertainties of national copyright laws, ease of piracy, and international electronic distribution all threaten the growth and stability of the electronic information industry.

In 1988, the Commission of the European Communities published the "Green Paper on Copyright and the Challenge of Technology - Copyright Issues Requiring Immediate Action." Chapter 6: Data Bases examines some of the critical copyright issues that affect electronic distribution of information.

Let me begin by saying that the term "data base" can be misleading; so much so that the Commission's questionnaire, sent to delegations invited to a

Hearing on Databases in 1990, began by asking, "What do you understand by the term 'data base'?" Perhaps the Chapter should have been entitled "Electronic Information" to make it clear that the issue is information that is like any other information, but for its electronic form and the medium used for delivery.

Many commentators assume that all data bases are "compilations" for copyright purposes. Compilations generally select, coordinate or arrange preexisting works, facts, or data. Compilations exist in written form and in electronic form. Not all databases are compilations. The example we used during a spirited discussion at the Hearing is as follows: If Thomas Mann had published "Death in Venice" first, once, and only in electronic form, and if readers signed on to an electronic information service and chose "Death in Venice" from a menu of "data bases", Mann's work would have been an original work of authorship, more specifically, a "literary work" under national copyright laws, and under the Berne Convention. Mann's novel is one type of literary work, compilations are another type of literary work.

Why is this distinction important? After all, novels and compilations are entitled to copyright protection. The distinction is important because compilations receive copyright protection for their compilation aspects; the selection, coordination or arrangement of information--not for the information itself. To the extent an infringer is prohibited from taking the underlying information, it can only be an indirect consequence of protecting the compilation aspects, not protection for that underlying information.

Consider this example. If you studied millions of pages of historical documents to compile information about left-handed generals, many courts will prevent an infringer from copying the compiled information from your work. They do so on the rationale that it is impossible to take substantial portions of your work without taking the compilation aspects. They do not protect the underlying information; that is, the infringer is free to develop this information from his own compilation efforts. Not all courts or commentators agree with this rationale. A recent United States Supreme Court decision, Feist v. Rural Telephone Co., seemingly prohibits any protection of the underlying information; but the decision leaves several issues unresolved, and its test may prove difficult to apply.

As Chairman of the Proprietary Rights

Committee of the Information Industry Association, a U.S. trade association, I participated in the Commission Hearing in April of 1990. Steve Metalitz, another speaker on this Lecture Series Programme, also testified. Our written testimony argued that under the Berne Convention, the UCC and traditional principles of copyright law, it is clear that databases, separate and apart from their components are protectible by copyright.

Berne art. 2(5) provides:

"Collections of literary or artistic works such as encyclopedias and anthologies which, by reason of the selection and arrangement of their contents, constitute intellectual creations, shall be protected as such, without prejudice to the copyright in each of the works forming part of such collections."

This means that for a compilation of literary and artistic works is protected, separate and apart from any protection for the components, provided the compilation qualifies as an "intellectual creation." Increasingly original works are first published in electronic form. As this becomes common, the meaning of the language above will become more clear:

1) An original work may be published in print form or electronic form, and of course the medium is irrelevant to the protection afforded by copyright law.

2) A subsequently published compilation may incorporate the original work, and it, too, may be published in print or electronic form. If the compilation, "by reason of its selection and arrangement" qualifies, the compilation, as well as the original work will be entitled to protection.

3) Finally, a compilation, published in print or electronic form, may be made up of preexisting works in the public domain, or it may compile facts, data or other information that are not eligible for copyright protection.
This compilation may still be eligible for copyright protection of its compilation aspects--selection, coordination, or arrangement. The benefits of this protection may vary. That is, copyright law will prohibit an infringer from copying the compilation and republishing it as a compilation. Whether copyright law will prevent an alleged infringer from taking substantial portions, or even all, of the underlying unprotected material, depends on the case. If a court determines that, the copying was so substantial that it amounted to taking the compilation, some indirect protection may be accorded to the underlying

information as published in the compilation. No protection will be accorded to the information itself.

The participants at the Commission Hearing in 1990 were unanimous in their opinion that copyright principles should apply to databases. An informal document, "Hearing on April 26, 27 1990 on Copyright and Databases Conclusions" was distributed after the Hearing. Among other conclusions, were the following (numbered paragraphs selected from Conclusions document):

3. All speakers indicated that databases are in their view protected by copyright. This view was shared by the representative of WIPO.

4. Copyright should apply to databases without prejudice to the application of other forms of legal protection such as patents, unfair competition, penal law, contract, etc.

5. As to the applicability of an alternative form of protection instead of copyright (neighboring right or sui generis right) a large majority of participants rejected this approach.

6. As to the categorization of databases, speakers did not indicate a desire to limit this to "compilations" given that some databases are "literary works" in their own right.

14. As regards the restricted acts, there was general agreement that classic copyright principles as laid down in the Berne Convention should apply. These restricted acts should cover: displaying, in-putting, loading, transmission, storage, down-loading.

16. On the question of a distinction between databases on CD-ROM and on-line databases, speakers advocated making no distinction. It was felt that the physical medium on which the database was stored was irrelevant to this issue.

Significant beneficial conclusions include the right to contract, clear protection for worthy compilations. If these and other conclusions can be incorporated into a Directive from the Commission, Europe may be ahead of other regions of the world in terms of providing a sound business environment that encourages investment in the creation of electronic information services. It is this investment, and the proliferation of valuable services that are the goal of the public policies that provide the foundation for copyright laws.

Originality

The remaining difficult issue will be "originality." All of the

principles discussed above, and the application of those principles will be hollow public policy victory if the international community creates a threshold of originality that is so high that many works are left out.

In discussing originality, commentators often compare patent law and copy right law. Patent law requires novelty--true originality. Copyright law, on the other hand, requires only that degree of creative originality to constitute authorship, specifically the creation of an original work of authorship. This level of originality, however, is usually quite low because the protection of copyright law is limited. Patent law protects the idea and all of its applications. Copyright law protects only the "expression of the idea." Other authors are free to copy the idea, as long as the expression of the idea is independently created--not copied. Hence, in theory, if it could be proven that a second author had absolutely no access to the preexisting works, the works could be very similar. Logically, then, most countries set the threshold at the level needed to demonstrate " independent creation," although the concepts are expressed in many ways. A few countries, however, maintain a relatively high threshold for "originality".

Consider the following international deliberation. In December of 1980, the Committee of Governmental Experts on Copyright Problems Arising From the Use of Computers for Access to or the Creation of Works met in Geneva. The Committee was jointly convened by Unesco and the World Intellectual Property Organization (WIPO). In early 1981, they issued a report that stated, at page 4,

III. COPYRIGHT PROBLEMS ARISING FROM THE USE OF COMPUTERS FOR THE STORAGE AND RETRIEVAL OF PROTECTED WORKS.

...As far as the subject matter of protection is concerned the Committee was unanimous in its approval of the conclusions reached by the Working Group that the storage in a computer of the usual particulars of the work (the name of author, title, publisher, year of publication, etc.- the index method) as such does not give rise to copyright...

...Addressing the question of abstracts the Committee felt that determining the precise criteria for their protection presented considerable difficulty. The Committee was, however, of the opinion that originality and creativity constitute the basic elements justifying copyright protection of abstracts...

(c) an abstract which is limited to a mere enumeration of ideas and facts expressed in the original work does not seem to form a proper subject matter for copyright protection...

This, and other language in the report, seemed to limit the protectibility of indexing and so-called "indicative" abstracts defined in ISO 214-1976 (E), Documentation-- *Abstracts for publication and documentation*.

That meant that one who took pains to create an indicative abstract, as opposed to an "informative" abstract, in part to minimize the danger of infringing on the original work might end up with an abstract that was deemed to lack the requisite creativity to entitle it to protection; a classic "Catch 22."

Experienced commentators pointed out the problem to the drafters, and over time, a somewhat looser definition, still resting on "originality and creativity" emerged.

The debate about originality will be particularly important to database publishers who compile news, financial, statistical, or scientific and technical databases. A threshold of originality that is too high may discourage investment in such valuable resources, in the end, harming users of these resources.

WIPO Model Law Deliberations and the GAAT

The Third Session of the Committee of Experts on Model Provisions for Legislation in the Field of Copyright was held in Geneva on July 2 through 13, 1990, under the auspices of the World Intellectual Property Organization (WIPO).

The current Draft of the Model Law, in Chapter II, Section 4, "Subject Matter of Protection: Derivative Works and Collections" states:

(1) The following shall also be protected as works:

...(ii) collections of works, of expressions of folklore or of mere facts or data, such as encyclopedias, anthologies and data bases *formed by the collection and assembling of contents that are selected, coordinated or arranged in such a way that the resulting work is* original.

The General Agreement on Tariffs and Trade (GATT) is attempting to bring the current "round" of negotiations to a close. Electronic information services are caught up in a tense debate on farm subsidies.

The GATT Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement was to be completed by December 1990. The EC and WIPO

deliberations are intellectually linked to GATT TRIPS. In these international forums, substantial differences between developed and less developed countries have emerged. Overall, however, the environment is encouraging. The Model Law will be published late in 1991, and meanwhile a Protocol to the Berne convention is likely to reflect the same protection accorded in the Model Law. It seems unlikely that the GATT will be too far out of step.

It appears that databases, including compilation databases, will be eligible for copyright protection throughout the world.

V. DATABASE DISTRIBUTION POLICIES IN THE FUTURE

Despite the developments in the Europe and the international community, the basic situation is unchanged. There is sufficient risk and uncertainty that database distribution agreements and written subscriber agreements are still being used.

Copyright law, as it is applied to electronic information, is still under development. The European Commission appears to be headed in the right direction. If they are able to articulate a doctrine that provides the appropriate "thin" protection to compilations, but allows incidental indirect protection of facts when that protection is necessary to protect the compilation aspects, e.g., in the event of piracy; then the European electronic information services industry may have a distinct advantage over the rest of the world. Worldwide, intellectual property law and the courts are slow to understand electronic publishing and compilations, as the Feist decision demonstrates. We are once again playing "catch-up" to technology.

Even if clear copyright principles emerge, product liability issues must be dealt with. The validation of shrink-wrap licenses or reasonable on-screen disclaimers would help. For now, however, electronic information service providers to seek written agreements that specify restrictions on use and limit liability. These agreements may be simplified when used by consumer oriented services--much like a magazine subscriber's subscription card--but the existence of a written agreement remains the best protection.

The same will be true of CD-ROM products, electronic information products that integrate software and data. Distribution by retail stores will make it difficult to get signed agreements because the transaction requires no "order form" like our magazine subscription analogy. It is likely that publishers will rely on shrink wrap licenses in

this environment, and leave it to the courts to decide on their enforceability.

Database publishers are at least as exposed to piracy as software developers, and their risk is probably greater. One does not see software equipped with a command to down-load the source code. The source code is hidden, and may be encrypted to prevent copying or reverse engineering. Database products, on the other hand, provide down-loading capability as a basic purpose of providing information for users.

As a practical matter, however, both software publishers and database publishers have found that copyright protection alone is impractical. Software publishers have formed alliances to pursue copyright pirates around the globe. Database publishers who use CD-ROM may have to do the same, if they have clear protection under copyright law.

EXHIBIT 1

PUBLISHING TODAY AND TOMORROW

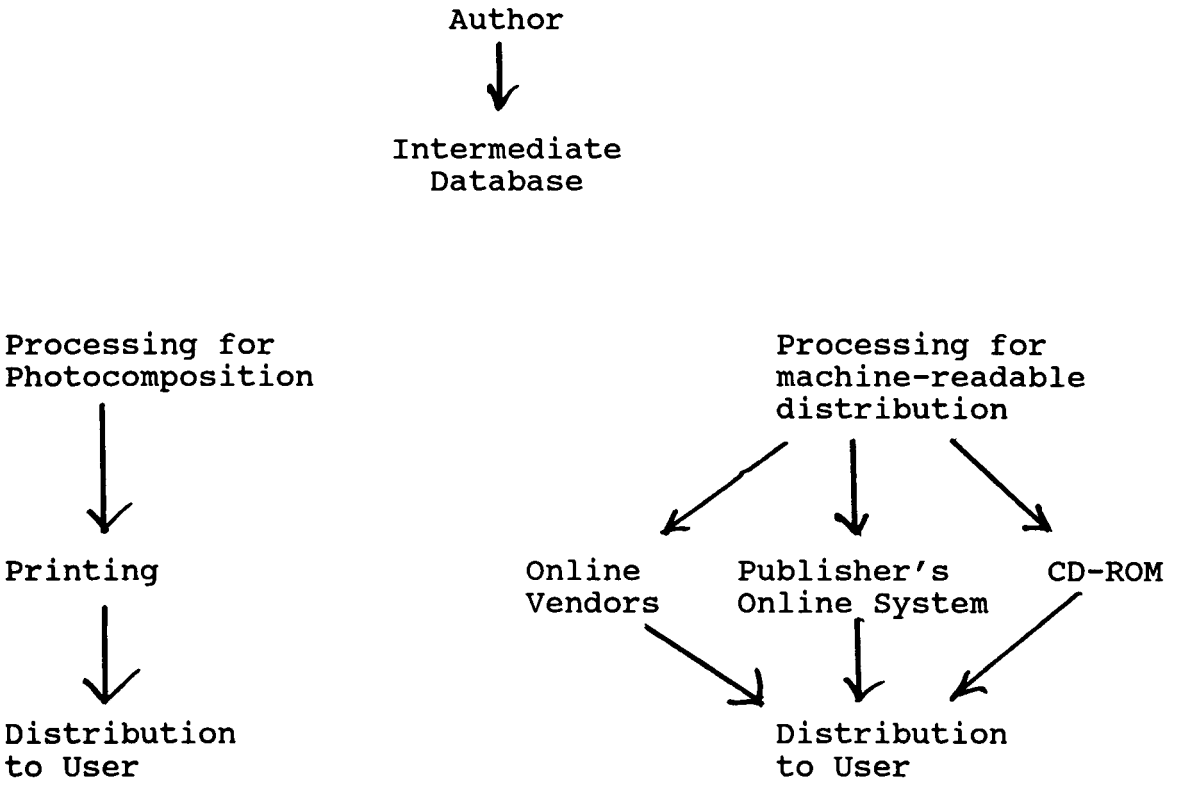


EXHIBIT 2

BREAKDOWN IN VERTICAL CHAIN:
TRADITIONAL MODEL

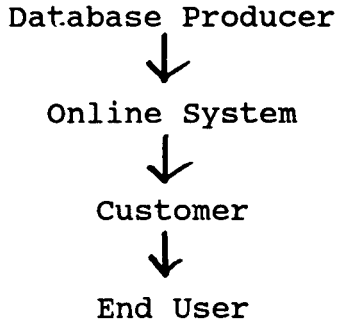


EXHIBIT 3

BREAKDOWN IN VERTICAL CHAIN:
HOPPENSTEDT MODEL

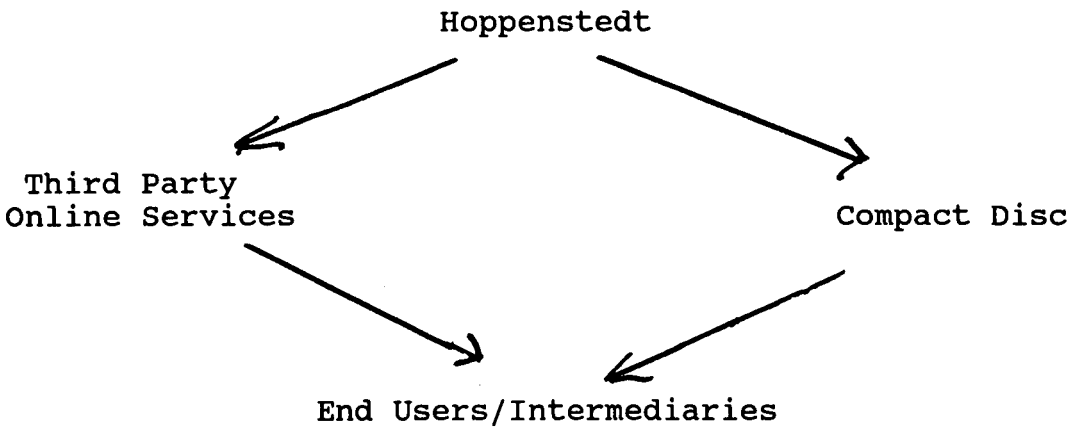


EXHIBIT 4

BREAKDOWN IN VERTICAL CHAIN:
ICC MODEL

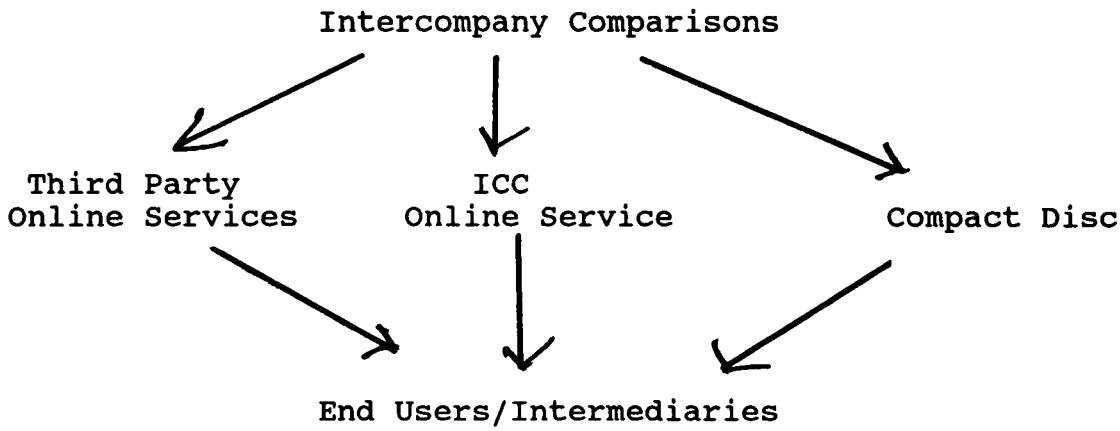


EXHIBIT 5

BREAKDOWN IN VERTICAL CHAIN
BUREAU VAN DIJK MODEL

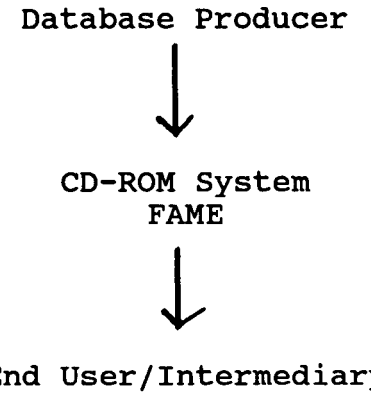


EXHIBIT 6

BREAKDOWN IN VERTICAL CHAIN:
BELLCORE MODEL

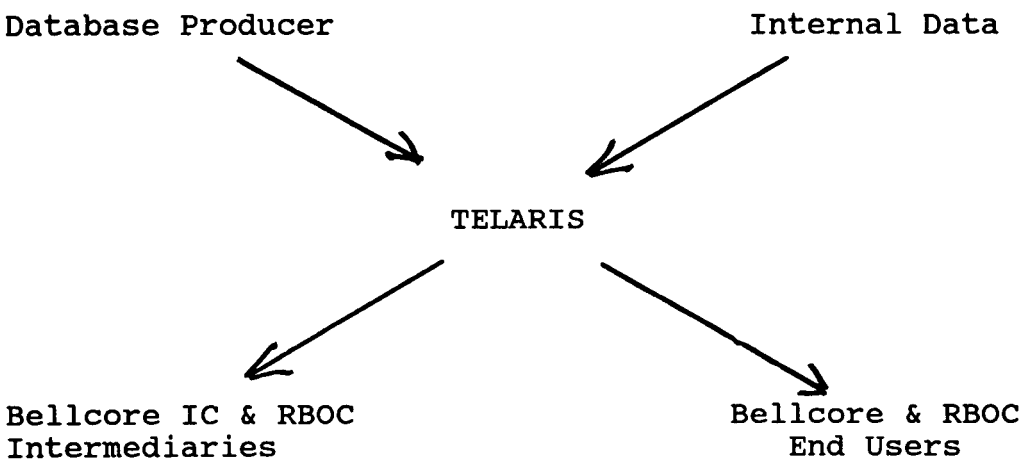
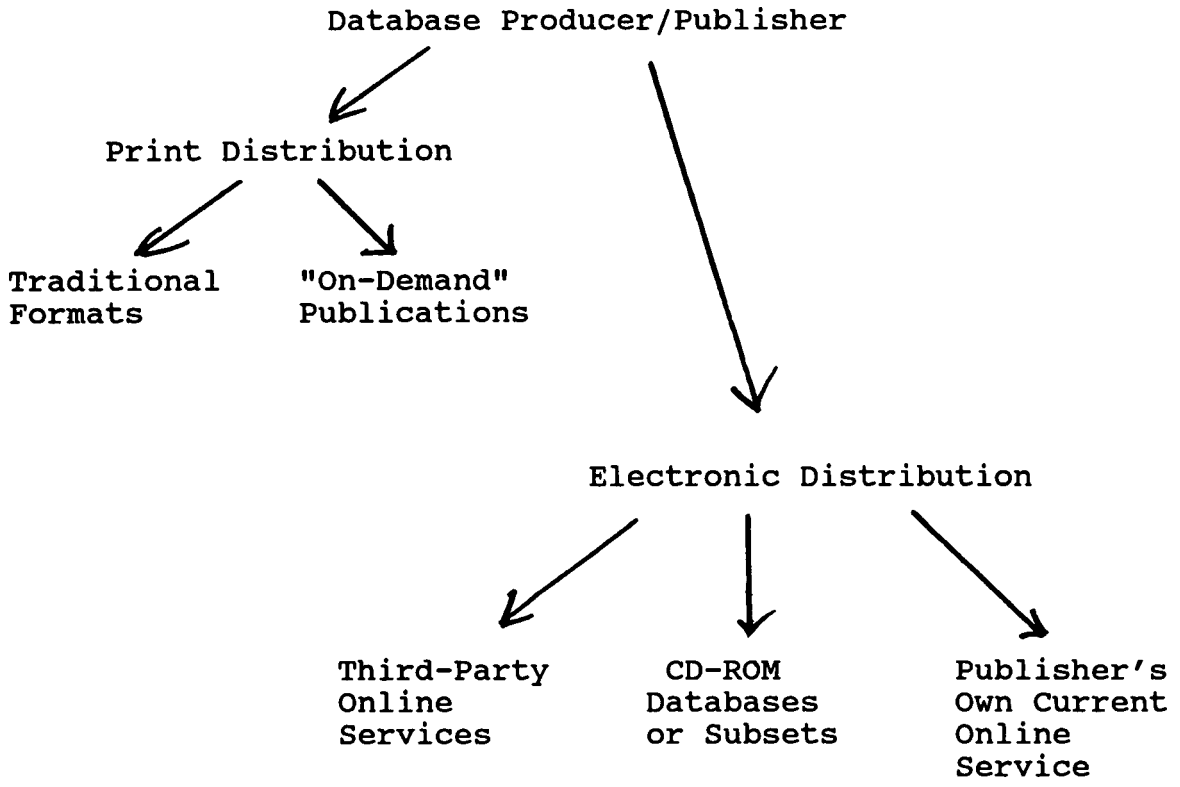


EXHIBIT 7

BREAKDOWN IN VERTICAL CHAIN:
FUTURE MODEL



PUBLIC SECTOR INFORMATION : TOWARDS A COMPREHENSIVE INFORMATION POLICY FOR RECONCILING DIVERGING INTERESTS

by
Herbert Burkert
c/o GMD-FS.INFOW
Schönhauserstr. 64
D-5000 Cologne 51
GERMANY

ABSTRACT

There is an increasing need for public sector information expressed by individuals, organizations, other public sector institutions and within the framework of international cooperation. With the move towards electronic filing, public sector information resources are being re-discovered by the private sector intending to service these needs. Against the background of budgetary restraints the public sector develops its own market interests in its information resources. These diverging interests call for comprehensive information policies. In trying to develop such policies the public sector sees itself faced with a regulatory environment comprising copyright, secrecy regulations, privacy and access to government information regulations, as well as competition law. The paper analyses the interests behind these regulations, their impact on the availability of public sector information and the problems they create with the change in public sector information handling from the traditional paper to the electronic filing environment. The author pleads for a balanced approach which takes into account the specific functions of public sector information.

(...) the market will no doubt take care of itself and the marketing of information services will simply be a matter of emulation between competitors eager to work for a better satisfaction of their users"

M.A.Yanez [1] at an AGARD Conference 1981.

1. THE NEED FOR PUBLIC SECTOR INFORMATION

Today, after our experiences with de-regulation or rather re-regulation it is more difficult to share this reliance. But this prediction, from an excellent paper which already in 1981 had described most of the problems which are still with us today, had been made under reservations. One of the reservations had been the pursuit of a coherent information policy. This importance has not changed. The political debate on the status of telecommunications is slowly calming down and getting back to technical problems. Attention shifts again from carriers to contents. There is an increasing need for information contents. One source of such contents receives particular attention: information created, collected, stored, processed and distributed by government agencies and institutions: public sector information.

1.1. THE LEVELS OF INTEREST IN PUBLIC SECTOR INFORMATION

There is an increasing interest in public sector information on the individual, institutional, national and global level [2,3].

1.1.1. INDIVIDUAL LEVEL

Since administration implies less and less face to face communication, the informational "image" which the administration uses for its decision making processes become more and more important. This importance increases the importance the individual places on his or her "informational representation". Beyond this interest in information about oneself, there is interest, in the context of participative and egalitarian democracy, in governmental and administrative procedures, decision making processes and programs, and the interest in how other people have been treated.

1.1.2. INSTITUTIONAL LEVEL

There is not only individual but also institutional dependency on public sector information. As organizations "discover" the need for strategic information handling, as "information management" or "information resource management" extend as concepts, organizations become more conscious of their own information inputs to the public sector and of what they receive in return.

In addition, such organizations, such enterprises, which, having observed rising information needs, have made information a business realize the potentials of public sector information. Such information tends to be comprehensive, with regard to the specific areas covered. It is associated with objectivity (at least as far as statistical data is concerned) and quality [4, 5].

1.1.3. NATIONAL LEVEL

On the national level governments and administrative agencies develop their own needs for other public sector participants' information. Furthermore they start to realize the economic potential of their own information resources. Tied by budget restraints they are torn between their public interest mandate for information distribution and the need to economize or even to generate extra revenue from these information resources.

1.1.4. INTERNATIONAL LEVEL

The problems of global information distribution had been on the agenda for quite some time. Even if the "New World Information Order " is no longer a main theme for international organizations, issues like "Transborder Data Flow", international trade in information services, access to international information markets, export controls with regard to information and know-how still are in the focus of the international community. This interest is not only directed at private sector information. The GATT, the OECD, the EEC, the American Free Trade Zone, the World Bank are only a few of the international organizations or collective agreements which have generated a constant demand for public sector information as well.

1.2. NEED FOR COMPREHENSIVE INFORMATION POLICIES

How can these various and sometimes conflicting demands be satisfied? What role does the public sector itself have in these distribution processes? Should information not be distributed like goods, i.e. via the market? What role is there for the information industry? Against this background governments not only have to develop their day to day information management activities with regard to their own information resources. They have to develop comprehensive national information distribution

policies. These policies have to be comprehensive to provide a stable framework for long term and medium term economic strategies. But comprehensiveness (and adherence) have to observe the rules of the legitimacy of policy making: Only if all major interest groups can be assured that their input for the decision making process has at least been realized will they accept compromise. Comprehensiveness, however, not only implies taking into account different interests but also to adjust different requirements from different social subsystems, such as the legal, the social, the cultural and the economic subsystems.

1.3. FOCUS

Although, as stated, public sector information itself is only part of the information environment, this type of information and the way it is handled nevertheless sets the tone for the information environment of a country or region, similar to the way public sector spending is affecting national and international monetary markets. To stay within the analogy, unlike private participants in such markets the public sector not only can act by investing or not investing, it can regulate (provided the legislature takes up its lead). Both observations justify to concentrate our following remarks on regulatory policies relating to public sector information.

2. PUBLIC SECTOR INFORMATION AND ITS REGULATORY ENVIRONMENT

It seems to us to be a popular misconception to see the private sector entangled by regulations whereas the public sector could set its own objectives and follow them freely. The fact that public sector information providers operate from "the sphere of government" does not necessarily make them their own rule makers. In the concept of the "law state" the public sector actors need a regulatory basis legitimized by the parliamentary process. Within this process rules even if comprehensively and logically charted go through the political filters which are most likely controlled by the logic of compromise. In addition, wherever the public sector operates there is already regulation: Before there is policy to become law there is already law which had been policy.

2.1. THE REGULATORY DEPENDENCIES OF PUBLIC SECTOR INFORMATION

Public sector information is entangled by a web of regulations like copyright, competition law, secrecy regulations, access legislation and more recently and very pointedly data protection or privacy legislation. All these regulations, and these seem to be only the most important areas with regard to public sector information handling, represent different sets of interests and objectives. They all have to be taken into account when developing a comprehensive information policy that seeks to adjust information needs from individuals, institutions, other countries and international organizations [6].

2.1.1. COPYRIGHT

During its history copyright has turned from a royal privilege to an economic incentive for individual and collective creativity in otherwise volatile markets. But we are not concerned with copyright as such but with copyright as it relates to public sector information. In some countries with a more recent revolutionary past, as e.g. in the US, there is nothing left of the privilege character: copyright for the public sector is abolished. Other countries with a "glorious" revolution, like the UK, have maintained their notion of "Crown Copyright". Again other countries have limited the scope of copyright for public sector information by excluding official documents and regulatory texts [7]. It is obvious that the degree of accessibility of public sector information is dependent on the degree of intellectual ownership which can be claimed on this material.

The impact of copyright has become even more complicated with the technological development in public administrations: As administrations migrate from traditional paper files to electronic filing they have to solve the question to what extent copyright protection, if at all accorded to the public sector, can be maintained for data bases. Does it cover their contents, does it cover the retrieval procedures, does it cover the way information is arranged in these data banks?

2.1.2. SECRECY OBLIGATIONS

The public sector acts as a trustee for private sector and individual information. To maintain the flow of these inputs this trust must be justified. But secrecy is not only a matter of trust, it is an instrument of overcoming deficits in resources by the freedom to time one's actions. Secrecy is an element of administrative strategy to maintain control with limited resources [8]. Both considerations have become part of the various obligations that are directed at those who handle public sector information, regulations ranging from civil service codes to penal law.

With technological change secrecy considerations and particularly their internal organization gather new momentum. The "electronic environment" demands a different approach to the internal control of secrecy.

2.1.3. PRIVACY/DATA PROTECTION

A direct result of technological change has been the reassessment of privacy. This reappraisal had effects on the general level and the sectorial levels of the handling of personal information.

2.1.3.1. GENERAL LEVEL

The concept of privacy had slowly been shaped, since the turn of the century, with the development of mass media first of all, as a concept of a "private sphere" which was to be protected from harm arising from unwarranted intrusion. In view of the extended use of electronic information handling in public administrations this concept was used against (electronic) handling of information on individuals by public sector institutions. Particularly in Western Europe the emphasis shifted from "harm" and "sphere" towards a right of "informational self-determination" (albeit balanced by societal needs) which today seems to be safely rooted as a civil and human right in Western European constitutional understanding [9].

From this basic right leads to a number of basic assumptions which may be generalized as follows: The (electronic) handling of personal information by public authorities has to be legitimized by a law (i.e. by parliamentary consent) unless it can be based on individual informed consent. The handling of personal information has to be transparent, unless there are overriding public interests. Transparency implies a right of access for the individual concerned and certain publication duties for the data holders either directly or via public registers. To stay within the limits of individual or collective consent, personal data should be processed and communicated only if consistent with the purpose for which it has been collected. Data collected should be relevant to the purpose for which it has been collected. All necessary efforts should be taken to maintain the quality of the data (timeliness, accuracy, completeness) and its security.

These basic assumptions are reflected, with some modifications, in the various data protection (privacy) acts. These modifications affect the extent to which traditional forms of information handling are covered, whether the legislation extends to the private sector,

whether data relating to legal persons is included, and whether there are independent supervisory authorities and to which extent they allow for self-regulation. These principles have been embodied into international legal instruments like the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data adopted by the Committee of Ministers of the Council of Europe on 17 September 1980 and the OECD Guidelines Governing the Protection of Privacy and Transborder Flows of Personal Data of 1980 . They form the core of the coming EEC Directive, and there is a UN declaration being prepared on this subject.

2.1.3.2. SECTORIAL RULES

By now these general regulations are followed by sector specific approaches covering areas like medical, statistical, banking and research data relating to individuals. These sectorial regulations react to the specific fair information practices which have developed in these areas.

2.1.4. ACCESS TO GOVERNMENT INFORMATION

As in data protection one can differentiate between more general developments and sectorial developments.

2.1.4.1. GENERAL DEVELOPMENTS

Access to government information regulations have a longer tradition than data protection laws. Access legislation answers concerns with large bureaucracies and intransparent policy making procedures. The oldest such regulation dates back to the 18th century (Sweden). After 1945 this regulatory approach was taken up in other Scandinavian countries, in the US (since 1966), and in some Commonwealth and EEC countries. Purpose and scope of access laws, or freedom of information laws, as they are sometimes called, have best been summed up in the Council of Europe Committee of Ministers' Recommendation No. R (81)19 to Member States on the Access to Information held by Public Authorities:

"(I) Everyone within the jurisdiction of a member state shall have the right to obtain, on request, information held by the public authorities other than legislative bodies and judicial authorities. (II) Effective and appropriate means shall be provided to ensure access to information. (III) Access to information shall not be refused on the ground that the requesting person has not a specific interest in the matter. (IV) Access to information shall be provided on the basis of equality. (V) The foregoing principles shall apply subject only to such limitations and restrictions as are necessary in a democratic society for the protection of legitimate public interests (such as national security, public safety, public order, the economic well-being of the country, the prevention of crime, or for preventing the disclosure of information received in confidence), and for the protection of privacy and other legitimate private interests, having, however, due regard to the specific interest of an individual in information held by the public authorities which concerns him personally. (VI) Any request for information shall be decided upon within a reasonable time. (VII) A public authority refusing access to information shall give the reasons on which the refusal is based, according to law or practice. (VIII) Any refusal of information shall be subject to review on request."

This concept has received considerably less support in Western Europe (among the EEC countries only Denmark, France, Greece and the Netherlands have such general laws whereas Spain and Portugal do have constitutional provisions in this regard without, however, having passed subsequent legislation) than the concept of data protection. At least with regard to environmental protection the EEC has moved an important step forward by passing a directive on access to public sector information concerning the environment which will force member states to follow with national legislation at least in this area.

2.1.4.2. SECTORIAL ACCESS LEGISLATION

Similar to data protection there is also special sector access legislation. Public registers (company registers, court registers, electoral registers, property registers, population registers, etc.) provide a general source of information which according to its content and purpose is subjected to different access rules.

2.1.4.3. IMPACT OF INFORMATION TECHNOLOGY

One of the main problems arising from this legislation is not so much how to maintain the inherent balance of access and secrecy but how to deal with the consequences of modern information technology. Most of this legislation has been put in place in an era when the paper file was regarded as the basic object of possible access demands. Electronic filing poses totally new problems: Does the access right comprise electronic documents? If yes, what is an electronic document? Does the notion include data sets in data banks? Has the requester the right to demand that the administration writes a specific retrieval program to meet the requester's information demands? Does an access request comprise the right to demand the totality of a public sector data base? If information is available both in the traditional and the electronic format who has the right of choice between the medium, the administration or the requester? There is a general understanding in jurisdictions which are already faced with these kind of problems because of the state of "electronification" of their internal information handling procedures that the basic right of access should not be jeopardized. The main concern is an economic one: as a civil right the exercise of access requests is connected to relatively moderate fees which are meant to recoup merely the basic costs of providing copies. The market value of such information, however, might be considerably higher.

2.1.4.4. INTERRELATION WITH DATA PROTECTION

Other problems occur from the interrelation with data protection. If a country has both sets of regulations, how can the interests of privacy be balanced against the public's right to know? To what extent can one access other people's personal data using the access law? May a person requesting information for him or herself choose between the access right in the data protection law and the access right in the freedom of information law? Other problems e.g. occur with regard to public registers which contain personal data. While these registers have been generally accessible under special sector access legislation because of their importance for the informational infrastructure of society and the economy, the moment these registers turn electronic they offer new opportunities. With regard to company registers e.g. it is then possible to search by names of individuals rather than by company names: Company registers turn into comprehensive registers on economic activities of individuals. Should now data protection considerations be applied to such registers?

2.1.5. COMPETITION LAW

We have stated that the advent of electronic filing in public administrations has led to the "discovery" of public sector information as a resource which can be put to profitable use. However, this is a discovery not only made by the private sector. The public sector, too, has realized these potentials of its own resources and has become tempted to exploit them. To what extent the public sector should indulge in such activities is a matter of economic policy and has recently been the main area of an international debate on de- or re-regulation, affecting mainly, in the area of information and communication, communication carriers. But while this is a policy issue, once an area has been defined in which the public sector should be present, then the public sector is also subject, as any other competitor in the market, to the rules of

competition law. However, the impact of competition law is likely to be more felt by the public sector because in many cases the public sector would enter the market with a number of "natural" advantages. These advantages may range from the specific "good will" the public sector may enjoy to more substantive advantages, as e.g. , in the area of information, the fact that the public sector may require others, by force of law, to provide information for its data bases.

Further limitations to a free choice of information distribution policies might come from the international environment in which the public sector is operating. There are e.g. competition law restrictions on the public sector activities within the EEC framework; there are restrictions to come in the new envisaged GATT framework for services.

Even if the public sector does not enter the market with its own information resources it has to observe rules of fair competition when it makes its resources available to market participants in order to avoid unfair preferential treatment of different information requesters.

2.2 IMPACT ON THE RELATIONSHIP BETWEEN THE PUBLIC AND THE PRIVATE SECTOR

- Copyright,
- secrecy,
- privacy,
- access to government information regulations
- competition law

have been identified as some of the regulatory restraints on the public sector in developing its own information distribution policies and in defining its relationship to the private sector. How complex the impact of these regulations may become is illustrated by the following two examples:

The first case [SDC Development Corporation v. Mathews, 542 F.2d 1116 (1976)] has become notorious. It shows the ramifications of an information policy which seeks to sell public sector information in an environment where there is access to government information legislation : Medlars (Medical Literature Analysis and Retrieval System) is an on-line information service for storing, indexing, and retrieving bibliographical data on medicine. This service is provided by the NLM (National Library of Medicine), an agency established by the Congress in 1956. The complete set of the information stored in that data bank could be purchased for (at that time) $ 50,000. One company made an information request based on the freedom of information act requiring " a current and complete set of Medlars tapes, in the format in which they are currently stored in NLM's operational disk files" plus " a complete copy of each and every updating tape as soon as each is prepared". The company computed $ 500 as the applicable fee for its primary request according to the fee structure of the Freedom of Information Act. It was only with some difficulties that the court could pass a decision backing the refusal of the NLM.

The second example shows the implications of data protection, access to government information, copyright and competition law. This case has recently been decided by the Quebec Commission d' accès [Commision d'accès à l'information, Québec, Dossier No. 89 02 36 Directron Media Inc. c. Inspecteur Général des Institutions Financières et Pierrôt Péladeau, decided June 21, 1990] , a supervisory authority with judicature functions that oversees the Quebec Access to Government Information Act. This Act, the first to integrate access to government information and privacy legislation in one single piece of legislation, gives every person access on request to public sector documents. "Documents" are defined as (also) including information on electronic storage media. The act does not allow to access "nominative" information. Nominative information is defined as any information relating to individuals which is not "public" because of a law. Similar to the MEDLAR case, a private information provider had requested from the authority responsible for the automated company register a tape in a specified format containing the most up-to-date copies of the main electronic files of that system. Additionally the company requested copies of the manuals. The requested material had an estimated market value of more than 1 million $CAN, whereas the costs chargeable within the framework of the act would have been $ CAN 40 per tape. The agency responsible for the company files, which had obtained quite a reasonable revenue from offering information from these files, used various arguments to avoid the release: They argued that the material was covered by industrial secrecy, that it was covered by copyright, that the information requested was nominative in the meaning of the act and thus not accessible. The Commission ruled that with the exception of the file containing information on the persons holding responsible positions in the companies all information had to be released on the basis of the access act. The case is currently under appeal.

Both cases also illustrate what kind of legal risks the public sector might be faced with if not operating in a consistent regulatory environment.

3. TOWARDS A COMPREHENSIVE INFORMATION POLICY FOR RECONCILING DIVERGING INTERESTS IN PUBLIC SECTOR INFORMATION

In view of the complexity of the regulatory framework, in view also of the diverging interests in public sector information, and finally in view of the opportunities provided by electronic information handling it is not surprising that many countries, particularly those which both have a highly differentiated regulatory environment and operate electronic data files to a considerable extent have started with review processes of their information policy objectives, the regulatory environment, in which they are operating and the policy options open to them.

The US have been particularly active in this area, particularly since the beginning of the review of the Paperwork Reduction Act which had already placed information management obligations on government agencies. The American Information Industry Association has made its voice heard by passing a number of principles (1990) which in their view should be applied for such an information policy both on state and local level:

"1. Citizens have a right of access to information held by government entities which should only be restricted by enactment of narrowly drawn statutes necessary to protect certain specific legitimate interests such as privacy.
2. Laws, regulations and policies governing public access to government information government should apply equally to all information regardless of the media in which in which it exists.
3. Information held by a government entity should be available to all persons on an equal and timely basis in all reproducible media used by the government entity to store or to distribute the information.
4. No person, public or private, should have a monopoly control over information held by a government entity, nor should government impose or claim any copyright or other restrictions on the ability of citizens to use and disseminate such information.
5. Government should encourage the widest possible dissemination of public information by making it available at a price not to exceed the marginal cost of dissemination.
6. Government laws, regulations and policies should facilitate public access to government information by encouraging a diversity of sources, including the library community and private sector information industry, to offer or provide access to such information. "

In Canada, in some of its provinces as well as on the federal level, similar exercises are on their way. The EEC, faced with an information market which slowly gains momentum, has passed recommendations in the form of "Guidelines for Improving the Synergy between the Public and Private Sectors in the Information Market" (1989) from which also some of the main principles should briefly be quoted here to show transatlantic convergencies:

"1. Public administrations regularly and systematically collect basic data and information in the performance of their governmental functions. These collections have value beyond their use by governments, and their wider availability would be beneficial both to the public sector and to private industry. Public organizations should, as far as is practicable and when access is not restricted for the protection of legitimate public or private interests, allow these basic information materials to be used by the private sector and exploited by the information industry through electronic information services.
(...)
3. Basic data and information collected by the public sector should be regularly reviewed, with regard to the possibility of their further use, and exploitation.
(...)
9. Electronic information services directly supplied by the public sector should be regularly reviewed, with a view to deciding whether their provision by the public or private sector is most appropriate, or whether the involvement of the private sector in their production or distribution, or their replacement by appropriate commercial services is desirable.
(...)
19. When public sector information or data is made available for private sector use or exploitation. any pre existing citizens rights of access to the original information as determined by legislation must be preserved."

All these recommendations indicate how complex the task is which the public sector is faced with in defining its approach to the private sector with regard to public sector information handling.

It would be presumptuous to offer a framework for such a task which has to take into account not only the regulatory framework but also economic, technical and cultural aspects. Such a framework could not

exclusively rely on the private sector to take over information distribution from the public sector. Such a radical approach would neglect the social and political implications of public sector information for the democratic, social and also economic infrastructure of our societies. Nor should this task entirely rest with the public sector, where distribution policies, like the founding or discontinuation of information sources, may at times be decisions made by the government of the day in view of short term rather than long term goals. Any such policy determination would have to be preceded by a careful analysis of the environment in which information resources are going to be placed in order to determine which type of option should be used by the public sector:

- keeping the information generally accessible,
- distributing the information for free,
- distributing the information at a market price, or
- handing the information to the private sector for further exploitation.

As we have shown in another context, using Quebec information policy approaches as an example [10] such an analysis would have to take into account

- the information law environment

This would require answers to questions like: What are the public sector privacy requirements? What are the public sector access requirements? What are the other sectorial information obligations the public sector has to continue to fulfil in its function as trustee and arbitrator? Particularly privacy concerns should not be underestimated, even if the banalization of data processing may seem to make this issue less dramatic. Any large scale commercialization by or via the public sector without indvidual or sufficient parliamentary debate and consent is likely to fundamentally affect the legitimacy of public sector handling of personal information.

- the competition environment

This would require considerations on whether an information resource to be distributed or one similar to it is already available in -or marketed by - the public or the private sector. This in turn would require a look at the contents of the information. This implies the necessity of an inventory of information resources both in the public and the private sector. It would demand a review of the mandate of the public sector institutions providing such information if similarities were detected in the public sector. With regard to parallel information resources in the private sector an analysis of opportunities and costs would become necessary for the public sector.

- the functional context

An analysis at this stage would involve the need to determine whether the information to be made available is related to the principal mission of the administration to collect and to distribute information (e.g. statistical offices) or wether the information was accumulated more or less as a by-product of an administrative task. If the information is mission related and if this information is not available from different sources in suitable formats and at reasonable costs then this would be an indicator that such information should be kept for access by the general public at low costs [11].

The public sector has to consider the legitimacy debate surrounding its own information gathering procedures. This is not only a matter of privacy. Enterprises increasingly see public sector information collection as an economic burden which should be compensated. The way these information collection procedures are going to be viewed will depend on the information distribution strategies employed.

- consideration of user interests

This step would demand to take into account social and political needs. Particularly with regard to information which is necessary in order to learn about services and obligations of the public sector there would be a strong argument for making such information generally available from within a public sector information service.

- economic considerations

Such an analysis would have to take into account the demand side (actual demand: size of demand, types of users, value of the market, saturation rate; potential demand) and the supply side (structure of data bases offered, market share, tariffs. etc.) of the information market, as well as the economic implications of particular information formats and the the potentials of the information resources under review.

Judging from experiences with market economies it seems that they have maintained their strength to the extent in which they have been capable of integrating social components into their market approach. Extending this observation to policy options with regard to a stronger commercialization of public sector information it seems that -to the extent that this is possible at all within the limits of legitimacy set e.g. by privacy and public transparency values- any such move would have to be accompanied by a "social information policy" i.e. a compensation policy with regard to information needs which cannot or not adequately be serviced by the market. In such a framework traditional institutions, such as libraries e.g. would have to fulfil new functions (e.g. as depositories for privatized data bases providing access below the market price level); losses in direct information distribution by the public sector would have to be compensated, not necessarily by subsidizing private sector data bases but by providing users with means to make their own choices (providing e.g. universities with specific funds for on-line research rather than funding on-line data bases directly). As comprehensive as public sector information policies should be, they should also be flexible enough to reconcile diverging interests.

REFERENCES

[1] YANEZ, (A.). Non-Technical Factors Influencing Information Services. What should Users Expect from Information Storage and Retrieval Systems of the 1980's? AGARD Conference Proceedings No.304. 1981, 4-13 - 4-21.

[2] BURKERT, (H.). Legal basis for selling information by the public sector. International Chamber of Commerce (ed.). International Contracts for sale of information services. The Dossiers of the Institute of International Business Land and Practice. Paris 1989, 61-90.

[3] LENK, (K.) (ed.):.Neue Informationsdienste im Verhältnis Bürger und Verwaltung. Heidelberg 1990.

[4] STROETMANN, (K.A.). Fachinformationsdienste und gesellschaftlich produziertes Wissen: Ökonomische, gesellschafts- und informationspolitische Fragestellungen und Perspektiven. Nachrichten für Dokumentation 41 (1990).No.6,343-348.

[5] SCHWUCHOW, (W.). Problems in evaluating the quality of information services. WORMELL, (i.).(ed.) Information Quality , definition and dimensions. London 1990, 54-68.

[6] BURKERT, (H.). Rechtliche Rahmenbedingungen des Europäischen Informationsmarktes: Zugang zu Informationen im öffentlichen Sektor. St. Augustin 1987.

[7] MACKAAY, (E.). Economic Incentives in Markets for Information and Innovation. In: Harvard Journal of Law & Public Policy. Vol. 13 (1990), No. 3, 867-909.

[8] BURKERT, (H.).Secrecy and Transparency: The Role of Information Law. In: L'informazione nell'economia e nel diritto. Osservatorio "Giordano Dell'Amoe" sui rapporti tra diritto ed economia desl Centro Nazionale di Prevenzione Difesa Sociale. Milano, Congresso internazionale, 30-31 marzo 1989. Milano 1990, 149-173.

[9] VITALIS, (A.). Infomatique, pouvoir et libertés. Paris, Economica, 1988.

[10] BURKERT, (H.).Reconciling Diverging Interests in Public Sector Information. The Québec Approach. Sankt Augustin 1990.

[11] PRÉMONT, (M.C.). La casse tête de l'information gouvernementale, ou comment vendre ce qu'on doit donner? In: Mémo'art Vol.2 (1989), No.4, 9-19.

Les transferts de technologie : négociations internationales et travaux en cours.

par

Paul FREIERMUTH
Contrôle Général des Armées
00450 ARMEES FRANCE

La réunion du COCOM des 23 et 24 mai 1991 à Paris, au moment où ces lignes sont écrites, a attiré l'attention des médias, qui avaient déjà été sensibilisés au problème des transferts de technologie à l'occasion de la crise du Golfe.

Celle-ci a mis en évidence la difficulté éprouvée par les gouvernements à définir une ligne de conduite simple en matière de technologies à usage militaire. Cette difficulté n'est pas très différente des questions que se posent les industriels : faut-il coopérer, faut-il vendre, faut-il acheter?

La signification de l'expression "transfert de technologie" est incertaine car elle regroupe deux termes mal définis. Si le premier semble recouvrir le sens juridique de transmission de droits, le second mérite un examen plus attentif car son sens a évolué.

On est passé du sens étymologique d'étude, de discours ou de science des techniques à celui d'ensemble des informations, compétences, méthodes et outillages ayant trait à la conception, la production, les essais ou l'utilisation (installation, exploitation, maintenance, réparation, révision) de marchandises ou de procédés.

Cette définition a parfois été critiquée en ce qu'elle met au même niveau les moyens matériels (informations, méthodes, outillages) et immatériels (savoir faire know how), mais ces deux aspects méritent une attention égale car la mise en oeuvre des outils et méthodes est parfois impossible sans savoir faire.

L'usage courant associe d'ailleurs au mot technologie les techniques sophistiquées, difficiles à mettre en oeuvre, voire nécessitant des investissements importants (électronique, nucléaire).

Il y a transfert de technologie lorsqu'une partie, qui domine un processus de production ou de gestion, met une autre partie en situation ou en mesure de réaliser de manière indépendante, au terme d'un délai variable, le processus, tel quel ou adapté, et le cas échéant d'innover en le prenant pour point de départ.

Il y a donc une situation déséquilibrée entre les deux parties surtout sensible lorsqu'elle intervient entre industriels de pays de niveau technique très différent, comme c'est le cas dans les rapports Nord-Sud.

Un survol historique montre que les transferts de technologie se sont fait de manière informelle (poudre à canon, boussole, imprimerie) mais leur intensification à l'ère industrielle a conduit les européens à les formaliser dans un cadre commun : c'est l'objet de la Convention de Paris du 20 mars 1883.

L'émergence d'un bloc hostile après 1945, puis la volonté des PVD d'avoir accès aux technologies occidentales pour se développer, a fait évoluer la problèmatique du champ industriel au domaine politique et économique.

Les demandeurs de technologie se situent en effet aussi bien parmi les pays occidentaux que dans les pays de l'Est ou dans les pays en voie de développement, et tout transfert s'inscrit dans une problématique différente selon le receveur, et qui dans les cas extrèmes (PVD hostile) met en jeu des considérations économiques, politiques (stratégiques) et juridiques.

Il ne peut donc pas y avoir de recommandation générale et indifférenciée en la matière car les transferts de technologie, qui correspondent à des finalités multiples, s'établissent selon des modalités trés diversifiées pour surmonter de difficultés de tous ordres.

I - Les finalités des transferts de technologie sont multiples.

Les Transferts de Technologie répondent avant tout au souci des pays ou des industriels de se maintenir en tête de la concurrence internationale grâce au progrès technique.

Ces échanges s'inscrivent donc dans un cadre politique de stratégie industrielle et des instruments juridiques adaptés permettent de les mettre en oeuvre.

1.1 - Les motivations sont fondamentalement techniques.

Elles sont toutefois très disparates et il faut distinguer les transferts en direction du sud, de l'est et de l'ouest.

1.1.1 - Les transferts vers les pays en voie de développement peuvent être perçus comme la clé d'un développement économique futur.

Ils font souvent l'objet d'accords entre Etats ou entre une entreprise et un acteur public, en raison de l'absence d'interlocuteurs crédibles dans le secteur privé et de l'intérêt stratégique du transfert pour le pays receveur dans son ensemble.

Le patrimoine technologique des PVD est très faible et leurs besoins se situent d'abord dans le domaine agricole mais ce domaine n'est pas toujours privilégié dans la mesure où il n'apparaît pas souhaitable de créer un sous emploi résultant d'une croissance trop rapide de la productivité agricole. Celle-ci nécessite d'ailleurs un détour industriel pour la production d'outils ou d'engrais.

Au delà des besoins de base, de nombreux PVD se sont lancé dans des programmes ambitieux de développement industriel et ont favorisé des opérations de prestige, cautionnées par les occidentaux mais parfois sanctionnées par l'echec.

Les pays du Sud ne constituent pas une catégorie uniforme et l'impact des transferts de technologie est très différent selon qu'il profite à des pays africains ou à des pays phares d'extrême orient. Le cas des nouveaux pays industrialisés comme la Corée du Sud apporte la preuve que les transferts de technologie sont un puissant outil de développement économique, à condition que l'écart technologique ne soit pas trop important. L'analyse de Fernand Braudel (4) distingue les pays du centre (occidentaux) et ceux de la périphérie, les transferts de technologie s'inscrivant dans un mouvement centrifuge dont les effets sont d'autant plus marqués que la distance par rapport au centre est moins grande.

C'est entre pays du centre que l'effet d'accélération est le plus marqué.

1.1.2 - Les transferts de technologie entre occidentaux conduisent à des coopérations exploitant les complémentarités.

Les pays occidentaux maîtrisent les technologies, et les échanges ont un caractère plus commercial que l'aide au développement.

. Les raisons économiques dominent.

En amont, en matière de recherche et développement, le but est d'éviter à la fois la sclérose intellectuelle et les duplications. Les échanges sont parfois formalisés entre états (ex : les Data Exchange Agreements - DEA avec les Etats-Unis). Les entreprises en revanche n'échangent pas d'informations à ce niveau avant d'avoir garanti leurs droits (brevets).

. Les raisons sont aussi techniques et financières, aucun pays n'étant plus en mesure de développer seul toutes les technologies. Les transferts visent alors à exploiter les complémentarités pour intégrer dans un produit final les différentes technologies nécessaires et dont une partie peut être acquise à l'extérieur de l'entreprise. Ainsi s'instaure une division du travail qui ne peut être profitable qu'entre pays ou entreprises de même niveau technologique ayant des capacités financières et des besoins similaires.

Les conditions se retrouvent par exemple dans les pays de l'OTAN en matière mili- taire, ou dans les pays occidentaux producteurs d'avions. Dans ces deux cas, les synergies ne peuvent s'exprimer que si elle sont précédées d'une harmonisation des normes.

D'un point de vue micro économique, les transferts de technologie permettent en outre un progrès de l'entreprise dans la mesure où d'une part ils exigent une formalisation des connaissances techni- ques, d'autre part ils incitent à pour- suivre les développements pour éviter les effets de concurrence en retour, enfin les redevances constituent une source de revenus parfois appréciables.

1.1.3 - Les transferts vers les pays de l'Est sont le moyen de remédier à leur retard technologique.

Les pays de l'Est sont en retard dans de nombreux domaines. Les raisons sont diverses : plans quinquennaux ne favorisant pas les technologies nouvelles, lourdeur de l'organisation, critères de régulation de l'économie.

Leur niveau technologique n'est pas homogène mais dans le domaine de l'armement il est égal ou proche de celui des occidentaux. Reste à connaître la part d'innovation propre à ces pays, et ce qui résulte de transferts irréguliers (contournement des barrières type COCOM ou espionnage).

Il semble admis que l'URSS a eu recours à de tels procédés mais il est difficile de mesurer l'avantage ainsi retiré.

Julian Cooper estime que les soviétiques ne souhaitent pas devenir dépendants de la technologie occidentale et qu'en particulier dans le domaine de la défense la recherche est purement soviétique et a été initiée de longue date.

SUTTON en revanche défend la thèse selon laquelle la technologie occidentale est à la base du développement économique de l'URSS. Le tableau I joint en annexe recense les transferts légaux ou illégaux influençant la technologie militaire.

Dans le domaine civil, l'écart semble être prononcé en chimie, automobile ou informatique, et d'une manière générale dans les industries de biens de consommation durables. Mais l'URSS surpasse parfois les occidentaux : elle vend des licences concernant le soudage, le moulage électromagnétique du cuivre, les instruments chirurgicaux...

L'exemple de l'URSS montre qu'au-delà des aspects techniques, les transferts de technologie s'inscrivent aussi dans un cadre stratégique et politique.

1.2 - Un cadre stratégique et politique.

Les finalités d'apparence purement économiques ne sont pas exemptes de considérations politiques et obéissent à des objectifs stratégiques, voire éthiques.

1.2.1 - Le développement est une obligation morale.

Les PVD expriment depuis longtemps des revendications en particulier à la CNUCED. Ils aspirent à un nouvel ordre économique international et dénoncent le poids des occidentaux dans le commerce international. Ces derniers sont très divisés sur la question des rapports Nord-Sud qui ne peuvent pas se fonder sur l'économisme dans la mesure où non seulement il y a peu de retours financiers mais de surcroît la coopération peut générer des concurrents redoutables en raison des très faibles coûts de productions observés dans les pays du Sud.

L'aide aux PVD obéit donc essentiellement à des mobiles d'ordre éthique et politique qui ne peuvent pas rencontrer un concensus dans un monde occidental lui-même divisé.

1.2.2 - L'affirmation de l'Europe divise les occidentaux.

La consolidation de la CEE depuis plus de trente ans résulte d'une forte volonté politique qui a permis aux européens de surmonter leurs divisions historiques et idéologiques sous la pression de la nécessité économique.

Ce renforcement de l'Europe est considéré parfois avec inquiétude outre atlantique, et les oppositions avec l'Amérique du Nord se font plus fréquentes : on songe inévitablement à ARIANE et AIRBUS qui mettent en jeu le leadership technologique d'un pays. Dans le cas d'Airbus le débat s'est installé dans le domaine du respect des règles concernant le financement des développements technologiques.

1.3 - Le cadre juridique des transferts de technologie.

Il n'existe pas de catégorie juridique "contrat de transfert de technologie" qui fasse l'objet d'un consensus sur le plan international. Il s'agit d'une opération commerciale dont les conditions reflètent le rapport de forces entre cocontractants, généralement au profit de l'émetteur. Une pratique internationale s'est toutefois progressivement dégagée, qui comporte des règles spécifiques pour les pays de l'Est.

1.3.1 - La difficile élaboration d'un droit international des transferts de technologie.

La propriété intellectuelle est reconnue comme un des droits fondamentaux de l'individu : ce droit est acquis à celui qui en est à l'origine sous réserve de certaines formalités (brevet) et peut être cédé. Ces questions étant abordées dans des exposés spécifiques on se limitera ici aux aspects particuliers des transferts de technologie en direction de l'Est et les contrôles dont ils font l'objet.

1.3.2 - Le contrôle des transferts de technologie vers l'Est obéit à des impératifs stratégiques, mais sa mise en oeuvre est délicate.

1.3.2.1 - Les finalités du contrôle sont militaires et stratégiques.

La nécessité d'un contrôle des transferts de technologie s'est imposée après la seconde guerre mondiale, lorsqu'il est apparu avec Hiroshima que la technologie moderne était un facteur décisif de la guerre et de la paix.

A cette époque la suprématie technologique des Etats-Unis est très prononcée et c'est donc tout naturellement, dans le contexte de guerre froide dramatisé par le blocus de Berlin, que les Etats-Unis décident un embargo technologique à l'égard de l'URSS et les pays sous sa dépendance. Pour contrarier le développement militaire de l'Est, l'ensemble des échanges technologiques mondiaux sont mis sous surveillance. Mais la volonté de soutenir les changements intervenus à l'Est par une modernisation de l'économie exige un assouplissement des règles.

1.3.2.2 - Le cadre juridique et les institutions de contrôle.

Les occidentaux ont mis en place dès 1949 une structure, le COCOM (Coordination Committee for multilateral Export Controls) qui regroupe les pays de l'OTAN (moins l'Islande) l'Australie et le Japon (depuis 1953). C'est une organisation informelle qui dispose d'un bureau permanent à Paris et prend ses décisions à l'unanimité. Celles-ci constituent des engagements des participants qui ne peuvent recevoir de sanction juridique internationale et ne deviennent effectives que lorsqu'elles sont intégrées dans le droit positif des Etats.

La responsabilité du contrôle incombe donc aux Etats. En France elle s'appuie sur un décret du 30 novembre 1944 qui permet de soumettre à autorisation préalable les produits désignés par arrêté ministériel. L'administration française publie des listes de matériels soumis à un contrôle de destination finale (CDF) qui incorporent les listes COCOM en droit français, les exportations de matériels de guerre étant de surcroît soumis à une autorisation exigée par le décret du 18 avril 1939. Le dossier est instruit par une commission interministérielle des exportations de matériels de guerre qui délivre l'autorisation.

Au COCOM, ce sont les services officiels qui sont représentés, et non les industriels exportateurs. Ces derniers présentent donc leur dossier aux autorités nationales qui seules disposent de l'ini- tiative de saisir le COCOM.

1.3.2.3 - L'objet du contrôle a évolué dans le temps et présente des ambiguïtés.

1. Les occidentaux avaient établi initialement trois listes de produits soumis à une interdiction d'exportation vers les pays dit "visés" : Pacte de Varsovie, Chine, Mongolie, Corée du Nord, Vietnam.

- Liste des matériels de guerre;
- Liste de l'énergie atomique;
- Liste I des produits à double usage;

Ces listes ont été actualisées régulièrement jusqu'en juin 1990, date à laquelle une libéralisation est intervenue pour prendre en compte les changements intervenus à l'Est. La liste I a été considérablement allégée, principalement dans les secteurs de la machine outil, des télécommunications et de l'informatique. Trois pays, la Pologne, la Hongrie et la Tchécoslovaquie bénéficient de conditions encore plus favorables, sous réserve de non réexportation.

2. De plus, un long travail de révision a abouti, lors de la réunion annuelle de haut niveau du COCOM les 23 et 24 mai 1991, a un accord pour substituer à la liste I un noyau dur (Core list) qui entrera en vigueur au 1er septembre 1991.

Ce noyau dur vise huit filières :

1. Electronique
2.A. Matériaux évolués
2.B. Traitement des matériaux
3.A. Télécommunications
3.B. Sécurité de l'information
4. Capteurs et lasers
5. Navigation et aéro électronique
6. Marine
7. Calculateurs
8. Propulsion

Chaque rubrique comporte des sous paragraphes : A : Produits - B : Machines - C : Matériaux - D : Logiciels - E : Technologie.

Comme par le passé, des seuils critiques de performances sont définis. Au dessus du seuil le plus élevé, l'exportation est interdite, sauf accord unanime, au dessous du seuil le plus bas l'exportation est libre. Entre les deux seuils le pays exportateur est tenu d'informer ses partenaires, ce qui permet de rester au courant des ventes "semi sensibles".

En outre diverses procédures existent pour déroger à l'embargo, dont deux sont réellement importantes :

- l'exception "administrative" accordée directement à l'exportateur par son gouvernement, sans accord préalable du Comité, sous réserve que cette procédure soit prévue dans des notes particulières figurant en fin d'article des listes ;

- l'exception "générale", accordée par le comité à l'unanimité. En cas de refus, le pays concerné peut déposer une "demande de reconsidération".

3. La nouvelle liste COCOM ne concerne que les produits à double usage. Elle traduit un équilibre entre les considérations de sécurité et la nécessité de développer les transferts de technologies indispensables à la modernisation des économies de l'Est.

Elle marque une grande ouverture pour les avions certifiés comme civils et leurs moteurs, et pour les calculateurs (dont la vitesse n'est plus le critère essentiel puisque le seuil est porté à 1000 mégabits/seconde) les technologies de production associées étant également libérées. Les radars de contrôle de circulation aérienne d'un rayon inférieur à 500 KM sont exportables. L'ouverture est moins grande pour les machines outils (le seuil de précision n'a été abaissé que de 20 à 6 microns, alors que certains pays auraient souhaité aller jusqu'à 1 micron). En revanche elle marque un durcissement vers l'URSS en matière de télécommunications intérieures, surtout pour les technologies à fibres optiques, et d'appareils de vision nocturne.

4. Une ambiguïté subsiste à propos des technologies duales dont le contrôle résulte de la thèse qui lie capacités industrielles et capacités militaires. Le but serait donc de limiter l'efficacité de l'industrie soviétique, le critère économique conduisant à un quasi embargo. Ce point de vue, principalement américain, n'est pas entièrement partagé par les européens ou les japonais, et a conduit à un affrontement à propos du gazoduc sibérien, qui s'est résolu en France par la réquisition des entreprises concernées.

5. L'établissement des listes et seuils résultent aussi de critères de non disponibilité dans les pays visés, ou de non possibilité de contournement. Ce dernier point est essentiel car de plus en plus de pays nouvellement industrialisés ne font pas partie du COCOM et sont donc en mesure de se substituer aux industriels occidentaux soumis au contrôle. Les pays tiers (Suisse, Autriche, Suède, Finlande, Singapour, Corée du Sud...) ont été soumis à une "campagne de persuasion" qui a enregistré des résultats positifs.

6. Ce contrôle international avait également pour conséquence de compliquer les échanges intra-COCOM, qui n'ont été libérés qu'en juin 1990. Des initiatives avaient d'ailleurs été prises par la France, la Grande Bretagne et la RFA qui ont instauré des licences générales intra COCOM, dans la perspective du marché unique de 1993.

Les contrôles ainsi évoqués concernent principalement les ventes de produits. En réalité, les transferts de technologie revêtent des formes multiples.

II - Les modalités des transferts de technologie sont variées.

Des formes plus élaborées que la cession vente, telles que la coopération, ont été institutionnalisées à côté de pratiques informelles voire illégales.

2.1 - Les transferts peuvent porter sur les connaissances, les compétences ou les performances.

2.1.1 - Les transferts de connaissances sont peu efficaces.

Ce mode de transfert correspond à la cession d'une licence d'exploitation d'un brevet, sans savoir faire. Il s'adresse donc à une entreprise disposant de capacités confirmées ce qui est courant dans les pays industrialisés. Il est peu pratiqué avec les pays du sud pour lesquels la cession de licence avec savoir faire (Know how) est plus efficace.

2.1.2 - Le transfert de compétences implique un partenariat

Ce type de transfert permet au destinataire de recevoir une aide, sous forme d'assistance technique ou de formation à l'utilisation. Le transféreur s'engage à former les techniciens qui n'existent pas dans l'entreprise ou le pays. Ce type de contrat n'assure pas que la "greffe technologique" survivra au programme de formation. Les exemples abondent dans le domaine militaire d'armées laissant se dégrader des équipements sophistiqués faute de savoir les entretenir, ou encore se plaçant durablement sous la dépendance du pays fournisseur.

2.1.3 - Le transfert de performances permet d'éviter les echecs

La forme la plus simple est le contrat "clé en main" qui garantit la construction d'une usine mais ne fournit aucune certitude quant à sa mise en oeuvre.

C'est pourquoi les pays peu développés préfèrent les contrats dits "produit en main" qui oblige le transféreur à permettre au destinataire de produire sans aide extérieure permanente.

Cette obligation de résultat, très lourde, ne peut être assumée que par de grandes entreprises mais garantit à terme la maîtrise technologique. La filière textile offre de bons exemples en la matière.

Le degré supérieur du transfert inclut le domaine de la concurrence et de la liberté d'exporter, formalisé par des contrats "marché en main" qui garantissent l'autonomie technologique.

Ces contrats sophistiqués comportent une aide technique prolongée (basic engineering) parfois apportée par une entreprise différente, pour alléger la dépendance. La mission couvre l'ensemble de la gestion des affaires tant au point de vue de l'exécution que du contrôle. L'entreprise doit communiquer au destinataire les concepts méthodologiques nécessaires et l'aider à adapter son organisation.

2.2 - **La coopération entre pays occidentaux est une modalité de transfert institutionnalisé qui se concrétise par des programmes spécifiques.**

La coopération peut être bilatérale ou multilatérale, elle peut intervenir ponctuellement ou s'inscrire dans un ensemble de recherches tant militaires que civiles, et s'appuie parfois sur des institutions adaptées.

2.2.1 - **La coopération dans le secteur civil donne lieu à des programmes ambitieux.**

Elle est le fait tantôt des Etats, tantôt des entreprises, et les plus brillants succès sont bien connus. Concorde, Airbus, le moteur CFM-56 développé par la SNECMA avec Général Electric, la fusée ARIANE...

La CEE a souhaité favoriser la diffusion des techniques et optimiser l'emploi des ressources financières en coordonnant la recherche au sein de vastes programmes, cofinancés par les industriels. Quatre axes principaux ont été retenus :

- les technologies de l'information absorbent 45 % des crédits pour les programmes ESPRIT, RACE, DELTA, DRIVE, AIM ;

- Les technologies industrielles (matériaux, chimie, textile...) font l'objet du programme BRITE,

- BAP, FLAIR, ECLAIR concernent les ressources biologiques ;

- enfin dans le domaine de l'énergie, la communauté a créé les programmes TELEMAN et JOULE.

Le projet EUREKA regroupe 19 pays et dépasse donc le cadre de la CEE. Il est destiné à promouvoir la recherche dans les technologies de pointe, en vue d'accroître la compétitivité européenne.

2.2.2 - La coopération militaire revêt des aspects particuliers.

L'armement étant un facteur de souveraineté, les gouvernements sont le plus souvent à l'origine de ces coopérations pour lesquelles ils ont mis en place des institutions spécifiques.

2.2.2.1 - Les coopérations bilatérales sont très nombreuses.

C'est entre les pays de l'OTAN que s'établissent le plus facilement des coopérations fondées sur la complémentarité industrielle et l'équilibre des échanges. Si la France, pour des raisons techniques et financières a pour partenaires principaux la RFA, la Grande Bretagne et les Etats-Unis, tous les pays de l'OTAN sont concernés par des accords bilatéraux. Les accords prennent la forme d'un Mémorandum d'Entente (MDE/MOU) qui présente la particularité de constituer un engagement international insusceptible de recours devant une juridiction.

2.2.2.2 - Les coopérations multilatérales se développent dans le cadre d'institutions adaptées.

Deux d'entre elles méritent une attention particulière : la CDNA et le GEIP.

1. la Conférence des Directeurs Nationaux d'Armement a remplacé en 1966 le Comité de l'Armement dans l'organisation de l'OTAN. Placée sous l'autorité du conseil, elle dispose de 7 groupes principaux : des groupes adaptés aux 3 armées (terre, air, mer) un groupe de recherche de défense, un groupe interarmées sur les communications et l'électronique, un groupe consultatif d'industriels (NIAG) et un groupe consultatif sur les pratiques d'acquisition (AC/313).

Succédant à un groupe sur la propriété intellectuelle, l'AC/313 a été créé en octobre 1981 pour étudier les mécanismes législatifs, contractuels, financiers et administratifs des réalisations d'armement en coopération, en vue d'harmoniser les pratiques, de faciliter les procédures contractuelles, de réduire les coûts et de promouvoir la coopération entre les gouvernements et les industriels.

Le groupe établit des recommandations, publiées dans la série "AACP", qui portent principalement sur la négociation des accords de coopération.

Le groupe a développé en particulier des lignes directrices pour la fixation des prix, les problèmes de change, la responsabilité en cas d'usage illégal de brevets, les dommages causés aux tiers, les échanges d'informations techniques, la sélection des fournisseurs.

Dans le prolongement des initiatives prises par la CDNA pour promouvoir l'exploitation des technologies émergentes, il a établi diverses mesures pratiques pour encourager des contacts précoces entre industriels et gouvernements à partir de modèle type de déclaration d'intérêt et de déclaration d'intention, ou encore en proposant dès critères de répartition des coûts et du travail.

Le groupe AC/313 a également mis au point une liste type des points à prendre en considération pour rédiger un Mémorandum d'entente de programme (PMOU) qui, signé à l'ouverture du programme, pose les prin- cipes fondamentaux de la coopération pour toute les phases du programme (faisabilité, développement, fabrication, maintenance, retrait du service).

Pour faciliter la négociation avec les industriels des contrats nécessaires aux programmes, le groupe a consulté le NIAG et mis au point des lignes directrices pour les études de faisabilité et les développements ; dans ce dernier cas, des exemples de clauses sont proposées.

Le groupe a enfin proposé des mécanismes pour associer aux développements les pays dont les industries de défense sont peu développées, de manière à leur permettre d'étendre leur base technologique, ou encore des procédures pour raccourcir le délai de signature des Mémorandum d'entente, et à également contribué aux réflexions d'un groupe ad-hoc sur les incidences sur les acquisitions de défense des négociations sur les forces conventionnelles en Europe (FCE), en particulier pour la concurrence transfrontalière, le juste retour et les transferts de technologie.

Les travaux en cours concernent des exemples de clauses de MDE, une clause contractuelle de propriété intellectuelle des logiciels, le coût global de possession, les questions d'impositions...

Les recommandations de l'AC/313 paraissent importantes dans la mesure où elles préfigurent un droit international de la coopération d'armement dont les instruments juridiques restent à établir.

2. Le groupe Européen Indépendant des programmes (G.E.I.P) a été fondé le 2 février 1976 par les pays européens de l'Alliance Atlantique, à l'époque la RFA, la Belgique, le Danemark, la France, la Grèce, l'Italie, le Luxembourg, la Norvège, les Pays-Bas, le Royaume-Uni et la Turquie. L'Espagne et le Portugal ont rejoint à une date ultérieure.

La "charte du GEIP", qui a été approuvée alors, présente les quatre objectifs de cette démarche, extraits de la résolution commune du 2 février 1976 :

- "Permettre un emploi efficace des moyens financiers affectés à la recherche, au développement et à l'acquisition de matériel ;

- accroître la standardisation et l'interopérabilité des matériels, ce qui facilitera aussi la coopération dans les domaines de la logistique et de l'entraînement,

- assurer le maintien d'un saine base industrielle et technologique européenne dans le domaine de la Défense,

- accroître en même temps le poids de l'Europe dans ses rapports avec les Etats-Unis et le Canada."

Il convient de souligner que le GEIP est établi sur la base de cette charte, **mais sans passer par un traité** au niveau des Etats. Ceci implique notamment que le **GEIP ne dispose pas d'une personnalité juridique propre, ne peut pas s'appuyer sur les réglementations et juridictions applicables aux organismes internationaux**, et notamment ne peut pas détenir de bien propre, ni passer de contrats en son nom. Il doit donc s'appuyer sur les dispositions réglementaires, juridiques et contractuelles des pays participants.

I - La structure de fonctionnement du GEIP.

Pour atteindre ses objectifs, le GEIP s'est doté d'une structure articulée autour de 3 commissions et 2 groupes spéciaux subordonnés aux Directeurs Nationaux d'Armement.

Ceux-ci rendent compte depuis novembre 1984 aux ministres de la Défense des pays membres, qui constituent l'échelon supérieur du GEIP et qui procurent à ses travaux une très haute visibilité.

La Commission I traite **l'harmonisation des besoins** et des spécifications des produits futurs, et couvre les programmes en coopération à plus long terme.

La Commission II traite de la coopération européenne en matière de recherche. Cette coopération comprend notamment la mise en oeuvre du programme **"EUCLID" (European Cooperation for the Long term In Defense)**, où les pays sont appelés à harmoniser leurs efforts dans onze domaines réputés prioritaires (les "Common European Priority Areas" CEPA) et à s'engager concrètement sur des projets de Recherche et de Développements Exploratoires (Research and Technology Project RTP).

Vingt six projets sont entrés en 1990 en phase de définition. Leurs arrangements techniques devraient être signés au cours des prochain mois et la plupart devraient faire ainsi l'objet d'appels d'offres dès cette année.

La somme des engagements pour ces vingt six projets est de 71 MECUS pour 1991 et de 80 MECUS pour 1992.

La Commission III traite des **procédures et des affaires réglementaires et contractuelles**, dans le but de faciliter les opérations internationales et l'européanisation des affaires d'armement. A ce titre, elle s'intéresse aux grands principes et procédures d'ouverture des marchés d'équipement de défense.

Cette commission s'appuie sur les travaux de divers groupes sur des sujets plus spécialisés tels que :

- la compétition et l'élargissement des appels d'offre,

- le juste retour,

- le traitement des pays en développement industriel (Developing Defense Industries - DDI - principalement Turquie, Grèce et Portugal),

- les transferts de technologie et les droits de propriété industrielle.

- Un groupe spécial sur les communications (**Task Force C 3** - communication-contrôle-et commandement) a été établi dans le but de permettre à l'industrie européenne de se préparer aux importantes opérations prévues par l'OTAN pour renouveler ses infrastructures de C3 dans les 20 prochaines années. Les travaux portent actuellement sur l'établissement de normes et standards, l'évaluation de différentes architectures, et la résolution des points durs technologiques.

- Un groupe ad-hoc (**AHG "1992"**) chargé d'analyser les conséquences du marché commun européen sur les activités du GEIP, dont le mandat est actuellement en cours d'approbation.

En parallèle à cette structure étatique, les industriels Européens ont la possibilité d'harmoniser leur vues au sein du "Groupe des Industriels Européens de la Défense" (European Defense Industrial Group - EDIG).

2.3 - Les transferts de technologie peuvent aussi être informels voire illégaux.

2.3.1 - Ils nécessitent des structures de recueil du renseignement.

L'URSS semble avoir particulièrement développé ce domaine en articulant son système de recueil du renseignement scientifique et technique autour de la VPK (Commission du Président du Conseil des Ministres). La VPK est chargée de déterminer les axes de recherche du KGB, du GRU, du GKNT et de l'agence IV chargée de contourner les contrôles du COCOM, le KGB étant plus particulièrement chargé de coordonner les efforts des satellites, dont la production devrait diminuer. Ainsi l'URSS a perdu l'aide des services d'Allemagne de l'Est (principalement la Hauptverwaltung für Aufklärung).

2.3.2 - Les transferts illégaux ou informels s'appuient sur des documents scientifiques ou des matériels.

Les contrôles douaniers sont très difficiles à mettre en oeuvre et certains spécialistes admettent que les probabilités de détection d'un détournement sont minimes. Certains matériels soviétiques présentent ainsi des ressem- blances étonnantes avec les matériels occidentaux : missiles ATOLL et Sidewinder, Illyouchine 86 et Boeing 747, Illyouchine 67 et Lockeed C 141, le SST Tupolev et le Concorde. Au niveau des équipements, le "reverse engineering" est encore plus difficile à mettre en évidence.

Les "technologies démembrées" sont des connaissances scientifiques divulguées lors de colloques ou qui figurent dans les notices techniques, instructions de fabrication, plans, ou rapports d'évaluation des matériels. Pour empêcher ce type de transfert, il faudrait interdire l'accès des pays hostiles aux rencontres scientifiques, et exercer un contrôle des technologies démembrées telles que les instructions de fabrication qui sont considérées comme étant un moyen efficace de transfert.

Les risques de détournement sont donc réels et ils limitent la volonté d'ou- verture des détenteurs de technologie, mais même lorsqu'il y a volonté de transférer, l'opération peut rencontrer de nombreux obstacles.

III - Les obstacles sont d'ordres culturel, économique, technique, politique.

3.1 - Les obstacles culturels sont linguistiques et sociologiques.

3.1.1 - L'absence de langage commun soulève des difficultés parfois inattendues.

Il s'agit d'abord de la compréhension mutuelle, compliquée par l'usage mal maîtrisé de l'anglais par des non anglophones. Les latins semblent particulièrement handicapés en raison des dérives de sens de mots d'origine latine incorporés dans l'anglais.

Ainsi, doit-on traduire "design" par dessin ou conception ?

L'imprécision de certains concepts divise les anglophones eux même et on peut y voir la raison du développement des professions juridiques aux Etats-Unis.

Le choix de la langue de rédaction d'un accord multilatéral peut se révéler délicat : dès lorsqu'un pays demande une traduction dans sa langue, tous les participants se sentent tenus à la même exigence, mais il y a peu de chances que toutes ces versions faisant également foi soient parfaitement conformes.

3.1.2 - Les obstacles sociologiques résultent des rapports étroits entre la technique et la culture.

Ils se rencontrent surtout dans les relations avec les pays du Sud.

Denis GOULET (3) observe que la technologie occidentale repose sur quatre valeurs essentielles qui rentrent en conflit avec les cultures vernaculaires du Tiers Monde.

1. La rationnalité s'oppose à une vision symbolique et mythique;
2. la notion d'efficacité repose sur un raisonnement d'exclusion ou d'inclusion d'un paramètre particulier. L'approche pragmatique et mécaniste de l'efficacité par l'occident ne prend pas toujours en compte les valeurs morales, religieuses, familiales.

Cette attitude évolue cependant car le facteur "pollution" est de mieux en mieux pris en compte : l'environnement est devenu une "internalité".

3. La technique est fondée sur la confrontation des faits humains et naturels, et découpe la réalité pour résoudre des problèmes. Cette approche n'est pas compatible avec l'attitude contemplative et le sentiment d'harmonie qui donne aux individus de certaines sociétés conscience d'appartenir à un "tout" indivisible.

4. Enfin, l'occidental possède une vision prométhéenne de l'Univers. Les forces de la nature sont "utilisées" et leur existence est en rapport avec leur utilité.

Ces quatre différences expliquent le malaise de certaines cultures face à la technologie.

3.2 - Les obstacles économiques.

3.2.1 - Le transfert de technologie ne correspond pas toujours aux besoins.

3.2.1.1 - L'adaptation économique est parfois négligée au profit du mimétisme technologique.

C'est un problème qui est porté à son paroxysme dans les pays du Tiers Monde mais il concerne aussi les entreprises occidentales confrontées à un choix de technologie.

Les PVD acquierrent souvent des techno- logies utilisant une combinaison de facteurs de production (capital et travail) qui n'est pas optimale dans leur contexte, et cette situation résulte d'une conjonction d'intérêts :

- les experts objectent que l'adaptation serait trop onéreuse ou dégraderait les performances;

- la nouvelle technologie valorise le receveur et peut le pousser à des opérations de prestige,

- le transféreur ne souhaite pas diffuser une technologie alternative et concurrente.

Ce mimétisme technologique est néfaste car il renforce les liens de dépendance et empêche l'acquéreur d'arriver à terme à l'autonomie technologique.

3.2.1.2 - L'inadéquation des besoins se rencontre aussi dans les coopérations militaires.

Pour qu'une coopération de défense s'instaure, il faut une conjonction des calendriers de renouvellement et un accord sur la définition du produit et la répartition du travail. Sur ce dernier point, les travaux menés à l'OTAN contribuent largement à la définition de besoins communs, mais ces besoins ont souvent été définis par l'enveloppe des besoins des divers participants et non pas par le noyau commun. Cela conduit à des produits très sophistiqués, pour assurer la polyvalence des missions, et donc très cher, parfois même trop. Aussi beaucoup de programmes ne voient pas le jour ou sont abandonnés à une phase précoce (cf NFR 90).

Des habitudes différentes dans la gestion des parcs de matériels a longtemps constitué un obstacle à la coopération européenne en matière de blindés, certains pays fonctionnant avec deux générations, ce qui impose des renouvellements tous les 15 ans, d'autres renouvelant l'ensemble du parc tous les 30 ans. Une évolution des cultures permettant d'harmoniser les calendriers semble toutefois se dessiner.

La répartition du travail constitue également une pierre d'achoppement de taille : la logique de mise en commun de capacités complémentaires est contrariée par la volonté des pays de profiter de ces coopérations pour combler leurs retards technologiques, en se chargeant précisemment des parties qu'ils "ne savent pas faire". Les programmes les plus récents comportent une forte part de logiciels ou d'électronique avancée. C'est cette partie noble qui est revendiquée par tous les partenaires qui y voient une possibilité relativement peu onéreuse de faire progresser leur industrie dans des domaines décisifs pour l'avenir.

La volonté d'impliquer les pays dont l'industrie de défense est en développement (DDI) se heurte à une double difficulté : les pays "riches" devraient accepter de financer en grande partie des développements mettant en jeu des technologies essentielles qui seraient réalisés dans les pays qui ne disposent pas de ces technologies (sauf à accepter le principe de Peter "Chacun doit faire ce qu'il n'arrive pas à faire").

Cela constitue un risque technique difficile à assumer et se heurte à l'opposition des industriels qui n'envisagent pas spontanément de renoncer à des contrats prometteurs, surtout si cela doit multiplier les concurrents et augmenter une capacité de production déjà excédentaire.

3.2.2 - Les propriétaires de la technologie veulent éviter une concurrence indue.

Pour limiter les risques de concurrence, les industriels qui transfèrent des technologies introduisent dans leurs contrats des clauses restrictives concernant la commercialisation ou même la production, et veulent s'assurer que leurs technologies ne seront par indûment disséminées.

La commercialisation est fréquemment limitée au territoire national du receveur, ce qui préserve pour le transféreur les autres marchés.

Les conditions de production peuvent aussi être aménagées en imposant l'approvisionnement en matières premières ou sous ensembles auprès du transféreur, ou encore en limitant la production à un produit, ou une catégorie de produits, et qui peut aller jusqu'à l'interdiction de modification.

Le souci essentiel des industriels est en effet de ne pas être dépossédés de leur technologie sans contrepartie. Le risque de dissémination non maîtrisée est réel dans les programmes militaires en coopération. La confidentialité des informations échangées entre pays participants est certes garantie entre pays participants, à la suite d'un accord OTAN de 1970 sur la communication, à des fins de défense, d'informations techniques faisant l'objet de droits de propriété, qui impose des mesures de protection efficaces.

Mais les pays divergent sur la portée de l'expression "à des fins de défense", les américains en particulier estimant qu'elle les autorise à transmettre les droits de reproduction acquis dans un programme en coopération, à des pays qui n'auraient pas financé ce programme, et éventuellement sans contrepartie, dans le cadre de leurs programmes d'aide gratuite (grant aid). Les autres membres de l'OTAN contestent cette interprétation, et elle inquiète beaucoup les industriels qui sont d'ailleurs amenés bien souvent à autofinancer une partie des développements.

3.2.3 - Les transferts de technologie sont onéreux.

Dans le cas de transfert minimal (licence) le coût supporté par le receveur comprend non seulement les redevances mais aussi le coût de l'adaptation à la nouvelle technologie ; le rapport coût/efficacité peut être médiocre dans les pays peu industrialisés. Les transferts plus efficaces (cf 2.1.3 ci-dessus) sont encore plus onéreux et induisent un problème de financement.

Tout transfert se caractérise par deux flux : un flux technologique du centre vers la périphérie, et un flux financier dans l'autre sens. Ce dernier suppose une accumulation de capital à la périphérie qui n'existe pas et est palliée par l'emprunt.

Les PVD se sont donc endettés, parfois à des niveaux excessifs, avec les conséquences que l'on connait. La dépendance technologique s'est donc doublée d'une dépendance financière. La situation ne pourra être maitrisée à l'avenir que par la mise en oeuvre d'une politique globale visant à faire des transferts de technologie l'instrument raisonné du développement scientifique et technique des pays bénéficiaires.

3.3 - Les transferts de technologie peuvent être contrariés par des considérations politiques.

3.3.1 - Les transferts de technologie sont un instrument du dialogue diplomatique.

La volonté des pays occidentaux de faire respecter des valeurs supérieures telles que les Droits de l'Homme ou le respect du droit international a conduit à diverses reprises à pratiquer des embargo économiques qui ont visé par exemple l'Afrique du Sud, la Chine ou l'Irak.

Les mesures sont appliquées avec plus ou moins de constance et leur efficacité politique est incertaine.

3.3.2 - Les institutions internationales restent à mettre en place.

Les réflexions menées à la suite de l'accord sur les FCE ont confirmé la volonté de promouvoir les transferts de technologie et ont mis en évidence l'absence d'une organisation spécifique qui serait chargée de les développer, mais il ne semble pas que cette constatation conduise immédiatement à des démarches positives.

En revanche il paraît inévitable, dans un contexte de diminution prévisible des budgets militaires, de recourir davantage à la concurrence internationale. L'extension à l'ensemble de l'OTAN des procédures d'ouverture réciproque des marchés d'armement, imitées de l'accord france britannique d'achats croisés, est une hypothèse qui n'est pas écartée.

Cela pourrait conduire à terme à une division du travail dont les conséquences stratégiques doivent être envisagées.

3.3.3 - Le caractère stratégique de l'industrie d'armement interdit une division systématique du travail.

La logique économique voudrait que l'on confie la production d'un type de matériel au pays le plus efficace.

Cette concentration des sources est déjà difficile à réaliser dans chaque pays, les donneurs d'ordres considérant que le maintien d'une concurrence constitue une garantie pour les prix.

Mais l'augmentation du coût des armements conduira nécessairement à une spécialisation qui n'est acceptable au niveau des matériels complets. Elle peut toutefois être envisagée au niveau des composants, la dépendance mutuelle reforçant les solidarités. Une telle évolution est sans doute souhaitable économiquement mais le niveau actuel de l'intégration politique en Europe par exemple ne permet pas de penser que les Etats sont à la veille de renoncer à l'instrument majeur d'indépendance nationale que constitue une industrie d'armement autonome.

La France joue un rôle déterminant dans les négociations sur l'Europe de la sécurité et de la défense. L'édification de cette Europe de la défense est d'abord une démarche politique et on assiste à des progrés spectaculaires de ce point de vue, qui ne remettent pas en cause l'Alliance mais au contraire visent à la renforcer.

Ce mouvement passe par un développement accru des coopérations industrielles qui sont à la base des transferts de technologies.

BIBLIOGRAPHIE

1 - Le contrôle des exportations de haute technologie vers les pays de l'Est, sous la coordination de Bertrand Warusfel, Editions Masson 1988.

2 - Transfert de technologie : enjeux économiques et structures juridiques, sous la direction de Bernard Remiche, Editions Cabay et Economica 1983.

3 - Enjeux technologiques et relations internationales, textes réunis par Michel Dusclaud et Jacques Soubeyrol, Editions Economica 1986.

4 - La dynamique du capitalisme par Fernand Braudel, Editions Flammarion, Collection Champs.

5 - **L'ARMEMENT** - N° 25 - décembre 1990.
La recherche de défense en coopération internationale par l'Ingénieur Général de l'Armement Alain Crémieux (p. 36 à 45).

6 - **L'ARMEMENT** - N° 26 - février/mars 1991.
Le contrôle à l'exportation des matériels sensibles : motivations par Michel Ferrier (p. 42 à 55).

7 - **DEFENSE NATIONALE** - avril 1987.
Transfert de technologie au profit de l'URSS par Henri Régnard (p. 21 à 32).

8 - **DEFENSE NATIONALE** - août/septembre 1990.
Les transferts de technologie vers les pays de l'Est par Marie-Hélène Labbé (p. 131 à 148).

9 - **PROBLEMES POLITIQUES ET SOCIAUX** - N° 643 - novembre 1990.
Les transferts de technologie Ouest-Est : quel avenir pour le COCOM ? Dossier constitué par Bertrand Warusfel.

10 - **Defense implications of Europe 92** par Michael Moodie, The Center for Strategic and International Studies Washington DC, 1990.
Dual-use industries in Europe par Eurostrategies, février 1991.

11 - **ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD (OTAN)**
CDNA, plan de travail de la CDNA concernant les incidences des réductions d'armement conventionels sur les acquisitions de défense par le président de l'AC/313, 12 mars 1991. Document AC/259-D/1426;AC/313-D/48.

12 - CDNA, faisabilité de l'amélioration des conditions régissant les échanges commerciaux entre les Alliés dans le secteur de la défense - analyse préliminaire. Rapport du groupe de travail. Document AC/259-D/1437.

13 - **GEIP** - Présentation générale, juin 1990.
Communiqué de la réunion ministérielle du GEIP, 16 novembre 1990..

Toward a Stronger Europe, Volume 2, IEPG.

Transfers of Technology: International Negotiations and Work in Progress

by

Paul Freiermuth
Contrôle Général des Armées
00450 Armées
France

The COCOM meeting held in Paris on 23 and 24 May 1991, at the time these lines were written, attracted the attention of the media, who had already become aware of the problem of transfers of technology during the Gulf crisis.

This meeting highlighted the government's problem of how to define a simple set of lines of conduct relating to technology for military use. This problem is not very different from the questions the industrialists are asking themselves: should we cooperate, should we sell, should we buy?

The meaning of the expression "transfer of technology" is uncertain because it groups together two ill-defined terms. Whereas the first seems to cover the legal meaning — transmission of rights, the second deserves closer examination since its meaning has changed.

It has developed from its etymological definition of the study, discussion or science of techniques, to that of a whole series of data, skills, methods and tools relating to the design, production, testing or use (installation, exploitation, maintenance, repair and revision) of goods or processes.

This definition has sometimes been criticized in that it places both tangible resources (information, methods, tools) and intangible resources (savoir-faire, know-how) on the same level. However, these two aspects deserve equal attention since the implementation of tools and methods is sometimes impossible without know-how.

Moreover, in current usage the word technology has connotations with sophisticated techniques, ones that are difficult to implement or even require substantial investments (electronics, nuclear industry).

Transfer of technology takes place when one party, which has thorough knowledge of a production or administrative process, puts another party in the position of being able to implement that process — in its original state or in an adapted form — independently, in a variable amount of time, thus, where applicable, enabling it to innovate by using the process as a starting point.

There is therefore a situation of imbalance between the two parties which is especially sensitive when it involves industrialists from countries with very different technical levels, as is the case in North-South relationships.

If we look at history, we find that transfers of technology used to take place informally (gunpowder, the compass or printing) but the intensification of such transfers in the age of the industrial revolution led the Europeans to formalise them in a common framework: this was the aim of the Paris Convention of 20 March 1883.

The emergence of a hostile bloc after 1945, followed by the developing countries' desire for access to Western technology, brought with them a change in the parameters of the industrial sector in the political and economic field.

In fact, potential purchasers of technology may include nationals of Western countries and of the countries of Eastern Europe as well as the developing countries, and any transfer gives rise to a different set of problems depending on the country at the receiving end, which in extreme cases (hostile developing countries) involves economic, political (strategic) and legal considerations.

Accordingly, no general, universal recommendation can be laid down in this field, since transfers of technology, corresponding to a wide variety of different end uses, are concluded by means of a very wide variety of modalities with a view to overcoming difficulties of every sort.

1. THE END USES OF TRANSFERS OF TECHNOLOGY ARE MANY AND VARIED

Transfers of technology respond above all to countries' or industrialists' desire to maintain their position in the forefront of international competition by means of technical progress.

Exchanges of this kind therefore fall into a political context of industrial strategy and appropriate legal instruments are used to implement them.

1.1 The Basic Motivations are Technical Ones

However, they are very disparate and a distinction should be drawn between transfers to the South, the East and the West.

1.1.1 *Transfers to the Developing Countries can be Viewed as the Key to Future Economic Development*

They are often the subject of inter-state agreements or agreements between a company and a public authority, in view of the lack of credible interlocutors in the private sector and the strategic interest of the transfer for the country at the receiving end as a whole.

The developing countries' technological assets are very limited and their primary needs are in the agricultural sector. However, this sector is not always given priority since it does not appear desirable to create underemployment which could well result from excessively rapid growth in agricultural productivity. Moreover, such productivity necessitates an industrial diversion in order to produce tools or fertilizers.

Over and above basic needs, many developing countries have embarked on ambitious industrial development programmes and have given priority to prestige operations, supported by Western countries but sometimes doomed to failure.

The Southern nations do not all fall into the same category and the impact of transfers of technology varies

considerably depending upon whether they benefit African countries or the bright lights of the Far East. The example of Newly Industrialising Countries like South Korea is evidence that transfers of technology are a powerful tool of economic development, provided that the technological divide is not too great. Fernand Braudel's analysis (Ref.4) draws a distinction between the countries of the centre (Western nations) and those on the periphery, with transfers of technology revolving in a centrifugal movement whose impact is all the more marked the nearer the centre they are.

Thus the effect of acceleration is the most noticeable between countries at the centre.

1.1.2 *Transfers of Technology between Western Countries Lead to Cooperation which Makes Use of Complementary Assets*

The Western nations have mastered various forms of technology, and such transfers are commercial rather than an aid to development.

Commercial reasons are dominant

Upstream, in the field of research and development, the aim is to avoid both intellectual stagnation and duplication. Exchanges between states are sometimes formalised (e.g. Data Exchange Agreements — DEA with the United States). On the other hand, companies do not exchange information at this level unless they have first safeguarded their rights (patents).

There are also technical and financial reasons, as no country is any longer in a position to develop forms of technology on its own. Transfers are then aimed at exploiting complementary assets with a view to integrating the various necessary technologies — part of which can be acquired from outside the company — to create a final product. Thus a division of labour is instituted which can only be profitable between countries or enterprises of the same technological level with similar financial capacities and needs.

Such conditions are found for example in the NATO countries in the military sector, or in the Western aircraft-manufacturing nations. In both these cases, the synergies can only be expressed provided they are preceded by the harmonisation of standards.

From the standpoint of micro-economics, transfers of technology also enable the enterprise to grow, in that on the one hand, they call for formalisation of technical knowledge and on the other hand they are an incentive for developments to be continued so as to avoid the effects of return competition. Lastly the licence fees can sometimes be a substantial source of income.

1.1.3 *Transfers to the Countries of Eastern Europe are a Method of Remedying their Technological Backwardness*

The countries of Eastern Europe are behindhand in many sectors. There are many different reasons for this: five year plans giving no incentive to new technologies, cumbersome administration, the criteria for regulating the economy.

Their technological level is not uniform, but in the armaments sector it is equal or close to that of the West. It is not known what percentage of the innovation was contributed by these countries themselves and what results from unauthorised transfers (avoidance of barriers such as COCOM, or espionage).

It seems to be acknowledged that the USSR has resorted to such methods but it is difficult to measure the advantage thus achieved.

Julian Cooper considers that the Soviets do not wish to become dependent on Western technology and that especially in the area of defence the research is purely Soviet and was initiated many years ago.

Sutton, on the other hand, argues in defence of the notion that the USSR's economic development is based on Western technology. Table I appended lists legal or illicit transfers that have had an impact on military technology.

In the civil sector, the gap seems very wide in the chemicals, automobile and data processing sectors, and generally in the consumer durables industries. However the USSR is ahead of the West in some sectors: it sells licences in the field of welding, electromagnetic copper moulding, surgical instruments etc.

The example of the USSR shows that aside from the technical aspects, transfers of technology also fall into a strategic and political context.

1.2 A Strategic and Political Context

Even apparently purely commercial uses are not exempt from political considerations and follow the dictates of strategic, even ethical, objectives.

1.2.1 *Development is a Moral Obligation*

For many years the developing countries have been pressing their claims especially to UNCTAD. They aspire to a new international economic order and denounce the weight of the West in international trade. Western nations are very divided on the question of North-South relationships which cannot be based on economic principles in that not only do they provide little financial return, but what is more, cooperation may give rise to redoubtable competitors in view of the very low production costs in the countries of the Southern hemisphere.

Aid to the developing countries accordingly essentially follows from motives of an ethical and political nature which are unlikely to meet with consensus in the Western world which is itself divided.

1.2.2 *The Strengthening of Europe Divides the West*

The consolidation of the EEC over more than thirty years is the result of a strong political will which has enabled Europeans to overcome their historical and idealogical divisions under the pressure of economic necessity.

This stengthening of Europe is sometimes viewed with concern on the other side of the Atlantic, and confrontations with North America occur more frequently: we are thinking, naturally, of the ARIANE and AIRBUS which call the technological leadership of a country into play. In the case of Airbus, the debate involved the area of compliance with the rules relating to the financing of technological developments.

1.3 The Legal Context of Transfers of Technology

There is no specific internationally recognized legal category known as the "transfer of technology agreement". It is a question of a commercial transaction whose terms reflect the relationship of strength between the respective contracting parties, generally in favour of the transferor. One international custom has gradually emerged, however, which sets out specific rules for the countries of Eastern Europe.

1.3.1 *The Difficulty of Drafting an International Law Relating to Transfers of Technology*

Intellectual property is recognized as one of the

fundamental rights of the individual: this right is the property of the person who created it subject to certain formalities (patent) and may be assigned. As these questions are being dealt with specifically in separate presentations, we shall restrict ourselves here to dealing with the special aspects of transfers of technology to Eastern Europe and the controls to which they are subject.

1.3.2 *The Control of Transfers of Technology to Eastern Europe follows the Dictates of Strategic Requirements, but its Implementation is Delicate*

1.3.2.1 *The end purposes of the control are both military and strategic*

The need for control of transfers of technology became essential after the Second World War, when Hiroshima demonstrated that modern technology was a decisive factor of war and peace.

At this time, the United States had marked technological supremacy and therefore, as a matter of course in the context of the Cold War dramatised by the Berlin blockade, the United States decided on a technological embargo of the USSR and the Eastern bloc countries. In order to counter military development by the Eastern bloc, all international technological exchanges were placed under scrutiny. However the desire to maintain the changes that have occurred in Eastern Europe by modernising the economy calls for the rules to be made more flexible.

1.3.2.2 *The legal context and the control institutions*

In 1949 the Western nations set up a structure, COCOM (Coordination Committee for Multilateral Export Controls) which groups together the NATO countries (apart from Iceland), Australia and Japan (since 1953). It is an informal organisation with a permanent secretariat in Paris, and it takes its decisions unanimously. These decisions constitute undertakings by the members which can only receive international legal sanction and only become effective when they are integrated into the states' substantive law.

Responsibility for control therefore falls to the states. In France it is based on a decree dated 30 November 1944 which requires particular products defined by ministerial decree to be submitted for preliminary authorisation. The French administration publishes lists of equipment that is subject to control of final destination (CDF) which incorporate the COCOM lists into French law, whilst armaments exports are in addition subject to authorisation laid down by the decree of 18 April 1939. The application for authorisation is investigated by an interministerial commission for armaments exports which issues the authorisation.

At COCOM, the official departments are represented rather than the exporting industrialists. Thus exporters submit their dossiers to the national authorities who alone have the right to refer the matter to COCOM.

1.3.2.3 *The aim of the controls has developed over time and contains ambiguities*

1. Initially the Western nations drew up three lists of products subject to export prohibition to the so-called "designated" countries: Warsaw Pact countries, China, Mongolia, North Korea and Vietnam.

   — List of war materials;
   — List of atomic power;
   — List I of dual-use products;

   These lists were regularly updated until June 1990, when they were made less restrictive to take account of the changes in Eastern Europe. List I was considerably reduced, principally in the machine tools, telecommunications and data processing sectors. Three countries, Poland, Hungary and Czechoslovakia, benefit from even more favourable terms, provided that there is no re-export.

2. Moreover, a long project of revision culminated, at the annual top level meeting of COCOM held on 23rd and 24th May 1991, in an agreement to substitute list I for a Core List which is due to come into force on 1st September 1991.

   This Core List comprises eight sectors:

   1. Electronics
   2.A. Advanced materials
   2.B. Processing of materials
   3.A. Telecommunications
   3.B. Security of information
   4. Receivers and lasers
   5. Navigation and aero-electronics
   6. Marine
   7. Computers
   8. Propulsion

   Each heading comprises subparagraphs: A: Products — B: Machines — C: Materials — D: Software — E: Technology.

   As in the past, critical performance thresholds are defined. Above the highest threshold, export is prohibited in the absence of unanimous agreement, below the lowest threshold, export is allowed. Between the two thresholds the exporting country is bound to inform its partners, which enables them to be kept up to date about "semi-sensitive" sales.

   In addition, there are various procedures for waiving the embargo, two of which are really important:

   — an "administrative" exception granted directly to the exporter by its government, without the Committee's prior approval, provided that this procedure is envisaged in the special notes set out at the end of the article of lists;

   — a "general" exception granted by the committee unanimously. In the event of refusal, the country concerned can file an "application for reconsideration".

3. The new COCOM list only relates to dual-use products. It translates a balance between considerations of security and the need to increase transfers of technology that are essential to the modernisation of the economies of Eastern Europe.

   It marks a great opening for sales of certified civil aircraft and their engines, and for computers (whose speed is no longer the main criterion, since the threshold has been increased to 1000 megabits/second) and the corresponding production technologies are also derestricted. Radar equipment for air traffic control with a radius of less than 500 kms may also be exported. The opening for machine tools is more limited (the precision threshold has only been reduced from 20 to 6 microns, whereas certain countries would have liked to go as far as 1 micron). On the other hand it marks greater intransigency towards

the USSR in the field of domestic telecommunications, especially in the case of optical fibre technologies and night vision appliances.

4. One ambiguity remains with regard to dual technologies, the control of which results from the theory linking industrial capacity with military capacity. The aim therefore seems to be to limit Soviet industry's efficiency, the economic criterion leading to a quasi-embargo. The Europeans and Japanese are not entirely in agreement with this mainly American viewpoint, and this has led to confrontation regarding a gas pipeline in Siberia. This has been resolved in France by the requisition of the companies concerned.

5. The establishment of the lists and thresholds also result from criteria of non-availability in the countries concerned, or lack of possibility of getting round the controls. The latter point is fundamental, for newly industrialising countries are not members of COCOM and are therefore increasingly in a position to take the place of Western industry that is subject to control. Third countries (Switzerland, Austria, Sweden, Finland, Singapore, South Korea etc.) have been subjected to "constant pressure" which has produced positive results.

6. This international control also results in the complication of inter-COCOM exchanges, which did not become unrestricted until June 1990. Moreover initiatives had been taken by France, Great Britain and West Germany instigating general licences within COCOM, with a view to the Single European Market of 1993.

   The controls referred to here mainly relate to sales of products. In reality, transfers of technology can take many forms.

2. TRANSFERS OF TECHNOLOGY CAN TAKE A VARIETY OF FORMS

More complicated forms than transfer by way of sale, such as cooperation agreements, have been institutionalised alongside informal or even illicit practices.

2.1 Transfers can Relate to Knowledge, Skills or Performance

2.1.1 *Transfers of **Knowledge** Alone are not Very Effective*

This method of transfer corresponds to the licence to utilize a patent, without know-how. It is therefore intended for a company with confirmed capabilities, as is common in the industrialised countries. It is seldom applied to countries in the Southern hemisphere, where the grant of a licence coupled with know-how is more effective.

2.1.2 *The Transfer of **Skills** Implies a Partnership*

This type of transfer enables the grantee to receive help, in the form of technical assistance or training in use. The transferor undertakes to train technicians where there are none in the company or in the country. This type of contract only ensures that the "technological transplant" survives the training programme. Examples abound in the military field of armies leaving sophisticated equipment to deteriorate because they do not know how to maintain it, or making themselves permanently dependent on the supplier country.

2.1.3 *The Transfer of **Performance** Enables the Avoidance of Setbacks*

The simplest form is the "turnkey" contract which guarantees the construction of a plant but does not supply any certainty as regards its implementation.

That is why less developed countries prefer so-called "product inclusive" contracts which oblige the transferor to put the transferee in a position to be able to produce the product in question without permanent foreign assistance.

This obligation as to result — a very heavy obligation — can only be assumed by large enterprises but does guarantee technological mastery in the long term. The textile industry offers good examples in this area.

An even higher degree of transfer includes the domain of competition and freedom to export, formalized by "market inclusive" contracts which guarantee technological autonomy.

These sophisticated contracts contain extended technical assistance (basic engineering) sometimes provided by a different company, in order to reduce dependency. The task covers the whole of the management of the business from the point of view to operation and control. The enterprise has to communicate the methodological concepts needed to the transferee and help it to adapt its organisation.

2.2 Cooperation between Western Countries is a Means of Institutionalised Transfer which is to be Put into Concrete Form by Specific Programmes

Cooperation may be bilateral or multilateral. It may take place on a one-off basis or form part of a whole research programme, both military and civil, and is sometimes backed by special institutions.

2.2.1 *Cooperation in the Civil Sector Leads to Ambitious Programmes*

This is done both by states and by companies, and the most brilliant successes are well known: Concorde, Airbus, the CFM-56 engine developed by SNECMA with General Electric, the ARIANE rocket, etc.

The EEC wished to encourage the spread of techniques and the optimization of financial resources by coordinating research within vast programmes, co-financed by industry. Four main lines have been selected:

- information technology absorbs 45% of credits for the following programmes: ESPRIT, RACE, DELTA, DRIVE and AIM;
- industrial technology (materials, chemicals, textiles, etc.) are covered by the BRITE programme;
- BAP, FLAIR and ECLAIR relate to biological resources;
- lastly in the energy sector, the EEC has set up the TELEMAN and JOULE programmes.

The EUREKA project groups 19 countries and its context is thus wider than the EEC. It is intended to promote research in state-of-the-art technology, with a view to increasing European competitiveness.

2.2.2 *Military Cooperation has Special Aspects of its Own*

As arms are a factor of sovereignty, usually this type of cooperation is initiated by governments, and specific institutions have been established with this aim in mind.

2.2.2.1 *There are many bilateral cooperation programmes*

Cooperation programmes based on complementary relationships in the industrial sector and balanced

exchanges can most easily be established between the NATO countries. Although for technical and financial reasons, France's main partners are the GFR, Great Britain and the Unted States, all the NATO countries are concerned by bilateral agreements. The agreements take the form of a Memorandum of Understanding (MOU/MDE) which has the particular feature of constituting an international undertaking which is not appealable before any court.

2.2.2.2 *Multilateral cooperation is developing in the context of special institutions*

Two of these deserve particular attention: the CNAD and the IEPG.

1. The *Conference of National Armament Directors* (CNAD) replaced the NATO Armaments Committee in 1966. Placed under the aegis of the council, it has 7 main groups: groups for each of the armed services (army, navy and airforce), an inter-army group covering communications and electronics, an industrial advisory group (NIAG) and an advisory group on procurement practices (AC/313).

   The successor to a group on intellectual property, AC/313 was set up in October 1981 to study the legislative, contractual, financial and administrative mechanisms of the realisation of cooperation programmes in the arms sector, with a view to harmonizing practices, facilitating contractual procedures, reducing costs and promoting cooperation between governments and industry.

   The group lays down recommendations, published in the "AACP" series, which relate principally to the negotiation of cooperation agreements.

   In particular the group has developed guidelines for price fixing, exchange rate problems, liability in the event of illegal use of patents, loss or damage caused to third parties, exchanges of technical information and the selection of suppliers.

   As an extension of the initiatives taken by the CNAD for encouraging the exploitation of new technologies, it has laid down various practical measures to encourage contacts between industrialists and governments at an early stage on the basis of a standard form declaration of interest and declaration of intent, or by proposing criteria for the division of costs and labour.

   The AC/313 group has also drawn up a standard list of points to be taken into consideration in drafting a Programme Memorandum of Understanding which, signed at the start of the programme, lays down the fundamental principles of the cooperation for all the phases of the programme (feasibility, development, manufacture, continuation and withdrawal from service).

   With a view to facilitating negotiation with industrialists of the necessary contracts relating to the programmes, the group consults the NIAG and establishes the guidelines for feasibility studies and developments; in the latter case suggested clauses are proposed.

   Lastly the group has proposed mechanisms for associating countries with less developed defence industries in the programmes, in order to enable them to extend their technological base, or procedures for reducing the delay in signature of the Memoranda of Understanding, and has also contributed to the studies of an ad-hoc group on the impact of the Conventional Forces in Europe (CFE) negotiations on defence procurement, in particular from the point of view of cross-border competition, fair return and transfers of technology.

   The work currently in progress concerns examples of MOU clauses, a contractual clause relating to intellectual property in software, the overall cost of possession, tax questions, etc.

   The AC/313 recommendations seem important in that they are the precursors of an international law on arms cooperation the legal instruments of which remain to be established.

2. The *Independent European Programme Group* (IEPG) was founded on 2nd February 1976 by the European members of the Atlantic Alliance, at that time, the GFR, Belgium, Denmark, France, Greece, Italy, Luxemburg, Norway, the Netherlands, the United Kingdom and Turkey. Spain and Portugal joined subsequently.

   The IEPG Charter which was then approved, sets out the four objectives of the group, extracted from the joint resolution of 2 February 1976:

   — "To enable efficient use of the financial resources appropriated to research, development and the acquisition of equipment;

   — to increase standardization and interoperability of equipment, thus facilitating cooperation in the areas of logistics and training;

   — to ensure the maintenance of a healthy European industrial and technological basis in the area of defence;

   — at the same time to increase Europe's weight in its dealings with the United States and Canada."

   It should be underlined that the IEPG was established on the basis of this Charter, but without involving a treaty at state level. The implications of this are in particular that the IEPG does not have an independent legal personality and accordingly is not supported by the regulations and courts applicable to international organisations, and in particular cannot hold any assets of its own, nor conclude contracts in its own name. It therefore has to rely on regulatory, legal and contractual provisions in the member states.

The operational structure of the IEPG

To achieve its objectives, the IEPG has provided itself with a structure based on 3 commissions and 2 special groups under the aegis of the National Armament Directors.

Since November 1984 this has reported back to the Ministries of Defence of the member states, who constitute the upper echelon of the IEPG and who ensure that its works have very high visibility.

Commission I deals with harmonisation of needs and specifications of future products, and covers longer term cooperation programmes.

Commission II deals with European cooperation in the field of research. This cooperation comprises in particular the implementation of the "EUCLID" programme (European Cooperation for the Long term in Defence), where the countries are called to harmonise their efforts in eleven

areas designated Common European Priority Areas (CEPA) and to undertake exploratory Research and Development Projects (RTP).

In 1990 twenty-six projects reached the definition stage. Their technical arrangements should be signed during the next few months and most should thus be the subject of tender procedures as from this year.

The overall total commitments for these twenty-six projects is 71 MECUS for 1991 and 80 MECUS for 1992.

Commission III deals with procedures and regulatory and contractual affairs with the aim of facilitating international operations and the Europeanisation of armaments matters. In this connection, it is concerned with the major principles and procedures of opening up the defence equipment markets.

This commission is based on the work of various groups dealing with more specialised subjects such as:

- competition and the expansion of tender procedures,
- fair return,
- the treatment of countries with developing defence industries (Developing Defense Industries — DDI — mainly Turkey, Greece and Portugal),
- transfers of technology and industrial property rights.
- *A special group on communications* (Task Force C3 — communication, control and command) has been set up with the aim of enabling European industry to prepare for the important operations envisaged by NATO relating to the renewal of its C3 infrastructure over the next 20 years. The work relates currently to the establishment of norms and standards, the evaluation of different architectures and the resolution of technological difficulties.
- An ad-hoc group (AHG "1992") charged with analysing the consequences of the European common market on the activities of the IEPG, whose mandate is currently in the course of approval.

  In parallel with this state structure, European industrialists have the possibility of harmonising their views within the *European Defence Industrial Group — EDIG.*

2.3 Transfers of Technology can also be Informal or Even Illicit

2.3.1 *They Necessitate Information Collection Structures*
The USSR seems to have developed this area particularly by linking its collection of scientific and technical information to the VPK (President's Commission of the Council of Ministers). The VPK is charged with determining the lines of research of the KGB, the GRU, the GKNT and Agency IV responsible for getting round the COCOM controls, the KGB being particularly responsible for coordinating efforts in the satellite sector, whose output is likely to diminish. For example the USSR has lost the assistance of the services of East Germany (mainly the Hauptverwaltung für Aufklärung).

2.3.2 *Illicit or Informal Transfers are Based on Scientific Documents or Equipment*
Customs controls are very difficult to implement and certain specialists admit that the likelihood of detection of illegal exports is minimal. Accordingly certain Soviet equipment bears an amazing resemblance to Western equipment: the ATOLL and Sidewinder missiles, Illyouchine 86 and Boeing 747, Illyouchine 67 and Lockheed C 141, the SST Tupolev and Concorde. At the level of armaments equipment, reverse engineering is even more difficult to pinpoint.

"Technological dissections" are scientific knowledge divulged during symposia or which feature in technical notices, manufacturing instructions, plans or equipment evaluation reports. In order to prevent this type of transfer nationals from enemy countries would have to be refused access to scientific meetings, and control exercised over technological dissections such as manufacturing instructions which are deemed to be an effective method of transfer.

The risks of misappropriation are therefore real and they limit owners of technology's desire for openness, but even when there is a will to transfer, the operation may come up against numerous obstacles.

3. THE OBSTACLES HAVE CULTURAL, ECONOMIC, TECHNICAL OR POLITICAL CONNOTATIONS

3.1 The Cultural Obstacles are Lingustic and Sociological

3.1.1 The absence of a common language sometimes gives rise to unexpected difficulties.

First of all it is a question of mutual understanding, complicated by a poor use of English by non-English speakers. The Latins seem particularly handicapped because of the changes in meaning of words with a Latin origin incorporated into English. Thus, should one translate the word "design" by the French word "dessin" (drawing) or by "conception" (design in the conceptual sense e.g. by an architect or engineer)?

The imprecision of certain concepts divides Anglophones themselves and one can even see this as one of the reasons behind the expansion of the legal professions in the United States.

The choice of language for the drafting of a multilateral agreement may turn out to be delicate: when one country requests a translation into its language, all the contracting parties feel constrained to make the same demand, yet there is little likelihood that all these equally authentic versions will accord perfectly one with the other.

3.1.2 The sociological obstacles result from the close relationship between technique and culture.

These are encountered particularly in dealings with countries in the Southern hemisphere.

Denis Goulet (Ref.3) notes that Western technology is based on four essential values which come into conflict with the local cultures of the Third World.

1. Rationality is opposed to a symbolic and mythical vision.
2. The notion of effectiveness is based on a logic of the exclusion or inclusion of a particular parameter. The Western pragmatic and mechanistic approach of effectiveness does not always take into account moral, religious and family values. This attitude is changing, however for the "pollution" factor is increasingly taken into account: the environment has become an intrinsic factor.
3. Technique is based on meeting the challenges of human and natural factors, and cuts across reality in order to resolve problems. This approach is not compatible

with the contemplative attitude and feeling of harmony which gives individuals of certain societies the sense of belonging to an indivisible "whole".

4. Lastly, the West has a Promethean vision of the Universe. The forces of nature are "exploited" and their existence corresponds to their utility.

These four differences explain the uneasiness of certain cultures with regard to technology.

3.2 Economic Obstacles

3.2.1 *The Transfer of Technology does not Always Correspond to Needs*

3.2.1.1 Economic adaptation is sometimes neglected in favour of technological mimicry.

This is a problem which has reached its peak in the Third World but it also concerns Western companies faced with a choice of technology.

Often the developing countries acquire technologies involving a combination of factors of production (capital and labour) which is not best suited to their particular situation, as a result of a combination of interests:

- the experts object that adaptation would be too expensive or would reduce performance;
- the new technology enhances the transferee's status and this can encourage it to opt for prestige operations;
- the transferor does not wish to disseminate alternative, competing technology.

Technological mimicry of this kind is harmful because it strengthens the ties of dependency and prevents the purchaser from achieving technological autonomy in the long run.

3.2.1.2 Failure to match needs is also encountered in military cooperation programmes.

For defence cooperation programmes to be instigated, renewal timetables have to coincide and there has to be an agreement regarding the definition of the product and the division of the work. In the latter connection studies carried out at NATO make a substantial contribution to the definition of common needs, but these needs are often defined by the whole envelope of needs of the various participants and not by the common core. This leads to very sophisticated products, aimed at ensuring versatility of missions, hence ones that are very expensive or even sometimes too expensive. Also many programmes never see the light of day or are abandoned at an early stage (cf NFR 90).

Different customs in the management of pools of equipment have long been an obstacle to European cooperation; in the area of armoured vehicles some countries operating with two generations which call for renewal every 15 years, and others renewing the whole pool every 30 years. However, a change in practice aimed at harmonising timetables seems to be in the pipeline.

The division of labour is also a stumbling block; the logic of pooling complementary skills and resources is countered by the countries' desire to make good their technological backwardness, specifically by taking on responsibility for parts that "they do not know how to make". The most recent programmes contain a high percentage of software or advanced electronics. It is this substantial part that all the members wish to lay claim to as they view this as a relatively inexpensive way of making their industry progress in the decisive areas for the future.

The desire to involve countries whose defence industry is developing (DDI) comes up against two problems: the "rich" countries should agree to finance to a major extent developments calling into play basic technologies which should be carried out in countries which do not have these technologies at their disposal (even if Peter's principle is accepted "each party should do what it cannot manage to do").

This is a difficult technical risk to assume and it comes up against opposition from industrialists who do not of their own accord envisage giving up promising contracts, especially if this is likely to increase the number of competitors and extend an already surplus capacity.

3.2.2 *Owners of Technology Wish to Avoid Unfair Competition*

In order to limit the risks of competition, industrialists who transfer technology introduce restrictive clauses into their contracts relating to marketing or even production in the aim of ensuring that their technologies are not improperly disseminated.

Marketing is often limited to the transferee's national territory, while the other markets are retained for the transferor.

Production conditions may also be so arranged as to be conditional on the transferor supplying the raw materials or sub-assemblies, or alternatively by limiting production to one product or one category of products, which can go so far as prohibiting modification.

The main concern of industrialists is in fact not to be dispossessed of their technology without compensation. The risk of uncontrolled dissemination is real in military cooperation programmes. Certainly, the confidentiality of the information exchanged between member states is guaranteed between member countries, following a 1970 NATO agreement relating to the transmission of technical information that is subject to property rights, for defence purposes, which calls for effective security measures.

However, the countries diverge on the significance of the expression "for defence purposes", the Americans in particular considering that it authorises them to transmit reproduction rights acquired in a cooperation programme to countries not involved in financing the programme, and in certain cases without consideration, in the context of their grant aid programmes. The other NATO members dispute this interpretation, and it is a matter of great concern to the industrialists, especially as they often have to self-finance part of the developments.

3.2.3 *Transfers of Technology are Expensive*

In the case of minimal transfer (licence) the cost borne by the transferee comprises not only the licence fees but also the cost of adaptation to the new technology; the cost/effectiveness ratio may be fairly low in non-industrialised countries. The most effective transfers (cf 2.1.3 above) are even more expensive and entail a problem of financing.

Any transfer is characterized by a bi-directional flow: a technological flow towards the outside and a financial flow in the other direction. The latter supposes an accumulation of capital on the periphery, which is not the case, and is remedied by borrowing.

The developing countries have therefore become indebted, sometimes to excessive levels with well-known consequences. Technological dependency is thus being combined with financial dependency. The only possible way of controlling the situation in the future is by the implementation of a global policy aimed at making transfers of technology the logical instrument of the beneficiary countries' scientific and technical development.

3.3 Transfers of Technology may be Opposed through Political Considerations

3.3.1 *Transfers of Technology are an Instrument of Diplomatic Dialogue*

Western nations' wish to see certain values upheld, such as human rights or the respect of international law, has led to the application of economic embargoes on a number of different occasions, such as those targeted at South Africa, China or Iraq.

The measures are applied with a varied amount of firmness and their political effectiveness is uncertain.

3.3.2 *The International Institutions Remain to be Set Up*

The reflections following the CFE agreement have confirmed the desire to encourage transfers of technology and have revealed the lack of a specific organisation with responsibility for developing them, but it seems unlikely that this finding will lead to positive steps in the immediate future.

On the other hand, in the context of a foreseeable reduction in military budgets, it seems inevitable that more and more resort will be made to international competition. The idea of extending the procedures for the reciprocal opening of the arms markets to all the NATO countries, in the style of the Franco-British cross-purchases agreement, is a possibility which is not excluded.

In the long term this might lead to a division of labour whose strategic consequences will need to be considered.

3.3.3 *The Strategic Nature of the Arms Industry Prohibits a Systematic Division of Labour*

If commercial logic were followed, the production of a particular type of equipment would be entrusted to the most efficient country.

Concentration of sources of this kind is already difficult to achieve in each country, as potential purchasers consider that the maintenance of competition guarantees prices.

However, the increase in arms costs will of necessity lead to specialisation which is not acceptable at the system level. It may however be envisaged at the level of components, mutual dependency strengthening solidarity. This kind of development is doubtless desirable economically but the present level of political integration in Europe for example, is such that it is not currently possible to imagine that states are on the eve of giving up the major instrument of national independence, an autonomous arms industry.

France is playing a decisive role in the negotiations on European security and defence. The construction of a European defence force is a political step first and foremost, and from this viewpoint we are witnessing spectacular progress which does not call the Alliance into question, but to the contrary is aimed at strengthening it.

This development comes through the increased expansion in industrial cooperation agreements which are based on the transfer of technology.

BIBLIOGRAPHY

1. **Le contrôle des exportations de haute technologie vers les pays de l'Est**, sous la coordination de Bertrand Warusfel, Editions Masson 1988.
2. **Transfert de technologie: enjeux économiques et structures juridiques**, sous la direction de Bernard Remiche, Editions Cabay et Economica 1983.
3. **Enjeux technologiques et relations internationales**, textes réunis par Michel Dusclaud et Jacques Soubeyrol, Editions Economica 1986.
4. **La dynamique du capitalisme** par Fernand Braudel, Editions Flammarion, Collection Champs.
5. **L'Armement** — N° 25 — décembre 1990.
   La recherche de défense en coopération internationale par l'Ingénieur Général de l'Armement Alain Crémieux (p. 36 à 45).
6. **L'Armement** — N° 26 — février/mars 1991.
   Le contrôle à l'exportation des matériels sensibles: motivations par Michel Ferrier (p. 42 à 55).
7. **Défense Nationale** — avril 1987.
   Transfert de technologie au profit de l'URSS par Henri Régnard (p. 21 à 32).
8. **Défense Nationale** — août/septembre 1990.
   Les transferts de technologie vers les pays de l'Est par Marie-Hélène Labbé (p. 131 à 148).
9. **Problèmes Politiques et Sociaux** — N° 643 — novembre 1990.
   Les transferts de technologie Ouest-Est: quel avenir pour le COCOM? Dossier constitué par Bertand Warusfel.
10. **Defense Implications of Europe 92** by Michael Moodie, The Center for Strategic and International Studies Washington DC, 1990.
    Dual-use Industries in Europe by Eurostrategies February 1991.
11. **Organisation du Traité de l'Atlantique Nord (OTAN)** CDNA, plan de travail de la CDNA concernant les incidences des réductions d'armement conventionels sur les acquisitions de défense par le président de l'AC/313, 12 mars 1991.
    Document AC/259-D/1426; AC/313-D/48.
12. **CDNA, faisabilité de l'amélioration des conditions régissant les échanges commerciaux entre les Alliés dans le secteur de la défense — analyse préliminaire.** Rapport du groupe de travail. Document AD/259-D/1437.
13. **GEIP** — Présentation générale, juin 1990.
    Communiqué de la réunion ministérielle du GEIP, 16 novembre 1990.

    Toward a Stronger Europe, Volume 2, IEPG.

THE NEW EUROPE

by

Bridget CZARNOTA
PRINCIPAL ADMINISTRATOR DG III

COMMISSION OF THE EUROPEAN COMMUNITIES
200 rue de la Loi B - 1049 Bruxelles
BELGIUM

SUMMARY

The New Europe

The Internal Dimension

The information market in Europe. Characteristics and development. The actions undertaken by the Community towards a European Information Market. The regulatory framework - actions already completed and to be initiated in the field of copyright, trademarks and patents. Issues of standardization and the use of proprietary intellectual property rights. Research and development contracts.

The External Dimension

Relations with the EFTA countries and the countries formerly called those of Eastern Europe. The role of the Community in international fora. The GATT TRIPS negotiations, and a common platform for the Continent of Europe.

My remarks today will focus on two particular aspects of the New Europe. The first is an overview of internal aspects of intellectual property protection and the Single Market, the second concerns the external dimension of that protection. The theme of our discussion here today is intellectual property and information. I would like to begin by some reflexions on what is meant by information, and the problems posed in a Community of over three hundred million people of twelve different cultures and nine different languages by the "information market".

In the year 642, so legend tells us, the famous library of King Ptolemy I disappeared in flames as the Arabs conquered Egypt. It had contained over 200,000 volumes. The Bibliothèque de France, when it opens its doors in 1995 in its new premises, will hold over 12 million texts. The British library, due to move into new premises in 1993, is seeing its stock of books increase by 12 metres of shelf space a day.

In the audiovisual field, the problem of handling such masses of information is no less acute. In France, the Institut National de l'Audiovisuel has nearly 1 million hours of television programmes in storage on tape and disc, increasing its stock by 60,000 discs per year. New York, Washington and Tokyo face the same problem of how to select and handle information.

Digitalization offers an immediate solution in terms of space saving and ease of manipulation. In 1985, the University of California put the 61 million words which go to make up the entire classical Latin vocabulary onto one CD ROM. We may see in the not too distant future all the world's largest libraries and data bases interconnected via a single electronic network, giving every man and woman in the world access to every work which has ever been published.

Against this background of an exponential growth of information and the use of new technologies to store and to access that information, intellectual property rights are a key factor. Information is not only held in traditional works whose expression is protected by copyrights such as books or magazine articles : it is embodied in films, videos, on works recorded on discs and tapes, and held in data bases. Intellectual property protection has a bearing on the access to and use of the information so held. Information is also sometimes the work itself, the computer program or the industrial design, the pharmaceutical product or the machine tool all represent information in a concrete form, a form from which the information can be copied and the original product reproduced.

Therefore, I believe that it is not possible to separate the information market into types of works nor to focus only on electronic media, nor to limit our consideration to one particular regime of intellectual property protection.
A component of a machine may be protected by a design right or a patent and the specification of the standard for that component, protected as a literary work, held in an on-line data base or on CD ROM. Therefore, information cannot easily be separated from the support or the product which embodies it, nor from the intellectual property rights in those products which regulate access to and reproduction

of that information.

However, so as to bring some order to my overview of Community policy in the information market, I will focus first on what could be termed electronic information systems.

Information is considered more and more as a tradeable commodity which is subject to the economies of scale due to the increased cost of collecting, codifying, distributing relevant data on top of a considerable initial investment. Technical, legal, commercial and financial information is a resource of great value which is sold at high prices by specialised companies.

In order to tackle the information explosion it has become indispensable to bring in the new technologies (informatics and computer communication) for the provision of effective information services. These new technologies are, however, upsetting the traditional equilibrium of the information economy. The same information may be transmitted via different, coexisting generations of services, and traditional press and book publishers find themselves increasingly in competition with unconventional publishers who communicate through optical media, radio, TV channels and new online information services.
As a result of these changes, Europe is faced with a challenge. It possesses some notable advantages : an abundance of raw information material in science, technology and culture, a strong press and publishing industry, a competitive industry and expertise in the field of telecommunications and a very real innovative capacity in the sector of information services, as shown by the exceptional success of videotex services within certain countries. However, its position on the world information market has become relatively weaker since the advent of electronic services. The Community market is fragmented by many technical, legal and linguistic barriers. This fragmentation hinders the free movement of information and services and therefore prevents the achievement of the economies of scale which are necessary in order to launch advanced information services. In addition, a number of uncertainties as regards technological trends, regulations and market response to new products and services handicap private investment in the area.

The term "electronic information services" covers a multitude of offerings today : bibliographic databases, electronic directories, real-time financial information services, full-text databases which may be delivered through a variety of media. We can consider sequentially the market situation segmented by delivery mode :

- online ASCII database services,
- videotext services,
- CD-ROM databases,
- new delivery media (audiotex and broadcasting).

ASCII database services

In 1989, the world-wide turnover for online database and real-time information services accounted for around 8,5 billion ECU, with a share of around 2 billion ECU for Europe. The size in turnover of Europe's market in this segment (excluding videotex) is currently one third of the US market. In effect, the level of consumption of scientific databases and of financial information services in the USA and Europe are comparable. The deficit in Europe comes from a lower level of consumption of database services in other areas : company data and current affairs, legal information, etc. A striking feature is the uneven development of the market across the Community. The United Kingdom alone accounts for a share which is said to vary between 30 % and 50 %.

In 1989, the European Community produced less than half as many online databases as the United States. In addition, it has to be stated that the US develop many more higher value (e.g. factual or full-text) and larger (in volume) databases than Europe. For-profit organisations are the major actors in database production in the US (72 %), whereas within the Community the non-profit sector still predominates in production (54 %).

At the present moment, the involvement of the private sector in database production varies greatly according to country. Both in the UK and Germany, the private sector now plays a predominant role in production. The production and distribution of ASCII database services is very uneven across the EEC. One third of the hosts located within the Community are based in the United Kingdom which also dominates production with one third of the databases.

Although the ASCII database market is usually considered as an international market (and this is particularly true as regards scientific and technical information services and real-time financial information services), most of the databases produced within Europe have little international coverage and are primarily concerned with domestic scientific, technical and economic information. Since their primary aim is to meet the information needs of domestic users, it follows that nine European databases in every ten are accessible in only one language, i.e. that of the producer country. Yet, 52 % of the databases produced in Europe can be consulted in English.

The tendency of European databases to cater for the national market, plus the exclusive use of the national language, explains why most databases produced in Europe are distributed by hosts based in the country of production. Of the 1,256 (1989) databases distributed by Community hosts, 73 % are of national origin, 18 % from third countries (nearly half of which from the USA) and only 9 % from other Member States.

Videotex services

The situation of the videotex market as opposed to traditional ASCII database services is radically different. Videotex services did not take off in the United States, whereas they are growing quickly in most Member States of the Community. However, the various videotex systems established by the Member States in the late 1970s developed very differently. Each Member State took its own approach to technical standards, transmission network development, terminal distribution policies and invoicing methods.

It is estimated that there are within the EEC some 25,000 videotex services (1989). Half of them are located in France which has the largest installed base of videotex terminals (over 5 million). It is difficult to compare videotex services with traditional database services. Videotex is a communication medium which can be used for a variety of purposes : games, entertainment, advertising, E-Mail, transactions, information retrieval. The use of videotex for accessing database services is, however, steadily increasing in France since the opening of a professional kiosk which differentiates these services from those aimed at the general public.

Again, the level of development of the videotex market is very unbalanced according to each Member State. Over 90 % of users of videotex services were located in France in 1989. Germany and the UK are the largest videotex markets behind France (4 % and 3 % of the European user base), but the market place is growing very quickly in Italy. In view of its larger user base, France has the largest market share in terms of traffic (83 %), followed by Germany (11 %). It is difficult to find reliable statistics on the market share of the UK (2 % to 3 %).

In view of the diversity of standards, the videotex market has developed exclusively within national boundaries. However, gateways between national videotex networks are now multiplying, although international videotex traffic remains marginal as compared to domestic traffic. There were over 86 million connect hours recorded on the France Teletel network in 1989 but only 30,000 connect hours coming from other countries.

CD-ROM market

The ability to record a huge mass of information on a small compact disc which can be retrieved with a PC has created great expectations within the database industry. The CD-ROM market is growing very quickly : the number of titles published doubles each year. It is expected that the number of titles (about 750 in 1989) will increase to more than 6000 worldwide in 1992.

CD-ROM today covers a wide variety of applications, from diagnostic programmes, computer graphics via cartography and full-text encyclopaedias. The size and the fields covered vary greatly from country to country. According to Infotech, the USA still dominated the world market in 1989 with 56 % of the production of commercial titles and 66 % of revenue. But the Japanese are fast coming up. They increased their market share in production from 1 % in 1988 to 21 % in 1989. The European Community accounted for only 15 % of the supply. The leading countries in Europe have been in 1989 Italy and Great Britain followed by Germany and France.

The subject areas mostly covered in the Community have been "Laws and Government Regulations" (19 %) followed by "Business, Finance and Company Directories" (16 %), whereas in the USA "Geography, Cartography, Census, Statistics" (20 %) and "General Reference, Bibliographies" (15 %) have been printed especially on CD-ROM. Japan contributed the majority of "Entertainment" titles (52 %).

According to Infotech, the total revenue of CD-ROM commercial titles amounted to some 441 million ECU in 1989 for an installed base of 366.000 drives and 753 titles published.

Yet, in view of the rapid growth of CD-ROM publishing, these figures may ahead be completely outdated.

New delivery media

Data transmission by radio relay channel, i.e. ground-based TV networks, satellite or FM radio subcarriers, is an alternative method of supplying electronic information services. Broadcasting is particularly suited to data services aimed at large numbers of users simultaneously : real-time stock market prices, race results, updated lists of prices transmitted to a network of retailers. These three segments are the core of the data-broadcasting market. The development of the market is, however, hindered in Europe by the shortage of radio frequencies, high investment costs and uncertainties as regards the evolution of the regulatory framework for such services. Excluding broadcasted videotex (teletext), very few broadcasting information services exist in Europe. Most of them are located in the United Kingdom.

Audiotex is a technology which gives users interactive access to information and telephone communication services. The user is routed into the information service by making a selection from successive menus as with videotex tree-searching using the twelve keys of his of her telephone. The information is supplied either by a synthesized or pre-recorded voice reciting the data collected or transmitted by telefax. A pilot multilingual audiotex service with voice recognition is currently being tested by the ECHO host of the Commission of the European Communities. This technology, which is just beginning to emerge in Europe, could become a serious rival to videotex since it makes use of the simplest and most widely available terminal : the telephone.

According to a survey carried out by Electronic Publishing Services, the Community audiotex information services market was worth 300 million ECU in 1989. It could develop by 300-400 % over the next five years and reach 700 to 1,200 million ECU by 1993 provided that appropriate regulatory and billing frameworks are set up.

The Community started to become active in the area of database services in the early 70s. At that time, Community initiatives focussed mainly on scientific and technical information.

Initial action plans for information and documentation over the period 1975-83 has as a primary goal the development of the basic infrastructure which was necessary in order to access online databases available within the Community. This goal was achieved through the implementation of the Euronet DIANE network, which has now been superseded by the interconnection of national packet-switched data networks. Later on, through a five-year programme for the development of the specialised information market (1984-1988), Community efforts focussed on the improvement of the quality

and coverage of databases produced within the Community. Through calls for proposals it encouraged the formation of European databases and promoted their use accross the Community.

These Community programmes, together with national initiatives, have stimulated the development of electronic information services within the Community. Before the opening of the Euronet DIANE network, the gap in terms of turnover between the European and the US online information market was 1 to 10. It has been reduced to 1 to 3.

However, the gap between the size of the Community information services market and that of the US market is closing only gradually. The European information services market is still very fragmented, chiefly as a result of linguistic, legal and technical barriers. Its main developments are taking place on a national basis. The diversity of national policies, particularly as regards the development of videotex networks, combined with the economic disparities within the Community exacerbates the discrepancies between Member States.

In view of the increased competition on the market place, the main operators on the European information services market have favoured national or transatlantic defensive agreements rather than European cooperation. However, progress achieved in the implementation of a Community telecommunications policy, the emergence of the CD-ROM market and audiotex technologies, the development of gateways between hosts, coupled with the new demand for information as a result of the creation of the single market, open new opportunities for developing a Community-wide information services market.

In order to help European information providers to grasp these opportunities, the Community embarked in 1989 on the initial phase of a major programme aimed at responding to the increasing market problems and needs.

A two-year action plan (1989-1990) for the creation of an information services market was approved by Council on 26 July 1988 (1). Known as IMPACT (Information Market Policy ACTions) and allocated a budget of 36 million ECU, the programme's aims were as follows :

- to set up an internal information services market by the end of 1992,
- to stimulate and reinforce the competitive capability of European suppliers of information services,
- to promote the use of advanced information services in the Community,
- to reinforce joint efforts to achieve Community cohesion with respect to information services.

Two complementary lines of approach have been followed in order to attain the above objectives :

- making a continuous effort to improve market conditions and promote the use of modern information services ("horizontal actions"),
- the launch of pilot and demonstration projects exerting a catalytic effect on the development of the market in key sectors ("vertical actions").

One aspect of the information market which has been the subject of great attention by the Commission over the last five years concerns the regulatory framework of that market.

Two regulatory issues of particular relevance to the information market have already been dealt with in the context of the Single Market, both measures which the Commission announced in its White Paper of 1985 "Completing the Internal Market". These measures are first the Directive on the legal protection of the topography of semi-conductor products - chips - and second the Directive on the legal protection of computer programs.

In the case of semi-conductors, the choice was made to offer protection within the Communities by means of a "sui generis" legal regime. This choice was determined by, among other factors, the feeling that existing regimes such as copyright, could not be stretched to cover such purely functional objects. On the other hand, for computer programs the choice of copyright protection for the Directive which was adopted in May of this year after two years of animated debate is founded on the belief that copyright is a vehicle which is appropriate for the protection of such a work.

Not only is copyright the appropriate regime in the eyes of the Commission, it is also the basis on which five of the Member States of the Community had already legislated to protect computer programs, as had a growing number of countries around the world including the United States and Japan.

From a Community viewpoint, the Directive on the legal protection of computer programs marks an important step forward. Community competence to regulate copyright matters in the Member States can no longer be challenged, in respect of computer programs at least, and probably no longer in respect of copyright matters generally. It is a landmark in the long and difficult journey towards a truly Community copyright regime with a single period of protection and common rules as to restricted acts and exceptions to the author's exclusive rights.

The Commission in this Directive also regulated, for the first time anywhere in the world, by express legislation, the question of access to and re-use of information required in order to make interoperable computer systems. Since programs are today usually commercialized in object code form only, and intellectual property rights prevent the process of reverse engineering or decompiling that object code in order to gain access to underlying ideas and principles or to specific information on, for example, program interfaces, a dominant supplier could exercise those intellectual property rights to exclude others from interoperating with his products. The Community's software Directive provides for a limited access to information and a

limited re-use of that information, for the sole purpose of independently creating an interoperable program.

The Commission is also turning its attention to regulatory matters applicable to another electronic medium of relevance to the information market. This subject is the legal protection of databases.

The Commission announced, in its Green Paper on "Copyright and the Challenge of Technology" in 1988 that it would seek views as to whether harmonization measures were required in the field of the legal protection of data bases.

In April 1990, the Commission organized a hearing of interested circles on this issue at which organizations were invited to present views. The consensus at the hearing seemed to be in favour of a copyright approach, protecting databases throughout the Community as compilations within the meaning of the Berne Convention and extending the term "data base" to all material stored arranged and accessed electronically.

The Commission has not yet announced what specific measure it intends to introduce, nor what the contents of such a measure could be.

Turning to the more traditional non-electronic media, the services of the Commission also conducted a study of reprography in the Member States, leading to a hearing in June of this year. The participants of this hearing discussed, inter alia, whether a harmonizing instrument from the Commission is required and if so, whether it should cover only the facsimile reproduction of texts in paper form or whether all types of copying including fax and electronic text transmission systems should be covered.
Different solutions exist in the Member States to the problem of unauthorized copying of texts, including contractual licensing arrangements, and levies on reprographic equipment.

The Commission has not yet taken any position on the views expressed on reprography, but it is clear that the phenomenon of cheap and easily used means to reproduce works protected by copyright constitutes a challenge to the exercise of intellectual property rights both in the more traditional spheres of the printed word and the photo, and also in the field of sound and visual recording both in analogue an digital form.

Indeed, the issue of intellectual property rights and information has been made more complex by the advent of digital technology. When copying of a work was done by hand, regardless of whether the copying reproduced the expression of the author or merely the information contained in his work, damage to the author's economic interests was relatively little. Since digital encoding and reproduction techniques now enable the copier to make substitutes for the original work at a fraction of the cost, the need to protect the copyrightable expression has grown.
Yet, paradoxically, digital fixation techniques allow manipulation of that expression and easy extraction of the unprotected information contained in the work. So what was perhaps in copyright terms a decade ago essentially a problem of protecting the expression of a work against piracy and slavish copying or cloning, has now in reality become a problem of prevention or allowing access to information.

This paradox is at its most evident in the field of the legal protection of databases. The elements which represent copyrightable expression, the selection or the arrangement of the contents of the database, are only a part of the effort and investment made by the creator of the database who may have expended considerable skill and labour in the collection and collation of raw data. Yet neither the data, nor the skill and labour involved in its collection are protectable under intellectual property law, and the selection and arrangement of the data can be altered at will electronically.

Another area in which both internally and externally the question of the compatibility of intellectual property rights and the free frow of information is being raised is in the field of standards.

In 1985 the Community launched with the Wite Paper a programme to remove the remaining obstacles to the creation of an Internal market, that is, "an area without Internal frontiers in which the free movement of goods, persons, services and capital is assured ..." (Article 8A of revised EEC Treaty). European standardization is playing a major part in the Community measures to ensure the free movement of goods and services.

Reference to common European standards has become the main instrument for the removal of technical barriers to trade. EEC legislation in the form of Directives is limited to the definition of essential requirements that products must meet in order to ensure protection of safety, health and the environment. Voluntary standards are developed at European level to supply the technical specifications corresponding to these requirements. This new approach has now been applied to a number of significant industrial sectors, such as machines, simple pressure vessels, construction products, medical devices and telecommunications equipment.

European standards are also used in the public procurement directives for the opening up of the EEC markets, which directives apply also to procurement by Ministries of Defence. In order to remove the possibility of restricting competition by imposing technical specifications, the EEC directives require purchasers to refer to European standards. This firm linkage between European standardization and public procurement is expected to provide a stimulus towards greater standardization at European level.

European standards will also contribute towards the 1992 objective in the area of conformity assessment.

European standards on quality systems and assessment criteria, based on international standards, now exist and have to be also used in the newly created body EOTC (European Organization for Testing and Certification). This body provides the

necessary forum in which all interested parties can come together to agree on common rules for certification systems in Europe.

Beyond the short term objective of the single market of 1992, European standardization holds also the key to the realization in the long term of the full economic benefits of an Integrated European market. It offers new opportunities for producers and users of industrial goods and services to reduce their costs and increase competition in the market place. The further development and wider use of European standards in all sectors has become an objective of the Community in its own right. The Community has promoted work in some sectors which are not subject to regulation (information technologies, advanced ceramics etc ...).

With a view to making all interested parties (European industry, standardization bodies and public authorities) fully aware of the strategic importance of European standardization in the European economy, the Commission issued a Green Paper on the development of European Standardization in October 1990. In this consultation document the Commission made recommendations for the reorganization of European standardization in order to respond better to industrial needs and to create a stable basis for this activity in the European technological landscape. The Green Paper has given rise to a major public debate; the Commission has received a large number of comments, many of them supportive of its analysis of the need for change, and important procedural and organizational initiatives will be taken by the standardization bodies in the coming months.

There are several common points of interest between the European Community and NATO in respect to standardization activity.

In terms of objectives both the Community and NATO share an interest in exploiting the economic benefits of standardization. The rationalization of markets, greater competition and the reduction of costs which standardization implies are of particular importance to the defense community. The military and the civil economies are equally interested in obtaining value for money.

The broadening scope of European standardization over the next decade in the civil area will increase the potential for overlap between civil and military standardization. There are several sectors in which European standardization is expanding fast. To illustrate the potential impact on defense budgets : information technnology, telecommunications, civil engineering, power supply, new materials, buildings and laser technology are all areas in which European standardization is accelerating.

The expertise needed for standardization work is scarce. The economic returns to European industry in committing their resources to civil European standardization are likely to be higher than ever before without more convergence between civil and defence-related standardization activity there will be a shortage of experts.

The CALS/NIAG initiative provides an opportunity to use information technology and telecommunications to speed up the exchange of data and information amongst the various economic actors involved in the complex operations which characterize modern procurement. It is clear that no end-to-end exchange of information can be guaranteed if some standards are not agreed and properly implemented.

A similar situation might exist for EDI (Electronic Data Interchange) for which the ISO-EDIFACT standards are expected to play a significant role for the electronic transmission of documents required for the satisfactory performance of the Customs Union once border controls have been removed inside the Community (completion of the internal market end of 1992).

There are many examples (e.g. COBOL, ADA) which show that standards promoted for use in defence procurements have been applied with discipline at a worldwide level and backed by the technical competence of procurement organizations, with the effect that such standards have been well maintained and their use extended much beyond the procurement area for which they were initially proposed.

It might be added that the reliable communication of information and data and the guarantee of their delivery will be an incentive to promote the use of telecommunication standards a growing level of interoperability amongst digital networks. Within such a context, the advent of ISDN networks could bring significant advantages for the reliable transmission of documents and provide a leading edge application involving many countries.

As a direct consequence of the 1992 programme, civil standardization within Europe is being mobilized rapidly, and will expand in the years to come. At the same time the defense community is having to consider economies which standardization is in position to supply. These two worlds will have to take greater account of each other's existence. The immediate task for policy makers is to identify more precisely areas of common interest, and to provide channels for communication to lay down the basis for mutually beneficial cooperation.

However the growing importance of standards in many sectors of industry brings with it a new intellectual property rights issue.

By definition, an industry standard has to be made available to the widest possible public in order to succeed (a fortiori an international standard). It has to be published, in paper or electronic form, and has to be reproduced for information purposes. It may have to be incorporated in to another legal instrument or code of practice. It has to be implemented precisely thereby imposing a need for highest standards of accuracy in its transmission to those who use it.

A second complication is in the fact that the standard represents a technical reality which may itself be subject to intellectual property rights. It may be a mechanical or physical standard covered by a patent or a software interface in lines of computer code covered by copyright. It may need to be implemented by corresponding mechanical or other products having identical characteristics to the subject matter of the

standard, which may have been developed by a proprietary rights holder. If the proprietary right holder has consented to use of his intellectual property in a standard, those rights should be made available on fair and non-discriminatory terms to all who wish to work to the proprietary standard, or the rights should be voluntarily waived.

If the standard has been developed by a research institute or standards body, as a public body it will have an obligation to make the results of its work available to those who have funded the work. Yet at the same time intellectual property rights have to be safeguarded lest the incentive to invest in research and development especially in areas of high standardization such as telecommunications is reduced. Therefore in a number of fora, such as ETSI,(the European Telecommunications Standards Institute), attempts have been made to draw up guidelines on the relationship between the standards making activity and the exercise of intellectual property rights.
The Commission has followed this debate with interest and in its Green Paper on standardization, has raised this very question, but without prejudging the outcome of the consultation process started by the publication of the Green Paper.
However, the Commission has a firm commitment to maintain the exclusive nature of intellectual property rights, including in the standardization field, preferring voluntary solutions wherever possible, and avoiding any mechanism whereby patents or copyrights would be expropriated against the wishes of the right holder.
Naturally there are areas where intellectual property rights and standards co-exist within a specific framework which imposes its own contraints on their relationship. Such is the case in the public procurement area where the Commission's desire to open specific markets to all competitors means that detailed specifications may be mandated as compulsory standards rather than voluntary ones. Logically this process of creating mandatory norms cannot create greater difficulties in respect of intellectual property rights if the process of standardization itself has been accomplished by the right holder consenting to make his proprietary rights available on fair and non-discriminatory terms.

Another area is which rights in information, whether or not held in works or products protected by an intellectual property right, are of increasing importance is in the field of joint research projects. Such projects may be carried out by public or private entities of the Member States of the Community or between those of the Community and third countries. It is clear that in such joint research and development programs involving Community and third country research entities, the application of the international intellectual and industrial property conventions will be the guiding factor. This international framework will determine not only questions of ownership of rights but also matters relating to rights of reproduction of the results of research programs, although of course the contractual arrangements between the parties will address many of theses issues specifically, particularly where the international framework is too general to provide detailed guidance. Rights of employees in their inventions for example may have to be determined by reference to national law, absent any harmonization yet at Community level.

INTERNATIONAL ASPECTS

Moving now to the international scene, I would like to consider three aspects of the work of the Community in relation to intellectual property protection.

They are the European Economic Space, in other words our relations with the EFTA countries, Eastern Europe, and the GATT.
As far as the European Economic Space is concerned, discussions have taken place over many months with the EFTA countries on the extent to which they will be able to take over the "acquis communautaire" on completion of the agreement with the Community. The "acquis communautaire" means the body of law already enacted within the Community. In substantive terms, in the field of intellectual property, this would mean a relatively small number of Community legal instruments, since progress towards harmonization has not been rapid in the patent and trade mark fields. However, in copyrights, the adoption of the Directive on the legal protection of computer programs by the Member States is clearly a measure within the meaning of the "acquis communautaire" as is the trade mark Directive in the industrial property field, and the Directive on the protection of the topography of semi-conductor products.

As far as the countries of what used to be called "Eastern Europe" are concerned, the Community has also been engaged for many months in negotiating association agreements with certain countries which were formerly members of COMECON, notably with Poland, Hungary and Czechoslovakia. Intellectual property rights are among the subjects under discussion and it is the hope of the Community that in these association agreements an undertaking can be given to align legislation in these countries at a level of protection similar to that existing in the Community.

Revision of existing intellectual and industrial property law is already under way in a number of the countries of Eastern Europe including of course countries not directly covered by association agreements such as the Soviet Union and Bulgaria. Therefore, over time we may hope to see a common platform for the continent of Europe as far as intellectual property legislation is concerned, with common standards of protection emerging throughout Europe in parallel and in harmony with moves within the other international fora such as WIPO (World Intellectual Property Organisation).

The Community has played, and will continue to play an active role both in areas such as dispute settlement and in areas of substantive Treaty revisions such as those scheduled to take place in Geneva at this time on the addition of a Protocol to the Berne Convention.
Lastly, I would like to deal with the question of the GATT negotiations and specifically the TRIPS talks (Trade Related Aspects of Intellectual Property Rights), although it should not be forgotten that there are also discussions on Telecommuni-

cations and on Public Procurement which are of interest in the context of this discussion. However, since at the time of drafting this contribution, the Community has not formally tabled position papers on either of these topics, I will confine my remarks to Intellectual Property matters. The objective of the industrialized countries within the TRIPS talks has been to negotiate a comprehensive agreement covering basic principles of intellectual property protection, substantive standards of protected rights and rules on national enforcement. The general thrust of this policy on the part of industrialized countries has been to secure better, that is, higher standards of protection, and better enforcement of those standards.

The developing countries on the other hand have tended to stress the importance of technology transfer and developmental policy and have still some reserves on certain issues.

The approach of the Community could be described as far as copyright is concerned as a "Berne Convention plus approach". Given the adherence of all the Member States of the Community to the Berne Convention, this approach poses no real difficulties, even in respect of moral rights where some divergence of views with the US position may be identified.

Important elements of the 'plus' aspect of this approach are the protection of computer program by copyright as a literary work and the protection of databases (compilations of data or other material is the current definition in the Community's proposal) which closely links data base protection with Article 2.5 of the Berne Convention.

As far as trade marks are concerned, an important compromise between the United States on one hand and the Community and other participants on the other can be seen in respect of the prior use requirements. The Community had originally wanted prior use not to be a condition for registration of a mark. The position under US law was the opposite. The current text within the GATT TRIPS allows protection to be applied for even if the mark has not been used yet, but allows countries to refuse actual registration until use occurs.
On geographical indications there are still some differences of opinion between the Community and the US but I do not believe that disputes over whether Glenfiddich whisky has to come from Glenfiddich needs to preoccupy us here today.

Patents on the other hand should and do concern those working in the information industry. Patents are seen by the developing countries as an important obstacle to technology transfer whereas to the Community and to the US the existence of a strong patent system is seen as an engine for driving technology transfer by providing a secure basis for research and development investment. Discussions within the GATT TRIPS context focus on some fundamental issues such as exclusions from patentability and compulsory licensing. Some aspects remain controversial such as the extent to which governement use should be covered by the same disciplines as compulsory licensing and whether Contracting Parties can discriminate between fields of technology in the issue of compulsory licenses. On the question of first to file it seems that a compromise between the US and Community positions can be reached.

Two other substantive issues of concern to the information market could be mentioned. The first concerns the discussion within TRIPS negotiations on the protection of semi-conductor product topographies and more specifically the relationship between the IPIC Treaty concluded in Washington in 1989 and the norms which might be set within the GATT.

Discussions have focussed on four areas where the IPIC Treaty was felt to be lacking : term of protection , innocent infringement, compulsory licensing and articles incorporating unlawfully reproduced topographies.

The Community has reinforced its own protection given by the semi-conductor topography directive of 1987 by its strong position in the GATT talks.
Last, out by no means least, the TRIPS negotiations have included provisions on "undisclosed information". This is an issue of considerable importance for economic, political and legal reasons. In spite of a reticence on the part of some to see the subject treated at all within the TRIPS context then does seem to be some consensus that the subject matter falls within the ambit of Article 10 bis of the Paris Convention.
The Community's initial approach has been generally linked to the concept of unfair competition but given the absence of a generalized system of unfair competition law notably within the Community itself, the provisions within the TRIPS talks leave the means of implementation open for the Contracting Parties to determine.

On the international front, we can say therefore that the Community as a whole and especially the Commission are interested in getting the best possible result in the GATT with the highest level of protection possible. We are optimistic that success can be achieved particularly since other countries around the world are showing signs of moving in the right direction.

In Japan for example, a new trade secrets law has been introduced and many other countries are reviewing the protection given to producers of phonograms and the duration of that protection. Some countries such as Switzerland are reviewing copyright law generally and therefore among the members of the OECD no major contentions seem to have arisen. The Commission is compiling an inventory of legislation in third countries world wide and listing any problem areas which might arise in order to complete our global picture.

In conclusion, the Community has an important and an evolving role to play in the intellectual property law field, especially in those areas which interface with the information market. Substantive harmonization at Community level has to be speeded up in order to remove obstacles to the free movement of goods and of information itself. That internal harmonization has to be co-ordinated and adjusted to take account of closer and wider associations between the Community and its neighbours, especially the newly emergent democracies

of Eastern Europe. Within both internal and external discussions, questions about the dichotomy between exclusive proprietary rights and greater competition have to be addressed, as do questions of the synergy between the public and private sectors, not least in the field of information gathering and dissemination. Open systems and a greater use of standards have to be encouraged, especially in the telecommunications field.

The growing internationalization of research projects in turn brings new issues of intellectual property protection to light, especially when such research is funded or conducted by public bodies. And at yet another level of internationalization, industrial and intellectual property law has to be made equitable and relevant to the needs of the developing as well as the developed nations, and at the same time continue to serve as an incentive for innovation and creativity.

All views expressed are the personal opinions of the author and do not bind the services of the Commission.

INFORMATION AND RESPONSIBILITY

STEVEN J. METALITZ
Vice President and General Counsel
Information Industry Association
555 New Jersey Avenue, N.W., Suite 800
Washington, DC 20001
U.S.A.

SUMMARY

A complex network of legal rights and responsibilities is part of the environment within which information products and services are developed and distributed. A brief survey of some aspects of this network or web of responsibility for information is provided, from the perspective of the information content provider. Responsibilities to authors and other sources are governed by copyright principles, especially those recently discussed by the U.S. Supreme Court in the Feist case. Debate over responsibilities to data subjects has recently been dominated by discussion of the draft European Commission directive on data protection. Responsibilities to data consumers and customers are generally governed by express or implied contract terms, while responsibilities to end-users and ultimate beneficiaries of information products and services implicates questions of negligence and strict liability. The article concludes with observations on the role of business and government in clarifying and defining legal responsibilities for information.

INTRODUCTION

The subject of networked access to information has been the focus of much discussion and debate throughout the information industry in recent years. The development of interlinked computer and communications networks, and the potential for even more extensive interconnection and proliferation of access, has raised exciting possibilities for new markets and new products, as well as troubling fears about network security, integrity and privacy. But the attention focused on these technological advances may have obscured the gradual growth of a different form of network: the network of legal responsibility for the development, distribution, marketing and use of information products and services.

Unlike the physical access network, the growth of the network of legal responsibility has not resulted from the conscious development decisions of businesses, governments, and customers. It has arisen, rather, from a myriad of sources: from the decisions of courts and administrative bodies, from the enactments of legislatures, and from the evolving conventions of commercial practices in the Information Age. The network of legal responsibility has, for the most part, grown haphazardly, without planning, on the basis of ad hoc decisions. Its landmarks have been constructed both on a sui generis basis, focused on the problems presented by particular information technologies and formats, and on the basis of analogies, stated or unstated, between newer and older, more familiar technologies. As a result, the network of legal responsibility often takes the form of a tangled web of legal duties, commercial expectations, and statutory rights, linking all market participants -- authors, publishers, distributors, purchasers, and end-users -- in a series of often murky, sometimes inconsistent, or even contradictory, responsibilities.

The following remarks seek to shed some light on a few of the strands of this evolving web of legal responsibility for information. If these observations raise more questions than answers, perhaps they accurately reflect the

embryonic state of the law in many of the areas surveyed. Their focus -- principally on developments in the United States -- reflects the limitations of the author's experience; but the issues they raise will have to be addressed, in one form or another, throughout the global information marketplace.

The perspective of these observations is primarily that of the private sector information industry, the thousands of companies and other institutions whose business involves the creation, distribution, and use of information. More specifically, the legal responsibilities are described mainly from the standpoint of the provider of information content -- the compiler and publisher of information products and services, particularly in the form of electronic databases -- rather than from the standpoint of the passive distributor or end-user. Even this single perspective is multi-faceted, however. To use the terminology of traditional copyright analysis, the information content provider shares characteristics of the user, author, and publisher. In many cases, the information provider relies on data supplied by others -- the fruits of scientific research, for instance -- and supplies the authorship involved in organizing and presenting these materials in the most useful and accessible way. The information provider then makes decisions as to the medium or media of distribution -- for instance, hard copy, on-line, CD-ROM, audiotex -- most appropriate to the nature of the product or service and the target market. Even where the information content provider does not actually execute the distribution strategy itself -- e.g., by running an on-line service on which are mounted the databases it has created or compiled -- its distribution decision may affect the nature of the legal responsibilities that it wittingly or unwittingly assumes. This essay will at points articulate those consequences, but it proceeds from the assumption that the content provider becomes enmeshed in the network of legal responsibility -- albeit perhaps at different points -- regardless of the distribution medium chosen.

Finally, these remarks should be viewed as a sample, not a comprehensive survey, of the legal responsibilities undertaken by information content providers. They focus on four major types of responsibility: to authors and other sources; to data subjects; to data consumers and customers; and to end-users and ultimate beneficiaries of information products and services. The essay concludes with some observations on the practical consequences of the nature of the evolving web of legal responsibility in the information field.

RESPONSIBILITIES TO AUTHORS AND OTHER SOURCES

The raw material of the content of a commercial database or other information product or service may take several forms. For present purposes, two categories are relevant: first, what the Berne Convention refers to as "literary and artistic works," and the U.S. Copyright Act calls "works of authorship"; second, other types of "raw data" or pre-existing materials. While the coverage of Berne and of the U.S. law are not precisely coextensive, the distinction between works protectible by copyright and unprotected data or other materials is an important one. Its significance has recently been underscored by the decision of the U.S. Supreme Court in the case of Feist Publications, Inc., v. Rural Telephone Service Co., Inc., 111 S.Ct. 1282 (1991), in which the Court for the first time expounded on the scope and existence of copyright protection for compilations of otherwise unprotected materials.

Where the information product or service is based upon works protectible in themselves, the responsibilities of the information provider to the author or authors is relatively familiar.

Inclusion of a work in a compilation does not, of course, prejudice the copyright in the underlying work. Whether the compilation involves the inclusion of an article or essay in an anthology, or even the wholesale inclusion of one compilation in a larger compilation -- for instance, the inclusion of a statistical chart on Belgian economic performance in a broader compilation of European business statistics -- the act of inclusion is ordinarily subject to traditional requirements of obtaining a license from the author or his representative, unless traditional exceptions such as fair use or fair dealing apply.

Questions may sometimes arise as to whom this responsibility runs -- in other words, in identifying the author of the work in question. Different rules apply with respect to the ability to ascribe authorship to legal entities, and to the conditions under which an employer or contractor is authorized to exercise the privileges of authorship with respect to a work created by its employees or contracting parties. Identifying the author of the work in question is essential, not only for securing a license to use the work in the larger database, but also for securing a release or consent with regard to the author's moral rights, particularly the rights of paternity and integrity recognized by the Berne Convention. Berne member states have adopted a variety of approaches to defining and enforcing these moral rights, ranging from the enactment of a specific moral rights code identified as such, to the U.S. model of subsuming these rights within a complex of other legal provisions, including trademark, defamation, and copyright itself.

Unique problems are presented when the database compiler seeks to identify the author of another compilation of data to be included in the subsequent database. In this instance, the author is generally the legal or natural person who has selected or arranged the data into the format presented. The verbs "selected or arranged" track Article 2(5) of the Berne Convention (Paris Text). Even though this paragraph refers only to "[c]ollections of literary or artistic works such as encycolpedias and anthologies," national law in most Berne countries makes clear that the same "selection or arrangement" authorship may be found in compilations of data that are not themselves individually subject to copyright protection. This is indisputably the case under U.S. law, which defines a compilation as "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated or arranged in such a way that the resulting work as a whole constitutes an original work of authorship." U.S. law recognizes a "collective work" as a species of the compilation genus, defining the former as a work "in which a number of contributions, constituting separate and independent works in themselves, are assembled into a collective whole." 17 U.S.C. sec. 101. Some of the shadows which may now lurk in this corner of the web of legal responsibility could be dispelled by a more explicit recognition in international legal instruments of the fact that, as a matter of law and practice, the Berne protection for compilations is not limited to collections of "works," but also extends to selected or arranged non-copyrightable material. That recognition should be reflected in any protocol to the Berne Convention that emerges from discussions soon to commence within the World Intellectual Property Organization. The broader definition of compilation would also be a valuable feature if included in the forthcoming European Community instrument on legal protections for databases, as well as in multilateral standards such as the proposed General Agreement on Tariffs and Trade agreement on trade-related

intellectual property rights.

The raw material, itself unprotected by copyright, that goes into a copyrightable compilation may take several forms. It may include works of authorship that have passed into the public domain, or official texts or other works of government authorship that may, under national law, be unprotected. Most commonly, however, this category refers to "data," "facts," or another label applied to statements or observations which do not themselves rise to the level of protected authorship. Such material runs the gamut from astronomical observations to stock quotations, from bibliographic citations to economic and demographic statistics. It may have taken a great deal of effort, resources, hard work and ingenuity to discover or articulate the fact in question, a sum of quantifiable inputs far greater than that which led to the creation of a simple tune or short rhyme. Nevertheless, because, as the Feist decision pithily states, "copyright rewards originality, not effort," the former may be in the public domain while the latter is not.

A brief review of the Feist decision may help to illuminate the complexities of describing this aspect of the legal responsibilities of the information content provider. The Feist case arose from a dispute between a small local telephone company (Rural) and a small independent publisher of telephone directories (Feist). Feist sought a license from Rural to include the latter's directory listings -- so-called "white pages" listings, consisting solely of names, addresses, and telephone numbers of telephone subscribers -- in the former's directory. When Rural, alone among nearly a dozen similarly situated telephone companies, refused Feist a license, Feist copied the listings it needed without a license. Rural successfully sued for copyright infringement, but the Supreme Court reversed the decision, absolving Feist of any copyright liability. Thus, although Feist originally acted as if it had a responsibility -- prudential if not legal -- to treat Rural's compilation as copyrightable and therefore available only under license, the result of the case was to throw all such white pages directories into the category of unprotected works which are available as source material to all comers. In other words, the web of responsibility to the compiler of the underlying material is broken here: a subsequent user is free to take all or some of it, for any purpose, without permission or payment of compensation, at least as far as copyright is concerned. The reason for this treatment lies in the Court's finding that white pages directories "are selected, coordinated and arranged in a way that utterly lacks originality."

While the significance of the decision to any American telephone directory publisher is obvious and profound, its applicability to any other kind of factual compilation is far less self-evident. Clearly, the Court considered white pages listings as atypical compilations, falling at one extreme of a spectrum that includes many copyrightable works. Rural's compilation failed to satisfy an originality requirement, but the decision underscores that that legal hurdle is set very low. As the opinion states:

> Originality requires only that the author make the selection or arrangement independently (i.e., without copying that selection or arrangement from another work), and that it display some minimal level of creativity. Presumably, the vast majority of compilations will pass this test, but not all will. There remains a narrow category of works in which the creative spark is utterly lacking or so trivial as to be virtually nonexistent.

Thus, a database developer

who bodily appropriates or substantially plunders a pre-existing compilation as source material for his own work does so at his peril. He gambles upon the possibility that the underlying compilation will be found to be an exception to the rule, a mere assemblage of data which fails to satisfy even the minimal creativity standard. In the Feist case, Rural's listing failed to pass muster because its "selection of listings could not be more obvious" and its alphabetical arrangement of those listings "is not only unoriginal [but] practically inevitable." Compilations which can establish even a minimal level of originality in the selection of data, or its arrangement -- or its coordination, a rubric on which the Feist decision is entirely silent -- can avoid the total rupture of the web of copyright responsibility, at least under U.S. law. (Even in that case, it is possible, although far from certain, that responsibility could be imposed on some other legal theory besides copyright.)

Perhaps the more interesting questions concern the precise contours of the responsibility imposed with respect to compilations that do meet the minimal creativity standard of selection, coordination or arrangement, and that therefore fall in that broad arc of the spectrum consisting of compilations protectible under copyright. Here the observations of the Supreme Court in the Feist case, while well stated and certainly highly suggestive of future decisions, may not literally be binding in subsequent cases, since the compilation in question was found to be totally unprotected. Nonetheless, they are an essential guide to any information marketplace participant seeking to clarify its responsibilities in this sphere.

The Feist decision stresses that the copyright in an original compilation "is limited to the particular selection or arrangement" which constitutes the protectible authorship. "In no event may copyright extend to the facts themselves." In summarizing the consequences of this distinction, the opinion states:

> This inevitably means that the copyright in a factual compilation is thin. Notwithstanding a valid copyright, a subsequent compiler remains free to use the facts contained in another's publication to aid in preparing a competing work, so long as the competing work does not feature the same selection and arrangement. As one commentator explains it: "[N]o matter how much original authorship the work displays, the facts and ideas it exposes are free for the taking.... [T]he very same facts and ideas may be divorced from the context imposed by the author, and restated or reshuffled by second comers, even if the author was the first to discover the facts or to propose the ideas."

This passage seeks to provide a doctrinal "bright line" to define clearly what may and may not be taken without permission from a copyrightable compilation. In practice, however, the line is far from bright. The Feist analysis assumes that a clear distinction may be drawn between facts, on the one hand, and the selection, coordination or arrangement of facts, on the other. The analysis assumes it should be possible to appropriate all of the former without taking any of the latter. But it is difficult to conceive of a practical example. If all the facts are taken, is not the first compiler's original "selection" taken as well? How can this result be avoided simply by omitting certain entries, when traditional copyright principles tell us that an infringer may not excuse his actions by demonstrating how much of the work he did not take? Does the Feist analysis have the ironic result of providing the

least protection for the most valuable databases -- those that comprehensively amass and aggregate the data on the particular subject at hand, without selectively omitting some data that might be of value to some users? Why should a map that arbitrarily omits provincial capitals, or a periodic table that selectively drops the halogens, enjoy greater protection against verbatim copying than a truly comprehensive compilation? Or can the latter demonstrate an element of original "selection" authorship through its original (not copied) definition of the universe to be comprehensively compiled: the territory to be mapped, or the attributes of the elements to be displayed?

The application of the Feist analysis seems especially questionable with regard to a computerized database, in which the "restating or reshuffling" of facts, themselves painstakingly compiled and presented according to an original plan of selection, coordination, or arrangement, may be accomplished with a touch of a button. Of course, from a copyright standpoint, Feist teaches us that "effort" is irrelevant. But at least from the perspective of U.S. law, based upon an explicit constitutional bargain "to promote the progress of science and useful arts" -- and, in this context, to encourage investment in the development of innovative and useful information products and services -- some have questioned whether the Feist analysis carries out the constitutional purpose. How is the "progress of science and useful arts" served if the protection for compilations -- themselves often the product of considerable investments of time, resources, and skill, as well as of originality -- is reduced to a "thinness" approaching emaciation?

Where does this leave the database developer who is seeking to define more precisely his responsibility toward a compiler of factual data upon which a new information product or service may be based? Put another way, what range of action is now permissible to the "second comer" who aims to offer an improved or enhanced service whose subject matter overlaps with an existing service? The glib answer in both cases may be that the information content provider finds himself at the cutting edge of one of the most dynamic arenas of copyright law, a position at once exciting and potentially dangerous. Watershed decisions such as Feist are inevitably followed by decisions of lower courts seeking to apply the announced broad principles to facts presented by specific cases. The process may be interstitial, putting meat on the bones of a skeletal pronouncement of overarching rules, or it may be dynamic, leading the courts incrementally to a new balance between creators and "second comers" somewhat different from that sketched out in Feist. Furthermore, courts are not the only actors in this developing drama: the national Congress and possibly state legislatures as well could entertain proposals to rectify the perceived problems created by the Feist decision, and thus to draw a clearer picture of this corner of the web of information responsibility.

In the meantime, the practical consequences, at least in the U.S. market, may include the following. Information companies will probably continue to seek licensing arrangements for the use of data contained in existing databases, even to create competing products, except in the narrow category of white pages directories and perhaps other compilations now deemed to lack any copyright protection. (Even in this sphere, licensing will continue to be needed to assure access to the most up-to-date compilations, rather than relying on outdated printed materials, even if they may be copied freely.) In order to protect their compilations against unauthorized copying, database developers will probably give greater emphasis to demonstrable originality in selection, coordination or arrangement of data

in all steps of the development process. Compilations of "raw facts" may be de-emphasized in favor of, or at least supplemented by, "value-added" features that involve original expression or the exercise of judgment and subjective evaluations. For instance, directories of companies could include not only objective factual information, compiled according to selected criteria and presented in an original arrangement, but also evaluations and ratings concerning financial position, market prospects, and other relevant factors. These changes could make at least wholesale copying less attractive by making it more difficult to take "mere facts" without also taking copyrightable elements. Finally, some information companies will reevaluate their marketing and distribution strategies in order to emphasize customer relationships defined by contract and to minimize relationships in which copyright provides the main mechanism for protecting against unauthorized copying of the database. This could mean a trend away from retail sales of hard copy, or even of discrete products such as a CD-ROM disc, and toward subscription sales and on-line access where unfriendly uses can be more effectively monitored and prevented.

The international implications of the Feist decision are also unclear. The doctrinal underpinnings of the decision are probably familiar to copyright specialists in most developed countries, but the case's teachings are not necessarily transferable throughout the Berne Union. Undoubtedly this first comprehensive statement on protection of compilations by the highest U.S. court will be carefully studied in both Brussels and Geneva, and will be reflected to some degree in the EC database protection directive, the Berne Protocol to be considered by WIPO, and the GATT agreement on copyright if one is achieved.

RESPONSIBILITY TO DATA SUBJECTS

The next strand of the web of legal responsibility for information products and services applies only to some databases, depending on their subject matter. For many scientific and technical works, there is no human data subject -- neither a natural nor a legal person -- to assert rights or seek redress in the case of error or injury to reputation. However, for the developers and distributors of a large category of commercially important databases, responsibility toward the data subject is a significant element of the legal environment. Unlike the copyright issues discussed in the preceding section, where the trends toward harmonization of the U.S. and European regimes are unmistakable, the rights of data subjects are approached in fundamentally different ways on different sides of the Atlantic, although many common aims can be identified. For purposes of this essay, two main elements of the responsibility toward data subjects should be addressed: data protection (or privacy) and defamation.

Just as the impact of the Feist decision dominates discussion of the responsibility of information content providers toward authors and compilers of source material, so a single major initiative helps to frame the current debate over data protection: the pending European Commission proposal for a Council directive concerning the protection of individuals in relation to the processing of personal data, COM (90) 314 final, SYN 287, O.J. No. C277, 5 November 1990. This proposal reflects in great part the need to harmonize the data protection legislation of the 12 EC member states at "an equivalent high level of data protection," in order to prevent the erection of internal barriers to data flow within the European Single Market. Yet the proposal's impact has already been felt far beyond the borders of the European Community. Two elements of the draft directive explain these broad repercussions: the expansive definition of "personal data," and the

extraterritorial reach of the proposal.

The proposed directive would have a broad coverage, extending to "any information relating to an identified or identifiable individual." Thus, its impact is not limited to databases containing medical records, information on religious practices, or other types of data that, at least from an American perspective, would seem especially sensitive or private. Certainly the draft directive would cover records of banking transactions by individual customers, airline reservations, personnel data, mailing lists of all kinds, and even bibliographic data and directories of individuals. Apparently any database containing individual names is covered, but so are databases that contain no names but do include identifying numbers from which the identity of an individual could be determined. Thus, for example a database consisting of the telephone numbers of persons who have asked to be excluded from telemarketing solicitations -- or, for that matter, any list of residential telephone numbers -- could be subject to the directive, since the names of the subscribers could be determined through use of a reverse directory. Both computerized and manual files are covered, as are files held by any business, large or small, even for internal purposes such as personnel decisions.

In short, the draft directive, if adopted in its current form, could provide an important thread of the web of legal responsibility for a wide range of databases, including many not usually thought of as focused on "personal information." Furthermore, its effect extends beyond the EC through its prohibition on the transfer of personal data outside the Community for processing unless the recipient country "ensures an adequate level of protection" for the data involved. Processing is defined broadly, to include even communication of data without more. Accordingly, the requirement for "adequate" extraterritorial protection would be invoked by such actions as a query from a named individual (or one identified by a password or other identifier) within the EC to a remote database located outside the Community, regardless of the nature of the data in the database sought to be accessed. Under these circumstances, the web of responsibility toward a "data subject" would embrace the handling of customer information by a database operator who has any subscribers located within Europe. Of course, the proprietor of a database, wherever located, that contained "personal data" on European individuals would have to meet the "adequacy" standard in order to obtain the data in the first place, as well as in order to retransmit it back to Europe in response to a request.

The content of the obligations imposed upon database proprietors, if the directive were enacted in its current form, are comprehensive and far-reaching, although not unfamiliar to at least some companies already subject to some of the more rigorous data protection laws in individual EC member states. Informed consent of the data subject is the keystone for creation and processing of personal data. The data subject must be told (usually at the time of data collection) the purpose of the file, how it will be used, and who will receive it, and must give "specific and express" consent for particular recipients and types of processing. There are exceptions for data processed under a contractual or trust relationship, or if a "legitimate interest" in processing outweighs the interest of the data subject. Data subjects also enjoy the right to review data on himself or herself; to delete data (even if accurate) obtained or processed in violation of the directive, and to obtain compensation from violators. In addition, "truly dissuasive sanctions," including criminal penalties, must be adopted by each Member State.

Other obligations to be imposed upon database proprietors run to Member State governments, rather than directly to individual data subjects. For instance, many databases must be registered with a government agency upon creation, and the agency must be allowed access to all files covered by the directive.

The draft directive has been subjected to considerable criticism. Among other things, it has been suggested that the ambiguousness of many of its provisions, and its authorization of Member State derogations and deviations in many areas, make it unlikely to achieve its stated goal of increased harmonization of requirements within the Community. Firms in many fields argue that compliance with the directive would be so expensive as to discourage involvement in businesses using "personal data," including many lines of business of undoubted benefit to consumers. The potential for interference with the flow of personal data to and from Europe has been criticized as a backward step in view of the growing globalization of every kind of business, especially where information is concerned.

The policy underpinnings of the proposed EC directive may usefully be contrasted with the privacy law approach taken in the United States. Although the draft EC directive, at least in its current form, contains many ambiguities and exceptions, it does have the virtue of comprehensiveness and a high degree of uniformity across different business sectors. The web it throws over the wide spectrum of databases containing personal information is dense and arguably stifling, but at least its main outlines are fairly clear. In the U.S., by contrast, the web of responsibility linking a database proprietor with persons named in the database is complex and uneven, with some kinds of databases far more extensively regulated than others. For the most part, this reflects a perception that compilations of certain kinds of data (e.g., credit and personal financial data) and databases held by certain institutions (notably the federal government) pose greater threats of abuses that could compromise personal privacy than do other, less sensitive databases. Other prominent features of U.S. privacy law include a greater reliance on legislation adopted by the individual states, rather than the central government, and a drastically lessened role for the government as the affirmative champion of personal privacy, a role generally left to the aggrieved data subject himself.

From an American perspective, it can be cogently argued that this sectoral approach, relying on individual enforcement and viewing government more as a potential threat to privacy than as its protector, has given Americans as high an effective level of privacy protection as their European counterparts (doubtless greater vis-a-vis government), as well as demonstrably greater access to a wide array of consumer products and services whose development in Europe is clearly threatened by the prospect of a comprehensive, sweeping data protection regime along the lines proposed by the European Commission. At the same time, it is unrealistic to expect the fundamental divergences between the European and American approaches to be resolved in the near future. The European proposal has already had a noticeable impact on the debate over privacy policies in the United States, and that influence is likely to grow. At least some elements of the European data protection approach are under consideration both in Congress and in a few state legislatures. In the long run, at least, it may be hoped that the contours of this part of the web of legal responsibility for the information industry will come to resemble each other on both sides of the Atlantic. Failure to work toward a common approach is sure to have a detrimental impact on the

dissemination of a wide range of information products and services in the global marketplace.

Another strand in the web of legal responsibility toward data subjects is based not on recent or proposed legislation, but on much older legal concepts. While this strand overlaps to some degree with data protection responsibilities, it is in most ways a narrower part of the web. While data protection standards govern the way in which information about individuals is collected, processed, and disseminated, its strictures apply regardless of the accuracy of the data in question. (The EC draft directive does include data quality provisions, yet it can be violated in many respects by the collection or processing of completely accurate "personal data.") Liability for defamation, by contrast, extends primarily to the dissemination of false information injurious to reputation. Its scope is broader than data protection in one key respect: businesses, institutions and other legal persons, as well as natural persons, can seek damages for defamation, while "personal data," at least under the proposed EC definition, must be identifiable to a particular individual.

There is little dispute about the general proposition that one who disseminates false and defamatory information about another may be liable for monetary damages, whether the defamation is communicated orally, through familiar ink-on-paper technologies, or electronically. The disputed aspects of this portion of the web of legal responsibility turn mainly on questions such as the degree of fault which must be proven, and problems involving republication of data, particularly from public record sources.

In general, information content providers appear to be more vulnerable to strict liability for defamation under European legal systems than under U.S. law. In the United States, at least a showing of negligence is usually required before a plaintiff may recover. Furthermore, in a significant if ill-defined category of cases, injured parties must surmount even higher hurdles in order to obtain damages. At its zenith, this protective standard requires a showing of "actual malice" -- that is, either knowledge of the falsity of the statement, or reckless indifference to its truth. These higher standards may be embodied in qualified privileges developed under the common law of particular states, but in some cases they have a constitutional basis as well, in the First Amendment guarantees of free speech and free press. The idea that the law must protect some false speech in order to give "breathing room" to First Amendment freedoms -- and to promote the beneficial effects of a free flow of information in a democratic society -- has ancient antecedents, but it has been firmly implanted in U.S. constitutional law for less than 30 years, and its contours are still subject to vigorous debate. By contrast, at least one European commentator has noted that, at least in the French legal system, "though freedom of speech is fully recognized as a constitutional principle ... there is no such idea, at least not expressly stated in judicial opinions, that imposing a liability on information providers would act as a deterrent of the free flow of information." Huet, "Liability of Information Providers: Recent Developments in French Law Contrasted with Louisiana Civil Law of Liability and United States Common Law of Torts," 5 Tulane Civil Law Forum 101, 108 (1990).

Certainly the U.S. constitutional privilege applies in full force to alleged libels concerning public officials; clearly it has little applicability to purely private disputes about private matters. But the boundaries between these categories are hotly contested.

Litigation in the United States involving on-line information services has focused

primarily on whether the statements involve "public figures" or a matter of "public concern," tests that must be satisfied in order to invoke the constitutional defenses against liability for merely negligent falsehoods. In many cases, the results have not been favorable to information content providers. In one leading case, the 1985 Supreme Court decision in Dun & Bradstreet v. Greenmoss Builders, 472 U.S. 749 (1985), the court allowed a small business to recover damages due to a false report that the company had filed for bankruptcy. It was held that the statement did not address an issue of "public concern," with some members of the court observing that imposing liability for negligent false statements was unlikely to have a deleterious impact on the free flow of commercial information. A similar result was reached by a lower court in a closely watched case, Blue Ridge Bank v. Veribanc, Inc., involving a negligently false report on the solvency of a bank.

Surely it can be argued that any provider of information content has some responsibility to guard against negligent inclusion of erroneous information in a database, even if in some circumstances the provider will not be held liable for mere negligence. But what if the negligence involved is that of the supplier of information, not of the party who compiles and makes it available in the form of an electronic information service? Where the data is obtained under contract, the provider would ordinarily obtain a warranty from the supplier and hold the latter ultimately responsible in case an undetected error proved to be defamatory. But is there some independent obligation to check and verify the data before making it available to customers, in order to ferret out errors before they cause injury? Is it practicable to impose such a duty in the case of vast databases containing enormous volumes of information, where the information provider would not normally have any occasion to examine any particular datum for accuracy? Does the existence of artificial intelligence software which can easily flag at least some categories of errors have any impact on the existence or scope of this duty? These are some of the questions whose answers may, in the future, shed more light on the precise contours of the responsibility of the information provider.

What of the situation in which the data is not obtained under contract, but simply by extracting it from public records, such as land titles, court files, and the like? Even where the defamation results not from the compiler's errors, but from defects in the public records themselves, the information content provider may have more difficulty avoiding responsibility in this situation than in the case described in the preceding paragraph. The government agency which is the source of the error may have no contractual obligation to the disseminator of the data, and its tort liability to the ultimate victim may be limited due to sovereign immunity or other privileges. Some courts appear attracted to the thinking that the act of compiling and disseminating public records in a single information source, readily accessible through modern communications technologies, could create a liability that does not exist when the individual data lie scattered in public records offices around the country. While this argument has gained some credence in the sphere of privacy protection, its applicability to libel remains unclear.

Finally, it should be noted that the information content provider may have some legal responsibility to data subjects for false information even when it does not necessarily constitute defamation, and even in some cases when the information is not false. In the first category fall duties imposed, for example, by specific statutes that include data accuracy requirements, such as the Fair

Credit Reporting Act in the U.S., and, indeed, the draft EC data protection directive itself. In the second category fall claims, actionable at least under U.S. law, that the inclusion of particular information about an individual, while true, portrays the data subject in a false light, as well, of course, as claims under European data protection laws for improper collection or processing of accurate data. Last, mention should be made of the Branly case in the French courts, cited by Professor Huet, in which an individual deliberately excluded from a historical treatise successfully sued on the ground that the historian had failed to satisfy a legal stands of "requirements of objective information." Thus, the web of responsibility may extend not only to those who are data subjects, but to those who are not but insist they should be.

RESPONSIBILITY TO DATA CONSUMERS AND CUSTOMERS

At first glance, the lines of legal responsibility of an information content provider to his customer appear to be among the clearest and simplest regions of the entire web. Access to an electronic database or other information service is normally governed by a contract agreed to by the information provider, on the one hand, and the customer, on the other. Even where the contract with the customer involves other parties, such as a gateway operator or telecommunications provider, there is usually a contractual chain linking the information provider with the customer who may claim to be aggrieved by the provision of inaccurate, untimely, or misleading information, or indeed by the failure to provide information as promised. In theory, at least, in the contractual arena the parties are well equipped to bargain over allocation of the risks of these occurrences, and the law is prepared to enforce these bargains if necessary. The practice, of course, may be much different; information providers and customers are far more likely to enter into pre-determined form contracts without paying much attention to unpleasant and unexpected contingencies. Commonly, in such contracts, the information provider seeks, often successfully, to protect himself from as much of the risk as possible.

However, an information provider who complacently relies solely upon contractual disclaimers of liability may ultimately find the web of legal responsibility much more tangled and dangerous than anticipated. A court may refuse to slam the courthouse door on an injured customer, no matter what the contract says. A brief survey of the validity of contractual disclaimers of liability in U.S. and European laws indicates that courts in every country will read into the contract certain obligations which cannot be disclaimed. Denis and Poullet, "Questions of Liability in the provision of Information Services," Newsidic No. 100, April 1990, at 7, 14-16. Whether labelled as requirements of "reasonableness," "good faith," or "good morals," these implied (or court-supplied) contractual principles all seek to relieve the allegedly injured party from the consequences of the bargain he has struck. The doctrines are especially applicable in cases where either the bargaining power, or the level of knowledge and expertise, of the two parties is grossly unequal. The degree to which this description applies to the circumstances surrounding a contract for access to information products and services may be inversely proportional to the degree to which the information content provider may safely rely upon contractual disclaimers of liability.

Even more interesting and novel responsibility issues arise when the terms of access to information products and services are not governed by any specific written contract. This may become an increasingly common circumstance with the growing penetration of

such services into mass consumer markets. Many knowledgeable observers believe that mass markets will inevitably include a significant proportion of "impulse" buyers whose spontaneous decisions to access information services will be frustrated without a non-contractual mechanism for obtaining and paying for such access. Whether access is achieved via ordinary telephone, in the case of audiotex services, or through a public videotex gateway not requiring presubscription, the rules of this noncontractual information marketplace will not be embodied in a signed, written agreement acknowledged by both (or all) parties to the information transaction. Those rules will have to be supplied by well-established industry practice, by formal industry codes of conduct, by dominant forces in the marketplace (e.g., monopoly or oligopoly providers of telecommunications conduits for the transactions), or by government -- or by a combination of these sources.

The recent developments in audiotex services in the United States offer an informative case study. The explosive growth of this marketplace in the past few years, catalyzed by rapid advances in voice processing technology and by the deployment of competitive long-distance telephone networks, has been characterized by the development of many innovative information services that meet real consumer needs and deliver true value. Unfortunately, growth has also been accompanied by some scandalous abuses by a handful of market participants, who have exploited the lack of clearly defined groundrules to bring to market falsely advertised, worthless "services" that are little more than a vehicle for consumer fraud. Industry efforts to develop and implement self-regulatory codes of conduct have been overtaken by a rush to regulation on the part of legislatures and regulatory agencies on both the state and federal level. As a result, in an arena where the lines of legal responsibility between information provider and customer were quite hazily defined just a year ago, the coming months are nearly certain to bring a new web of complex and overlapping regulatory restrictions, not only on the way audiotex services are advertised and marketed, but on their content and presentation as well. The precise contours of these regulations are unclear at this writing, but it is far from clear that they will either succeed in the objective of eliminating fraudulent audiotex programs, or avoid imposing unneeded new regulatory requirements on other electronic information services, including business-to-business services where there is not the same legal vacuum for government to fill.

RESPONSIBILITY TO END-USERS

This brief survey of part of the web of legal responsibility for information concludes with a glance at one of the most attenuated strands: the information content provider's responsibility to the ultimate end-user. Particularly in the case of databases of business and professional information, it is obvious that the ultimate beneficiary of the information product or service is not the customer to whom access is made available under contract: it is the customer's client, patient, business partner, or customer, the person or institution to whom the original customer transmits the information or, more commonly, for whose benefit the information is used to create or enhance a different product or service. With this ultimate beneficiary, the original information content provider has no contractual or other business relationship. Indeed, the information provider often has no way of knowing even the identity of the party at the other end of this strand of the web. That knowledge, if it ever arrives at the doorstep of the information content provider, may be accompanied by legal process demanding the database provider to pay damages to redress injuries

allegedly suffered in reliance upon, or as a result of, defects in the information product or service in question.

The information provider's dismay in this situation may be ameliorated slightly by the knowledge that he is (usually) not alone. He is more commonly one of several defendants, including the party to whom he has originally sold access to the information (for instance, a physician or attorney who subscribes to a professional information database which is alleged to have contributed to the injury to the patient or client). The contract between the information provider and his customer should address the issue of allocation of responsibility to third parties for use of the information product or service in question. Such a provision, if enforceable, may govern who must actually pay any damages that are awarded, but it does not necessarily resolve the question of whether the information provider is legally responsible to the ultimate end-user of the data that he has launched into the stream of commerce through the original contract for access. Even more ominously, contractual provisions for indemnification can be useless in the case where the original customer is deceased, bankrupt, or otherwise unable to respond adequately from the point of view of the injured plaintiff. In such a case, attention must be focused directly upon the breadth and strength of this last strand of the legal responsibility web.

As in so many other regions of the web, the responsibilities of the provider of the electronic database publisher turn to some degree at least on how a traditional ink-on-paper publisher would be treated in similar circumstances. Professor Huet's article draws an interesting contrast between cases in France and the United States. In the case cited by Huet as Affaire de "La cique", and by Denis and Poullet as Gribinsky v. Nathan, T.G.I. Ier, 28-5-1986, D. 1987 1R, 3R, the publisher (as well as the author) of a cookbook on edible wild plants was held liable for the death of a reader who mistook poisonous hemlock for the very similar but safely edible wild carrot. By contrast, in Cardozo v. True, 342 So.2d 1053 (Fla. Dist. Ct. App. 1977), there was no liability for the illness of an reader who tasted raw dasheen before cooking it according to the recipe in a cookbook which failed to warn that the uncooked plants were poisonous. Indeed, as one commentator on U.S. law has noted, "[u]ntil a few years ago, it was firm doctrine that the publisher of a book provided no warranty concerning the accuracy of the information contained therein." Gemignani, "More on the Use of Computers by Professionals," 13 Rutgers Computer and Technology Law Journal 317, 336 (1987). That doctrine, as Dean Gemignani notes, "is being eroded," along with similar obstacles to liability based on electronic information services.

The degree of legal responsibility may turn upon the nature of the information product or service, and its intended audience. Somewhat paradoxically, the duty to verify data and check for errors may be greater in the case of specialized technical services used by professionals such as doctors, lawyers and engineers than it is in the case of general information services accessed by the general public. Perhaps this is a vestigial distinction based upon the long line of cases absolving newspapers for liability for misprints, and reflecting the higher stakes that are usually involved in claims of professional malpractice based on faulty information. But it does seem to overlook the fact that in the case of specialized technical services, the ultimate victim should be able to rely on a skilled professional -- the original recipient of the data -- to screen out at least gross errors before they cause damage. This analysis seems to be reflected in a German case, BGH NJW 1970, p 1963, described by Denis and Poullet, in which the publisher

of a medical book was absolved of liability for a misplaced decimal point in a treatment formula because any medically educated person should have noticed it.

A claim for damages based on errors in an electronic database service could face some more difficult hurdles than a similar claim based on errors in a printed book. For instance, in a dynamic on-line database, in which the content is constantly changing, it will often be difficult for the plaintiff to establish just what the data was at the time it was allegedly accessed. Similarly, in the case where an error is spotted and corrected, disputes may arise about whether the database was consulted before or after the correction.

Furthermore, in many cases there will be difficult questions about causation, the requirement under virtually any legal system of linking the defendants' alleged wrongful act or omission to the plaintiff's injury. It may be hard to prove conclusively, for example, that a legal database's failure to enter or properly index a certain precedent, or a medical database's omission of a certain reference or contraindication, was the proximate cause of the plaintiff's ensuing legal or medical difficulties. In both cases, the professional representing or treating the plaintiff is not simply a passive conduit for accurate or inaccurate data; he or she is expected to exercise judgment and consider a variety of factors before deciding upon a course of action. Showing that the result would have been different but for the information provider's alleged negligence in allowing inaccurate data to remain in the database will often be a heavy burden to meet.

One way of easing part of the plaintiff's burden in these cases would be to apply a theory of strict liability, under which the information content provider would be responsible even if no negligence were proven. The justification for this theory would be to bring the legal responsibility of information providers in line with the duties imposed upon the manufacturers and distributors of defective products of other kinds, who, under evolving tort law concepts, are often held strictly liable for injuries caused by their products. Strict liability has been applied in a few cases involving information products, most notably a series of U.S. cases involving an air crash caused by defective navigational charts. The chartmaker was held strictly liable, even though the charts accurately reflected inaccurate information provided by the government.

If information providers become subject to strict liability for damages suffered by the ultimate end-users of the information they make available, this long strand of responsibility will assume extraordinary importance in the overall web of legal responsibility. After all, one of the great potentials of the Information Age is that vast quantities of information, hitherto closely held and not readily available, will become easily accessible to broader publics, either directly or through intermediaries. If this broader access to, and freer flow of, socially useful information brings with it greater risks of liability for errors, omissions, or misinterpretations of the information, even those which are not due to the information provider's own negligence, the incentives for the development and marketing of new information products and services could be sharply diminished. At a minimum, this increased exposure will bring with it increased costs and limitations on access to information.

Whether or not strict liability should apply in the information arena will be a difficult question for courts and legislatures around the world. The question should not be obscured or confused, as it currently is, by debate over whether different kinds

of information dissemination activities constitute "products" -- to which strict liability applies -- or "services" -- as to which liability generally must be based on a showing of negligence. This debate over the applicable category flies in the face of technological developments that are blurring the distinctions between products and services. To assert that a database is a "product" when it is embodied in a discrete physical object, such as a CD-ROM, that is bought and sold for use in the purchaser's home or office, but that an identical database -- perhaps the identical CD-ROM -- is a "service" when it is remotely accessed from a user's computer terminal, is to distort reality for the convenience of legal pigeonholes. It also invites further confusion when a court is confronted with something that combines both "product" and "service" aspects: for instance, a CD-ROM updated by on-line or broadcast means, in a way that is transparent to the user, who has no idea whether the particular data on screen comes from the disc in his drive or a remote database an ocean or continent away. The policy focus should be on the reasonable expectations of the user, the realistic capabilities of the information provider, and the social and economic implications of how responsibility for information will be allocated. Definitional disputes between "product" and "service" categories are at best a distraction from this difficult policy balance.

CONCLUSION

If the network or web of legal responsibility described in the preceding pages seems murky or potentially treacherous, it still may be navigated by a prudent, careful information content provider without undue difficulty. The lessons to be drawn are those of common sense. Carelessness may have unpleasant consequences, as may indifference or contempt for the legitimate rights of others, be they data subjects, customers, or competitors. Aggressive strategies may yield high returns, but they also bring with them high risks. Most importantly, the businessperson must remember that the legal and liability landscape is a critical element of the environment within which the business operates. It is an aspect that the entrepreneur can hope to shape or at least seek to influence, but that it is surely perilous to disregard altogether.

Some of the obscurities in the web of legal responsibility will be illuminated in the years ahead by courts, legislatures, and government regulators. Three observations may be in order.

First, as noted in the preceding section, legislative and legal classifications may not match up with technological reality. Where the misfit is severe, the consequences could be confusion and inequity. In particular, policymakers should resist the temptation to pigeonhole based on the medium or format of information. Today's on-line database will be tomorrow's CD-ROM, just as it was yesterday's printed volume. In fact, the same information may coexist simultaneously as a broadcast data service, an audiotex program accessible by telephone, or the knowledge base component of an artificial intelligence system. To the greatest extent possible, the rights and responsibilities of participants in the information marketplace should be determined independently of the particular media in which a given information transaction may take place.

Second, knowledgeable market participants -- the information industry and its customers and suppliers -- should play an important role in setting the groundrules for that marketplace. Industry codes of conduct and self-regulation should be encouraged where appropriate. Of course, there is a limit to the degree to which the marketplace can regulate itself without impairing competition or sacrificing the interests of unrepresented parties.

But even where government must assume a rulemaking role, industry should be involved in writing and reviewing those rules, if only to obtain expert opinion on whether they are likely to achieve the desired practical results at a tolerable cost and without other undesirable side effects.

Finally, policymakers should seek to strike the proper balance between proactive and reactive strategies. The oft-expressed goal to get "ahead of the curve" will usually prove elusive: realistic rules cannot be written for marketplaces that do not yet exist, based on technologies that are not yet in place. Yet the ability to adapt to tomorrow's technology can be enhanced by policy principles that are not the captives of today's technology. A clear and steady focus on the interests to be balanced, followed by a flexible application of that balance to the technological environment, may prove to be the best guidepost to the evolving network of legal responsibility for information.

BIBLIOGRAPHY

This Bibliography was prepared for this Lecture Series by the Centre de Documentation de l'Armement (CEDOCAR), the technical documentation centre of the French Ministry of Defence.

1/54 - (C) C.cedocar

NUMERO SIGNALEMENT	C-91-F01886
TITRE FRANCAIS	Conditions propres à faciliter la coopération industrielle des marchés publics ouverts.L'achèvement du marché intérieur.Situation au 31 décembre 1989.
AUTEUR COLLECTIF	Comm.des Commu.Europ.(LU)
TYPE DE DOCUMENT	Ouvrage
CODE LANGUE	FRE
CODE PAYS D'ORIGINE	LU
EDITEUR	Comm.des Commun.Europ.(LU)
SOURCE	63 p.; DP. 1990
ISBN	9-282-60870-0
GISEMENT	05; 12964-19
RESUME	Droit des sociétés : Groupement européen d'intérêt économique;Statut de la société européenne;Structure des sociétés anonymes;Fusions transfrontalières;Publicité des succursales;Comptes annuels et comptes consolidés;Offres publiques d'achat.Propriété intellectuelle : Marque communautaire : règlement d'exécution et rapprochement des législations nationales;Taxes de l'Office communautaire des marques;Règlement de procédure des chambres de recours de l'Office communautaire des marques;Protection juridique des topographies de produits semi-conducteurs;Protection juridique des inventions biotechnologiques;Protection juridique des programmes informatiques.Fiscalité : Régime fiscal commun applicable aux sociétés mères et à leurs filiales;Elimination des doubles impositions;Régime fiscal commun : fusions, scissions et apports d'actifs;Régime fiscal du report des pertes;Transactions sur titres : abolition de l'imposition.Brochure mise à jour et rééditée à intervalles réguliers jusqu'en 1992.
SIGNATURE ANALYSTE	INFO/AN
CODE CLASSIFICATION	05 03
DESCRIPTEUR(S)	MARCHE PUBLIC*;LEGISLATION;DROIT COMMERCIAL;SOCIETE ANONYME; PUBLICITE;COMPTABILITE GENERALE;FISCALITE;COMMUNAUTE EUROPEENNE
IDENTIFICATEUR(S)	COOPERATION INDUSTRIELLE*;COOPERATION EUROPEENNE*;FUSION ENTREPRISE;PROCEDURE ADMINISTRATIVE;PROPRIETE INTELLECTUELLE; MARQUE DEPOSEE

2/54 - (C) C.cedocar

NUMERO SIGNALEMENT	C-91-F01151
TITRE FRANCAIS	Le développement des mémoires optiques au service des bibliothèques.
AUTEUR(S)	LEVIVE J. J.
TYPE DE DOCUMENT	Publication en serie
CODE LANGUE	FRE
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Bulletin des bibliothèques de France (FR)
SOURCE	VOL 35; NO 3; pp. 244-246; 1 Ref.; DP. 1990
CODEN	BBIFA7
GISEMENT	05; P 2212
RESUME	On envisage que, dans l'avenir, tous les documents soient disponibles sur supports compacts, ce qui permettrait d'avoir toujours un exemplaire disponible pour la consultation et de faire des économies substantielles en matière de prêts entre bibliothèques.Ces propositions posent le problème de la protection des droits financiers des auteurs et éditeurs.A terme, avec le développement des mémoires optiques, le besoin de catalogue

collectif disparaîtra.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 09 02; 05 02
DESCRIPTEUR(S) MEMOIRE OPTIQUE*;BIBLIOTHECONOMIE*
IDENTIFICATEUR(S) PRET INTER BIBLIOTHEQUE;DROIT AUTEUR;CATALOGAGE;CD ROM MEMOIRE MASSE;VIDEODISQUE;DISQUE OPTIQUE

3/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-91-F00170
TITRE FRANCAIS Livre vert de la commission concernant le développement de la normalisation européenne : action pour une intégration technologique plus rapide en Europe.
AUTEUR COLLECTIF Comm.des Commu.Eur.(BE)
TYPE DE DOCUMENT Publication en serie
CODE LANGUE FRE
CODE PAYS D'ORIGINE BE
TITRE DU PERIODIQUE Commission des Communautés Européennes - Avis et Rapports, Série 13
SOURCE NO COM(90)456; 67 p.; 1 Ref.; DP. 1990/10/08
CODEN CCED3R
ISSN 0255-0709
GISEMENT 05; M 610-15-3/90-456
RESUME Les normes européennes pour le domaine législatif et dans un marché intégré.Le CEN (Comité Européen de Normalisation) et le CENELEC (Comité Européen de Normalisation Electrotechnique), et l'ETSI (Institut Européen de Normalisation de Télécommunication).Le rôle de l'industrie européenne et des autres parties intéressées.L'organisation de la normalisation européenne : efficacité, coordination et structure, adhésion et coopération internationale, financement, information, statut de la norme européenne, essais et certification, propriété intellectuelle et brevets.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 05 04; 15 05
DESCRIPTEUR(S) Intégration européenne*;Normalisation*;Développement technologique;Législation;Industrie;Financement;Brevet;Marché commun
IDENTIFICATEUR(S) Norme CEN*;Norme internationale;Communauté européenne;Propriété intellectuelle

4/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-90-F04092
TITRE FRANCAIS Le droit du logiciel.
AUTEUR(S) SCHAMING B.
AFFILIATION Ernst et Young International (FR)
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
EDITEUR La villeguerin Editions (Paris)
SOURCE 416 p.; nb Ref.; qq Fig.; Les Publications Fiduciares; DP. 1990/01
ISBN 2-865-21120-7
GISEMENT 05; 13933/1A
RESUME De sa conception à son utilisation, en passant par son édition, sa distribution et sa maintenance, le logiciel repose sur un fondement juridique - le **droit** d'**auteur**.Mais les incertitudes, que pose l'application de ce droit à un produit fort différent de l'écrit, engendrent des risques importants pour tous les acteurs du marché du logiciel comme en témoigne le nombre des litiges.Faire le point sur les difficultés juridiques, fiscales ou

comptables et éclairer les choix et les décisions de tous les intervenants sur ce marché (créateurs SSII, éditeurs, distributeurs, utilisateurs, salariés, etc.), tel est le but de cet ouvrage.Réponse aux questions les plus controversées : quel est le statut du concepteur salarié ?Quel est le régime applicable aux logiciels crées en collaboration ?Comment protéger et défendre un logiciel ?Quel est le contenu obligatoire du contrat d'édition de logiciels ?Quels sont les droits de SSII-maîtres d'oeuvre d'un logiciel ?.

SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 09 02; 05 04
DESCRIPTEUR(S) Logiciel*;Législation*;Droit*;Brevet;Droit civil;Droit pénal; Reproduction;Contrat;Comptabilité;Fiscalité;Investissement
IDENTIFICATEUR(S) Droit auteur*;Droit informatique*;Protection information;Propriété intellectuelle;Contrefaçon;Fraude informatique

5/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-90-F02462
TITRE FRANCAIS Aspects juridiques de l'utilisation des réseaux.
AUTEUR(S) PIETTE COUDOL T.
AFFILIATION Univ.de Grenoble (FR)
TYPE DE DOCUMENT Publication en serie
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE Travail et Méthodes (FR)
SOURCE NO 476; pp. 9-11; DP. 1989/11
CODEN TRVMAT
ISSN 0041-185X
GISEMENT 05; P 1562
RESUME Respect de la propriété du logiciel.Respect des dispositions de la loi informatique et libertés.La sécurité dans les réseaux.Le régime particulier de la télématique.
SIGNATURE ANALYSTE INFO/ AN
CODE CLASSIFICATION 05 04; 09 02
DESCRIPTEUR(S) Législation*;Informatique*;Logiciel
IDENTIFICATEUR(S) Réseau informatique*;Propriété intellectuelle;Sécurité informatique;Télématique

6/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-90-F01916
TITRE FRANCAIS Avis sur la proposition de décision du Conseil relative au programme-cadre pour des actions communautaires de recherche et de développement technologique (1990-1994).
AUTEUR COLLECTIF Comité Econ.et Soc.(BE)
TYPE DE DOCUMENT Publication en série
CODE LANGUE FRE
CODE PAYS D'ORIGINE BE
TITRE DU PERIODIQUE Commission des Communautés Européennes.Documents.Sélection 16.Recherche Scientifique et Technique (LU)
SOURCE NO COM89 397F; 24 p.; DP. 1989/11/15
CODEN CCED3R
ISSN 0255-0709
GISEMENT 05; M610-16-2/89-1250
RESUME Technologies de l'information et des communications.Technologies industrielles et des matériaux.Science et technologie du vivant.Energie.Capital humain et mobilité.Services scientifiques et gestion des ressources de la Commission.Les principes qui

devraient sous-tendre les propositions de RDT de la Commission.Définition de la précompétitivité.Utilisation des résultats de la RDT-EUREKA.La politique internationale.Le rôle du Centre commun de recherche.La dimension prénormative.La propriété intellectuelle.Les activités de coopération européenne.La participation à la RDT des PME.

SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 14 06; 05 01
DESCRIPTEUR(S) Recherche développement*;Programme recherche*;Norme
IDENTIFICATEUR(S) Innovation technologique*;Programme européen*;Propriété intellectuelle;Budget recherche;Coopération européenne;Coopération scientifique;EUREKA projet

7/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-89-012597
TITRE FRANCAIS Les droits de propriété intellectuelle : qui est propriétaire des logiciels ?.
TITRE ANGLAIS Intellectual property rights : who owns the software ?.
AUTEUR(S) BARRIE D.
AUTEUR COLLECTIF Service rédaction
TYPE DE DOCUMENT Publication en série
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE Jane's Defence Weekly (GB)
SOURCE VOL 12; NO 2; p. 80-81; 1 Phot.; DP. 1989/07/15
CODEN JADW25
ISSN 0265-3818
GISEMENT 05; P 2347
RESUME L'affaire Britannique du Système de Commande et de Contrôle de la Défense Aérienne met en évidence le problème de la propriété industrielle et intellectuelle des logiciels, et fait état des démêlés en la matière entre le Gouvernement Britannique et le Consortium Hughes Plessey Marconi.L'un des avantages qui est reconnu au langage de programmation ADA est précisément la possibilité offerte de réutiliser des modules de code concernant des applications récurrentes, sous réserve d'en avoir payl le développement ou de verser un droit de licence.Un exemple récent montrant combien ce droit de propriété sur les logiciels est contesté est le chasseur FS-X Américano-Japonais.Le Japon a décidé de développer lui-même le logiciel du système de contrôle de vol plutôt que de se mettre entre les mains de General-Dynamics.
SIGNATURE ANALYSTE INFO/BR
CODE CLASSIFICATION 09 02; 05 04
DESCRIPTEUR(S) Logiciel*;Propriété industrielle*;Système défense;Royaume Uni; Etats Unis;Japon
IDENTIFICATEUR(S) Propriété intellectuelle*

8/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-89-F03085
TITRE FRANCAIS La création salariée.Propriété intellectuelle et droit du travail.
TITRE DU CONGRES La création salariée.Propriété intellectuelle et droit du travail.
LIEU DU CONGRES Paris (FR)
DATE DU CONGRES 1988/05/05-1988/05/06
AUTEUR COLLECTIF Editions Lamy S.A., Paris, AADA, Paris (FR)
TYPE DE DOCUMENT Congrès
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR

EDITEUR INPI, Paris
SOURCE 180 p.; quelq. Phot.; DP. 1989
GISEMENT 05; M 1372-2
RESUME Trois thèmes importants ont été étudiés à l'occasion de de ce colloque.Les inventions : droit du travail et droit des brevets.Les oeuvres : **droit** d'**auteur** et droit du travail.Les créations autres : droit du travail et régime divers de protection.
SIGNATURE ANALYSTE INFO/GR
CODE CLASSIFICATION 05 04
DESCRIPTEUR(S) Droit travail*;Propriété intellectuelle*;Participation travailleur; Propriété industrielle;Brevet;Invention;Droit auteur;Créativité; Information;Communication;Logiciel;Industrie;Base donnée;Protection

9/54 - (C) C.cedocar
NUMERO SIGNALEMENT BM-89-000463
TITRE FRANCAIS Nouveaux équipements pour la médecine et la rééducation : de la conception à la commercialisation.
TITRE DU CONGRES Equipement innovation in medicine and rehabilitation : from idea to the market place.
LIEU DU CONGRES London (GB)
DATE DU CONGRES 1988/06/14-1988/06/14
AUTEUR COLLECTIF The Institution of Electrical Engineers (GB)
TYPE DE DOCUMENT Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE GB
TITRE DU PERIODIQUE IEE Colloquium Digest (GB)
EDITEUR IEE, London
SOURCE NO 1988-91; 22 p.; nombr. Ref.; nombr. Fig.; nombr. Tabl.; 7 communications; DP. 1988
CODEN DCILDN
GISEMENT 05; Me 131-4
RESUME Analyse du chemin que doit parcourir un produit en équipement médical entre le moment de sa conception et le loment où il est mis sur le marché.Etude des problèmes liés aux droits de propriété industrielle, aux normes et à la réglementation.Analyse économique de rentabilité du produit.
SIGNATURE ANALYSTE INFO/HD
CODE CLASSIFICATION 06 12
DESCRIPTEUR(S) Equipement médical*;Electronique médicale;Propriété industrielle; Rentabilité;Recherche médicale;Etude marché;Analyse économique
IDENTIFICATEUR(S) Propriété intellectuelle

10/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-89-F00622
TITRE FRANCAIS Communication de la commission.Livre vert sur le **droit** d'**auteur** le défi technologique.Problèmes de **droit** d'**auteur** appelant une action immédiate.
AUTEUR COLLECTIF Comm.des Commu.Eur.(LU)
TYPE DE DOCUMENT Publication en série
CODE LANGUE FRE
CODE PAYS D'ORIGINE LU
TITRE DU PERIODIQUE Commission des Communautés Européennes.Documents.Sélection 16.Recherche Scientifique et Technique (LU)
SOURCE VOL 16; NO COM(88)172; 237 p.; nombr. Ref.; 6 Tabl.; DP. 1988/06/20
CODEN CCED3R
ISSN 0254-1491

GISEMENT 05; M 610-15-2
RESUME Le **droit** d'**auteur** et la communauté européenne.La piraterie.La copie privée de fixations audiovisuelles.Droit de distribution, épuisement et droit de location.Programmes d'ordinateur.Bases de données.Le rôle de la communauté dans les relations extérieures multilatérales et bilatérales.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 05 04
DESCRIPTEUR(S) Propriété industrielle*;Législation;Programme calculateur;Méthode audiovisuelle;Base donnée;Logiciel;Relation extérieure
IDENTIFICATEUR(S) Droit auteur*;Innovation technologique*;Communauté européenne; Marché commun;Droit informatique;Propriété intellectuelle; Législation internationale;Relation commerciale;Règlementation

11/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-88-F03069
TITRE FRANCAIS Droit anglais.
AUTEUR(S) JOLOWICZ J. A.
AFFILIATION Université de Cambridge (GB)
AUTEUR COLLECTIF Centre d'Etudes Juridiques Comparatives de l'Université de PARIS, (FR)
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE GB
EDITEUR Dalloz, paris
SOURCE 684 p.; DP. 1986
ISBN 2-247-00743-0
GISEMENT 20; 88.134 STCAN/BIB
RESUME Ce volume est réalisé en vue d'offrir au lecteur francophone un aperçu sur le système en vigueur en Angleterre.Vue générale de droit anglais.Les principaux domaines du droit anglais : le droit constitutionnel;procédure civile;le droit des contrats;la responsabilité délictuelle;le droit des consommateurs;le droit commercial;concurrence et pratiques commerciales restrictives la propriété immobilière;propriétés intellectuelles;droit des sociétés;le droit des trusts;le droit de la famille;successions;droit fiscal;sécurité sociale;droit administratif;la procédure pénale;droit pénal;droit du travail, droit international privé.
SIGNATURE ANALYSTE INFO/AP
CODE CLASSIFICATION 05 04
DESCRIPTEUR(S) Droit*;Droit constitutionnel;Droit civil;Droit commercial;Droit fiscal;Droit administratif;Droit pénal;Droit travail;Droit international privé;Propriété immobilière;Sécurité sociale;Défense consommateur;Grande Bretagne
IDENTIFICATEUR(S) Propriété intellectuelle;Copbib

12/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-88-F03063
TITRE FRANCAIS Les entreprises et les contrats informatiques.
AUTEUR(S) LAIRE J. P.
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE ZZ
EDITEUR Editions Performa, PARIS
SOURCE 248 p.; DP. 1987/05
ISBN 2-732-85301-1

GISEMENT	20; 88.89 STCAN/BIB
RESUME	Le phénomène informatique engendre une évolution du droit civil et commercial.Cet ouvrage présente les caractéristiques de ce droit nouveau et ce, dans les domaines les plus divers (fiscal, comptable, **droit** d'**auteur**, libertés publiques...).Il apporte également des réponses aux problèmes rencontrés par l'entreprise au cours de son informatisation.Droit de l'informatique et droits des contrats en informatique.Les principes généraux du droit des contrats en informatiques : la formation du contrat;les effets du contrat.Les règles spécifiques à chaque type de contrat : les contrats de conseil et d'audit;les contrats portant sur le matériel;les contrats de fourniture de logiciel;la protection juridique du logiciel;les contrats de maintenance.Annexe : lexique, lois, décrets.
SIGNATURE ANALYSTE	INFO/AP
CODE CLASSIFICATION	05 03; 09 02
DESCRIPTEUR(S)	Entreprise*;Informatique*;Contrat*;Droit civil;Droit commercial; Logiciel
IDENTIFICATEUR(S)	Droit informatique*;Droit juridique;Responsabilité juridique; Matériel informatique;Copbib

13/54 - (C) C.cedocar

NUMERO SIGNALEMENT	C-88-F03062
TITRE FRANCAIS	Les marchés publics.Guide pratique.Application aux marchés industriels.
AUTEUR(S)	LONCHAMPT M.
TYPE DE DOCUMENT	Ouvrage
CODE LANGUE	FRE
CODE PAYS D'ORIGINE	ZZ
EDITEUR	Berger-Levrault
SOURCE	319 p.; NB Ref.; DP. 1987/11
ISBN	2-701-30714-7
GISEMENT	20; 88-97 STCAN/BIB
RESUME	Définition des marchés publics.Le cadre institutionnel.Le cadre juridique.Le cadre réglementaire (et pararéglementaire) des marchés publics.Les acheteurs publics et leurs achats.Le processus de l'achat.2ème partie : l'établissement des marchés.Que doit contenir le marché.Les divers types de marchés.La mise en concurrence formaliste.Les marchés négociés.Coûts et prix.Les régimes préférentiels.Les achats à l'étranger.Les marchés à intéressement.Les marchés de longue durée.Le contrôle des marchés.3ème partie : les clauses contractuelles et l'éxécution du contrat.Les cahiers des clauses administratives générales (CCAG).Les clauses techniques.La propriété de l'Etat.Les droits de propriété intellectuelle et industrielle.Les modifications.Les délais de l'éxécution.La surveillance du marché.La réception.Les garanties.Les suretés.La variation des prix.Les paiements et le financement.La réalisation.Discrétion, sécurité, secret.Les recours et litiges.Cotraitance et sous-traitance.Dispositions particulières à certains marchés.4ème partie : compléments divers.Les achats sans marché public.Les publications officielles.La formation à l'achat public.
SIGNATURE ANALYSTE	INFO/AP
CODE CLASSIFICATION	05 03; 05 01
DESCRIPTEUR(S)	Marché public*;Acte administratif*;Marché Etat;Etude marché;Marché industriel;Concurrence;Achat;Contrat;Clause contractuelle; Propriété industrielle;Coût;Législation;Sous traitance

IDENTIFICATEUR(S) Marché civil;Propriété intellectuelle;Rupture contrat;Contrôle réception;Copbib

14/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-88-F01277
TITRE FRANCAIS Les questions du copyright.
AUTEUR(S) LABBE V.
TYPE DE DOCUMENT Publication en série
CODE LANGUE FRE
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE Infotecture (FR)
SOURCE NO 151; 12 p.; 1 Ref.; DP. 1988/01/21
CODEN NFTCDC
ISSN 0241-2640
GISEMENT 05; P 2201
RESUME Les progrès fulgurants des techniques de stockage et diffusion de l'information posent des problèmes inédits de protection du **droit** d'**auteur**.Présentation des droits et devoirs des "utilisateurs d'informations".La question particulière des banques de données -leur protection, mais aussi les règles qu'elle doivent respecter quand elles reprennent des oeuvres protégées.Rapide panorama de quelques solutions concrètes mises en place en France et à l'étranger dans le domaine de la lutte contre la photocopie.Le problème est sans doute surtout de faire évoluer les mentalités.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 05 04; 05 01
DESCRIPTEUR(S) Législation*;Banque donnée*;Photocopie
IDENTIFICATEUR(S) Droit auteur*;Protection information;Propriété littéraire artistique;Propriété intellectuelle

15/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-87-013982
TITRE FRANCAIS Second rapport de la Commission de Défense : session 1986-1987.Conséquences pour le Royaume-Uni de la défense par missile ballistique.
TITRE ANGLAIS Second report from the Defence Committee.Session 1986-1987.The implications for the United Kingdom of ballistic-missile Defence.
AUTEUR COLLECTIF House of Commons (GB)
TYPE DE DOCUMENT Rapport
CODE LANGUE ENG
CODE PAYS D'ORIGINE GB
EDITEUR Her Majesty's Stationery Office (Londres)
NUMERO DE RAPPORT H.C. 1987/04/29
SOURCE Rapport d'assemblée; 238 p.; DP. 1987/04/29
GISEMENT 05; 453-1-1
RESUME La participation du Royaume-Uni à l'initiative de défense stratégique : camp David, le Mémorandum de l'Accord, le Bureau de Participation de l'initiative de défense stratégique, le traité d'acquiescement, les contrats accordés, la participation de l'Université, la participation des autres pays, les droits de la propriété intellectuelle, le transfert de technologie, EUREKA, le débat sur la participation.La défense européenne par missile ballistique : le résultat du missile ballistique anti-tactique, la menace, les contres-mesures.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 15 03

DESCRIPTEUR(S) Système défense*;Royaume Uni;Evaluation menace;Coopération internationale;Contremesure missile;Missile balistique
IDENTIFICATEUR(S) Initiative défense stratégique*;Propriété intellectuelle;Transfert technologie;Défense européenne;OTAN organisme;EUREKA projet;Accord militaire

16/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-87-009889
TITRE FRANCAIS Protection du logiciel et des communications.
TITRE ANGLAIS Protecting software and communications.
TITRE DU CONGRES WESCON 186 Electronic Show and Convention.
LIEU DU CONGRES Anaheim, US
DATE DU CONGRES 1986/11/18-1986/11/20
AUTEUR COLLECTIF Inst.of Electr.and Electron.Eng.(US)
TYPE DE DOCUMENT Mémoire Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
EDITEUR IEEE, New York
SOURCE pp. 23/1.1-23/3.6; NE Ref.; NE Fig.; 3 mémoires; DP. 1986
GISEMENT 05; ME 349
RESUME Un premier mémoire de 76 pages est consacré à la technologie de la protection et aux procédures permettant d'obtenir, de conserver et d'exploiter des droits en matière de brevet, copyright, marque de fabrique, secret commercial, reproduction des microcircuits.Ce mémoire ne se veut pas exhaustif, il vise à sensibiliser les responsables techniques et commerciaux aux problèmes de "propriété intellectuelle".Les deux autres mémoires traitent de la sécurité apportée par le dépôt de brevet et de la sécurité du matériel.
SIGNATURE ANALYSTE INFO/CR
CODE CLASSIFICATION 09 02; 05 04
DESCRIPTEUR(S) Protection fichier*;Droit professionnel*;Propriété industrielle;Propriété commerciale;Brevet;Système communication secrète;Droit international
IDENTIFICATEUR(S) Propriété intellectuelle*;Protection hardware;Droit informatique;Marque déposée;Sécurité informatique

17/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-87-008279
TITRE FRANCAIS Colloque sur la gestion de la propriété industrielle.
TITRE DU CONGRES Colloquium on "the management of intellectual property".
LIEU DU CONGRES Londres, GB
DATE DU CONGRES 1987/03/12
AUTEUR(S) BUNTON J.; HOSTE C.; SADLER P. S.; HURST
AFFILIATION GEC (GB);British Telecom (GB);Thorn EMI (GB)
AUTEUR COLLECTIF Institution of Electrical Engineers (IEE) (GB)
TYPE DE DOCUMENT Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE GB
EDITEUR Ieee (gb)
SOURCE NO 1987729; 13 p.; DP. 1987
GISEMENT 05; ME 131-4
RESUME Protection de la propriété intellectuelle.Transfert de technologie et licence.Exploitation des droits de la propriété intellectuelle.Etude de deux exemples : le scanner de tomographie par calculateur de la société EMI et les brevets PAL pour la télévision en couleur.
SIGNATURE ANALYSTE INFO/AN

CODE CLASSIFICATION 05 02; 05 04
DESCRIPTEUR(S) Brevet*;Propriété industrielle*;Licence fabrication
IDENTIFICATEUR(S) Propriété intellectuelle*;Transfert technologie;Droit auteur

18/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-87-005098
TITRE FRANCAIS Deuxième congrès sur la sécurité des calculateurs aérospatiaux AIAA/ASIS/DODCI.
TITRE DU CONGRES AIAA/ASIS/DODCI second aerospace computer security conference.
LIEU DU CONGRES MC Lean, US
DATE DU CONGRES 1986/12/02-1986/12/04
AUTEUR COLLECTIF American Institute of Aeronautics and Astronautics (US)
TYPE DE DOCUMENT Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
EDITEUR AIAA, New York
SOURCE 132 p.; NB Ref.; NB Fig.; DP. 1986
GISEMENT 05; ME 300-36
RESUME Si la vulnérabilité des calculateurs et des systèmes d'information est aisée à comprendre sur le plan général, chaque application particulière de cette technologie présente des risques différents qui ne peuvent pas toujours être prévus avec précision.Ce congrès est un forum pour l'exploration d'un grand nombre de ces applications nouvelles.L'un des principaux sujets traités est la protection de la propriété des informations à bord des spationefs.
SIGNATURE ANALYSTE INFO/GD
CODE CLASSIFICATION 09 02
DESCRIPTEUR(S) Calculateur aérospatial embarqué*;Protection secret;Système information;Station spatiale;Navette spatiale;Logiciel
IDENTIFICATEUR(S) Sécurité calculateur*;Protection information;Propriété intellectuelle;UNIX système exploitation;Gestion base donnée; Sécurité informatique

19/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-87-F03265
TITRE FRANCAIS Banque de données et **droit** d'**auteur**.
TITRE DU CONGRES Banque de données et **Droit** d'**Auteur**.
LIEU DU CONGRES Paris
DATE DU CONGRES 1986/11/27
AUTEUR COLLECTIF Institut de Recherche en Propriété Intellectuelle Henri Desbois (FR)
TYPE DE DOCUMENT Congrès
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
EDITEUR Librairies Techniques
SOURCE 179 p.; 43 Ref.; DP. 1987
ISBN 2-711-10730-2
ISSN 0757-0341
GISEMENT 05; 13315-6
RESUME Ce congrès a pour but de définir l'étendue de la protection des banques de données par les droits d'auteur et de montrer les différences entre la communauté européenne et les Etats-Unis.
SIGNATURE ANALYSTE INFO/GR
CODE CLASSIFICATION 05 01
DESCRIPTEUR(S) Banque donnée*;Traitement donnée;Communauté économique européenne; Etats Unis
IDENTIFICATEUR(S) Droit auteur*;Protection information*;Propriété intellectuelle;

Evolution économique

20/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-87-F02595
TITRE FRANCAIS Le logiciel, protection juridique: France et étranger.
AUTEUR(S) KESSLER M.
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE ZZ
EDITEUR Technique et Documentation Lavoisier, Paris
SOURCE 232 p.; nbrs. Ref.; nbrs. Tabl.; 2 Phot.; DP. 1986
GISEMENT 84; L.11984
RESUME La facilité avec laquelle un logiciel peut être copié a rendu nécessaire la mise en place d'une protection juridique de ces créations "immatérielles".La France et de nombreux pays à sa suite, ont opté pour la technique du **droit** d'**auteur**.Dans la foulée, un système de protection internationale a été élaboré.Les divers régimes de protection légale sont ici exposés, notamment ceux en vigueur en France et aux Etats-Unis, principaux créateurs de logiciels.
SIGNATURE ANALYSTE YS/AL
CODE CLASSIFICATION 05 02; 14 07
DESCRIPTEUR(S) Logiciel*;Protection*;Législation*;France;Etats Unis;Brevet;Droit
IDENTIFICATEUR(S) Convention internationale;COPSGD

21/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-86-001544
TITRE FRANCAIS Le transfert de l'information comme stimulant de l'innovation.Compte rendu de la 25ème conférence annuelle de la National Federation of Abstracting and Information Services.
TITRE DU CONGRES Information Transfer : incentives for innovation.Proceedings of the 25th annual conference of the National Federation of Abstracting and Information Services.
LIEU DU CONGRES Arlington (US)
DATE DU CONGRES 1983/02/27-1983/03/02
AUTEUR(S) NEUFELD M. L.; SPERR I. L.; ROWLETT R. J.; MILLER M. A.
AUTEUR COLLECTIF Natl Federation of Abstrating and Information Services (NFAIS) (US)
TYPE DE DOCUMENT Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
EDITEUR NFAIS, Philadelphie
SOURCE 176 p.; nombr. Ref.; 3 Fig.; quelq. Tabl.; DP. 1984/03
GISEMENT 05; ME.2318-1
RESUME La NFAIS est une association de presque 50 organisations s'occupant de résumés d'indexation, et d'apalyse de documents.Tendances pour les 25 prochaines années.Comment résoudre les problèmes de l'information dans le secteur public et le secteur privé.Les nouvelles technologies.Le marketing au service de l'information.L'avenir de l'information.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 05 02; 05 03
DESCRIPTEUR(S) Science information*;Progrès technique*;Transfert information*; Information technique;Terme indexation sujet
IDENTIFICATEUR(S) Diffusion information;Accès information;Information scientifique; Document classifié;Droit auteur;Centre information

22/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-86-F03711
TITRE FRANCAIS Les relations contractuelles des producteurs de bases et banques de données.
AUTEUR COLLECTIF Groupement français des fournisseurs d'information en ligne (FR)
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
EDITEUR Dalloz (Paris)
SOURCE 148 p.; nb. Ref.; DP. 1986/04
GISEMENT 05; M1412/2P
RESUME Analyse fonctionnelle de l'exploitation d'une base ou banque de données.La problématique des relations contractuelles du producteur.La responsabilité contractuelle du producteur.Négociation et rédaction des contrats entre le producteur et ses partenaires.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 05 02; 05 04
DESCRIPTEUR(S) Banque donnée*;Droit*;Clause contractuelle*;Contrat;Droit international;Jurisprudence
IDENTIFICATEUR(S) Droit auteur;Communauté européenne;Responsabilité juridique; Responsabilité pénale;Serveur;Producteur

23/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-86-F03710
TITRE FRANCAIS L'appropriation de l'information.
TITRE DU CONGRES L'appropriation de l'information.
LIEU DU CONGRES Paris (FR)
DATE DU CONGRES 1984/11/12-1984/11/14
AUTEUR(S) CHAMOUX J. P.
TYPE DE DOCUMENT Congrès
CODE LANGUE FRE
CODE PAYS D'ORIGINE ZZ
EDITEUR Librairies Techniques (Paris)
SOURCE 184 p.; Nb. Ref.; DP. 1986
ISBN 2-711-10632-2
GISEMENT 05; 13133
RESUME Un secteur conditionné par l'économie marchande.Un droit complexe et multiforme : les droits de propriété sur l'information, les droits d'accès à l'information.Objectif : sortir l'information de l'économie souterraine.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 05 02; 05 04
DESCRIPTEUR(S) Banque donnée*;Droit*;Législation;Marché;Logiciel
IDENTIFICATEUR(S) Accès information;Droit auteur;Information public

24/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-86-F03543
TITRE FRANCAIS Le point sur la protection des logiciels.
AUTEUR(S) BOUJU A.
AFFILIATION Ceipi (fr)
TYPE DE DOCUMENT Publication en série
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE Le progrès Technique (FR)
SOURCE NO 2; pp. 27-32; DP. 1986

CODEN PTDGAR
ISSN 0397-8060
GISEMENT 05; P 1397
RESUME Le marché des logiciels représente un enjeu économique considérable pour la France.La protection de ces nouveaux produits intellectuels est stratégique.Il existe un faisceau de protections législatives.Le logiciel est-il brevetable ?Peut-on instaurer un **droit** d'**auteur** sur le logiciel ?.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 09 02; 05 04
DESCRIPTEUR(S) Logiciel*;Législation*;France;Brevet;Jurisprudence
IDENTIFICATEUR(S) Droit auteur*;Fraude informatique

25/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-86-F02331
TITRE FRANCAIS Le logiciel, protection juridique.France et étranger.
AUTEUR(S) KESSLER M.
AFFILIATION Univ.Paris 10 (FR)
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
EDITEUR Technique et Documentation.Lavoisier, Paris
SOURCE 232 p.; nbr. Ref.; 2 Phot.; DP. 1986
ISBN 2-852-06323-9
GISEMENT 05; 13049
RESUME Les protections juridiques en France: la preuve préconstituée, la protection contractuelle, la protection contentieuse.La protection internationale des logiciels: l'extension de la protection par les conventions internationales, les principaux régimes nationaux de protection.Etudes doctrinales.Juriprudences.Textes réglementaires en annexe.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 09 02; 05 04
DESCRIPTEUR(S) Logiciel*;Législation*
IDENTIFICATEUR(S) Droit informatique*;Propriété intellectuelle;Fraude informatique; Législation internationale;Protection information

26/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-86-F00674
TITRE FRANCAIS Enfin un statut pour la protection des logiciels.
AUTEUR(S) BRUN O.; MURPHY M. F.
AFFILIATION Aérospatiale (FR);Aérospatiale (FR)
TYPE DE DOCUMENT Publication en série
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE L'Aéronautique et l'Astronautique (FR)
SOURCE NO 114; pp. 33-35; DP. 1985
CODEN AENABS
ISSN 0001-9275
GISEMENT 05; P 0943
RESUME La Commission de la propriété intellectuelle de l'AAAF a examiné les dispositions relatives aux logiciels de la loi du 03/07/85.Cette loi a pour but de réduire l'incertitude résultant de solutions jurisprudentielles, de ne pas recourir à un droit "sui generis" qui aurait privé les logiciels français d'une protection internationale, d'adapter la création de logiciels aux réalités économiques de cette fin de XXe siècle.

SIGNATURE ANALYSTE INFO/MS
CODE CLASSIFICATION 09 02; 05 04
DESCRIPTEUR(S) Logiciel*;Propriété industrielle*;Législation
IDENTIFICATEUR(S) Propriété intellectuelle

27/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-85-009294
TITRE FRANCAIS Compte rendu du 27e colloque sur le droit spatial.
TITRE DU CONGRES Proceedings of the twenty-seventh colloquium on the law of outer space.
LIEU DU CONGRES Lausanne (CH)
DATE DU CONGRES 1984/10/07-1984/10/13
AUTEUR COLLECTIF Int.Inst.of Sp.Law of the Int.Astronaut.Federation (US)
TYPE DE DOCUMENT Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
EDITEUR American Institute of Aeronautics and Astronautics (US)
SOURCE 413 p.; nombr. Ref.; DP. 1985
ISBN 0-915-92893-0
GISEMENT 05; M 5960
RESUME Recueil de mémoires traitant des sujets suivants : le droit spatial et la législation intérieure;les activités spatiales face à la propriété intellectuelle et à la propriété industrielle;les sources d'énergie nucléaire dans l'espace;les conditions essentielles pour maintenir l'utilisation de l'espace à des fins pacifiques;les aspects juridiques concernant les grandes structures spatiales.
SIGNATURE ANALYSTE INFO/MS
CODE CLASSIFICATION 05 04
DESCRIPTEUR(S) Droit spatial*;Droit privé;Propriété industrielle;Source énergie; Energie nucléaire;Droit international;Utilisation pacifique
IDENTIFICATEUR(S) Industrialisation espace;Propriété intellectuelle

28/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-85-007487
TITRE FRANCAIS Protection et aspects juridiques de l'informatique.
TITRE ANGLAIS Security and legal aspects.
TITRE DU CONGRES 1984 EUROCON : computers in communication and control.
LIEU DU CONGRES Brighton (US)
DATE DU CONGRES 1984/09/26-1984/09/28
AUTEUR COLLECTIF EUREL and IEEE Region 8 (US)
TYPE DE DOCUMENT Mémoire Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
EDITEUR Peter Pelegrinus Ltd, London
SOURCE NO 84CH2130-3; pp. 54-68; 57 Ref.; 1 Tabl.; 3 mémoires; DP. 1984
ISBN 0-863-41029-4
GISEMENT 05; ME 349-21
RESUME Etude des possibilités de protection du logiciel dans le cadre de la réglementation américaine en matière de brevet, de **droit** d'**auteur** et de secret industriel.Analyse des propriétés, des avantages et des inconvénients, de la cryptographie comme moyen d'assurer la protection des données durant leur stockage et leur transmission.Conception de cryptosystèmes à clé publics (basés sur le problème du sac à dos) utilisant des éléments idempotents.
SIGNATURE ANALYSTE INFO/CR
CODE CLASSIFICATION 09 02

DESCRIPTEUR(S) Protection fichier*;Droit commercial;Secret industriel;Théorie codage
IDENTIFICATEUR(S) Sécurité informatique;Brevetabilité;Fraude informatique;Droit auteur;Intégrité information;Clé cryptographique;Chiffrement; Problème sac à dos

29/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-85-000240
TITRE FRANCAIS Bases de données pour l'ingénierie: logiciels pour des applications en ligne.
TITRE ANGLAIS Engineering databases: software for on-line applications.
TITRE DU CONGRES The 1984 Pressure Vessels and Piping Conference and Exhibition.
LIEU DU CONGRES San Antonio (US)
DATE DU CONGRES 1984/06/17-1984/06/21
AUTEUR(S) JEFFREY T. F.
AFFILIATION National Bureau of Standards (US)
TYPE DE DOCUMENT Mémoire Congrès
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE ASME Publication Paper (US)
SOURCE VOL 96; 128 p.; nbr. Ref.; nbr. Fig.; nbr. Tabl.; DP. 1984
CODEN ASSP2I
GISEMENT 05; Me.125-13 H 00310
RESUME L'ASME a formé un groupe d'étude en 1981 pour se pencher sur le problème des ordinateurs considérés non comme des instruments de calcul mais comme des instruments d'aide à la décision.A été retenu ici le cas de logiciels pour un réseau de données réparties avec possibilité d'évaluation en ligne.Systèmes courantrs d'interrogation en ligne et description de quelques langages.Bases de données utilisées à des degrés de propriété et de droits d'auteur.
SIGNATURE ANALYSTE INFO/AN
CODE CLASSIFICATION 09 02; 05 01
DESCRIPTEUR(S) Logiciel*;Base donnée*;Essai fatigue;Code;Formule mathématique; Charge mécanique;Propagation fissure;Programme calculateur;Fortran langage programmation
IDENTIFICATEUR(S) ASME code;Cuve réacteur nucléaire;Système expert;Composant mécanique;Sécurité informatique;Droit auteur;Système recherche; Aide à la décision

30/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-85-F02905
TITRE FRANCAIS Aéronautique logiciels et sécurité.
AUTEUR(S) FAGARD J. P.
AFFILIATION Aérospatiale (FR)
TYPE DE DOCUMENT Publication en série.
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE L'Aéronautique et l'Astronautique (FR)
SOURCE NO 110; pp. 36-40; DP. 1985
CODEN AENABS
ISSN 0001-9275
GISEMENT 05; P.0943
RESUME Etat d'avancement actuel des études, faites par les spécialistes de la Propriété Intellectuelle, relatives aux possibilités de protection des logiciels.Ces études sont conduites selon deux axes: d'une part en fonction de l'utilisation des lois existantes

	et d'autre part vers l'élaboration de moyens de protection spécifiques et nouveaux.
SIGNATURE ANALYSTE	INFO/MS
CODE CLASSIFICATION	09 02; 05 04
DESCRIPTEUR(S)	Logiciel*;Propriété industrielle*;Industrie aéronautique*;Brevet; Contrat;Droit pénal
IDENTIFICATEUR(S)	Propriété intellectuelle*;Sécurité informatique*;Protection information;Propriété litteraire artistique;Code civil

31/54 - (C) C.cedocar

NUMERO SIGNALEMENT	C-85-F02828
TITRE FRANCAIS	Droit et documentation.
AUTEUR COLLECTIF	Adbs (fr)
TYPE DE DOCUMENT	Publication en série
CODE LANGUE	FRE
CODE PAYS D'ORIGINE	FR
TITRE DU PERIODIQUE	Documentaliste (Sciences de l'Information) (FR)
SOURCE	VOL 22; NO 2; PP. 51-82; Nb. Ref.; 1 Tabl.; Numéro spécial; DP. 1985/03
CODEN	DCMTAU
ISSN	0012-4508
GISEMENT	05; P 1137
RESUME	Série d'articles : les pratiques actuelles, **droit** d'**auteur** et droit de reproduction, la télématique comme nouveau droit.Accès aux documents et aux données : la liberté d'accès aux documents administratifs, informatique et libertés en 1984, les relations contractuelles nouvelles entre serveurs, producteurs et utilisateurs, le contrat entre producteur de base de données documentaires et serveur, typologie des relations entre utilisateurs de banques de données et serveurs, la responsabilité du fournisseur d'information.
SIGNATURE ANALYSTE	INFO/AN
CODE CLASSIFICATION	05 04; 05 02
DESCRIPTEUR(S)	Droit*;Documentation*;Contrat;Banque donnée;Base donnée
IDENTIFICATEUR(S)	Droit informatique;Droit auteur;Télématique;Propriété intellectuelle;Propriété littéraire artistique;Protection information;Liberté;Documentation administrative

32/54 - (C) C.cedocar

NUMERO SIGNALEMENT	C-83-008392
TITRE FRANCAIS	La protection légale du logiciel d'affichage graphique par calculateur
TITRE ANGLAIS	Legal protection of computer graphics software
AUTEUR(S)	LAVEY W. G.
TYPE DE DOCUMENT	Publication en Série
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	IEEE Computer Graphics and Applications (US)
SOURCE	VOL. 3, NO 1 (01-02/83), PP. 11-16, 18, 20-21; 75 réf.
CODEN	ICGA2P
GISEMENT	05; P.0316
CLASSIFICATION INT	0905
RESUME	La loi apporte trois formes de protection (droits de reproduction, brevet, secret industriel) mais l'évolution de la technologie rend plus complexes les problèmes juridiques d'interprétation des textes.
SIGNATURE ANALYSTE	INFO/CR

CODE CLASSIFICATION 09 05
DESCRIPTEUR(S) Affichage graphique calculateur*;Logiciel;Espionnage industriel; Droit commercial
IDENTIFICATEUR(S) Droit informatique*;Législation industrielle;Brevetabilité;Droit auteur

33/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-83-001682
TITRE FRANCAIS Le logiciel à la recherche d'une protection légale
TITRE ANGLAIS Software : product in pursuit of legal protection
AUTEUR(S) MCCANDLISH H. E.; HOFFMANN G. M.
TYPE DE DOCUMENT Publication en Série
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE Signal (US)
SOURCE VOL. 36, NO 10 (7/82), PP. 44-48; 6 réf.
CODEN SGNAAZ
GISEMENT 05; P 0835
CLASSIFICATION INT 0902
RESUME Etude de l'évolution, aux Etats-Unis, de la protection légale du logiciel notamment par le moyen des brevets.
SIGNATURE ANALYSTE CNIT/CR
CODE CLASSIFICATION 09 02
DESCRIPTEUR(S) Logiciel*;Propriété industrielle
IDENTIFICATEUR(S) Brevetabilité*;Propriété intellectuelle;Package software; Protection industrielle

34/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-83-F01021
TITRE FRANCAIS Le droit des logiciels.
AUTEUR(S) BENSOUSSAN A.
AUTEUR COLLECTIF Afcet Informatique
TYPE DE DOCUMENT Publication en Série
CODE LANGUE FRE
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE Technique et Science Informatiques (FR)
SOURCE VOL. 1, NO 4 (7-8/82), PP. 349-352.
CODEN TESI26
GISEMENT 05; P 2229
CLASSIFICATION INT 0902
RESUME Présentation des différents cas de figure pour la réalisation des logiciels.Les différents modes et niveaux de protection des logiciels.La répression pénale des pillages.Les droits d'auteur.La concurrence parasitaire.le personnel salarié et les logiciels.
SIGNATURE ANALYSTE CNIT/TT
CODE CLASSIFICATION 09 02
DESCRIPTEUR(S) Logiciel*;Protection secret*;Droit*;Informatique;Droit pénal; Concurrence;Personnel
IDENTIFICATEUR(S) Progiciel;Droit auteur;Statut juridique

35/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-82-013700
TITRE FRANCAIS Protection juridique des programmes de calculateur
TITRE ANGLAIS Legal protection for computer programs
AUTEUR(S) GASAWAY L. N.; MURPHY M.
AUTEUR COLLECTIF CAUSE Monograph Series (US)
TYPE DE DOCUMENT Ouvrage

CODE LANGUE ENG
CODE PAYS D'ORIGINE US
EDITEUR Cause (us)
SOURCE (1982), 117 P.; NBR réf. , NBR fig., 2 tabl. 2ème éd.; Microfiche
GISEMENT 05; MF 40117
CLASSIFICATION INT 0902
RESUME Protection du copyright.Protection des brevets.Protection du secret commercial.Concurrence déloyale et remèdes éventuels.
SIGNATURE ANALYSTE CNIT/TT
CODE CLASSIFICATION 09 02
DESCRIPTEUR(S) Protection fichier*;Législation*;Ouvrage*;Programme calculateur; Logiciel;Brevet;Concurrence;Droit commercial;Minicalculateur; Microprocesseur
IDENTIFICATEUR(S) Propriété intellectuelle

36/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-82-011549
TITRE FRANCAIS Les projets de la Commission des communautés européennes en matière de publication électronique et de livraison de documents
TITRE ANGLAIS The CEC plans for electronic publishing and document delivery
AUTEUR(S) VERNIMB C.
TYPE DE DOCUMENT Publication en Série
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE Learned Information, Oxford and New Jersey
SOURCE VOL. 5 (1981), PP. 351-360; 3 réf. , 1 fig. 5th International Online Information Meeting London 8-10 December 1981
CODEN LEIN2J
ISBN 0-904933-33-4
GISEMENT 05; M 5789
CLASSIFICATION INT 0502
RESUME Des expériences ont permis de suivre les documents depuis leur arrivée jusqu'à leur livraison sur le bureau de l'utilisateur.Des essais de communication par satellites seront également utilisés.Des études sur les droits d'auteurs par exemple compléteront l'analyse.
SIGNATURE ANALYSTE CAEN/AN
CODE CLASSIFICATION 05 02
DESCRIPTEUR(S) Document*;Communauté économique européenne*;Satellite télécommunication
IDENTIFICATEUR(S) Livraison*;Documentation automatique*;Publication documentaire; Euronet réseau;Droit auteur

37/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-82-008736
TITRE FRANCAIS Etude du copyright: 1971-1981
TITRE ANGLAIS Copyright: 1971-1981
AUTEUR(S) MILLEN R. J.
AUTEUR COLLECTIF Advisory Group for Aerospace Research and Development
TYPE DE DOCUMENT Publication en Série
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE AGARD Advisory Report
SOURCE NO 176 (1982), 30 P.; NBR réf.
CODEN AAARBK
ISBN 92-835-1411-4
GISEMENT 05; Me 372-16

CLASSIFICATION INT 0504
RESUME Etude centrée sur les Etats-Unis et la Grande-Bretagne, mais incluant des commentaires sur la position des membres de l'OTAN et d'autres pays.Problème de la photocopie dans les bibliothèques;autres sujets concernant le transfert de l'information (protection des logiciels et des bases de données).
SIGNATURE ANALYSTE CAEN/SE
CODE CLASSIFICATION 05 04
DESCRIPTEUR(S) Droit*;Photocopie*;Documentation*;Bibliothèque;Transfert information;Etats Unis;Grande Bretagne;Europe;Logiciel;Base donnée;Information
IDENTIFICATEUR(S) Propriété intellectuelle*;Copyright*;Droit auteur;Publication documentaire

38/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-82-F06977
TITRE FRANCAIS La propriété industrielle, protection des inventions, des marques et des modèles.
AUTEUR(S) CHEVALIER R.
AFFILIATION (1) Entreprise Moderne d'Edition
TYPE DE DOCUMENT Ouvrage
CODE LANGUE FRE
CODE PAYS D'ORIGINE ZZ
EDITEUR Editions ESF, Paris
SOURCE (1982), 151 P.; 30 réf.
ISBN 2-7101-0376-1I
ISSN 0245-3088
GISEMENT 17; ETAS : E-82.0251
CLASSIFICATION INT E-82.0251
RESUME Questions et réponses sur la " propriété industrielle ", les dispositions législatives, la jurisprudence, les droits et les faits qui s'appliquent aux brevets d'invention, aux marques ou aux modèles déposés ou réalisés, pour expliquer, représenter et comprendre les lois, pour soutenir les connaissances acquises et pour publier les résultats des recherches scientifiques.
SIGNATURE ANALYSTE ETAS/LT
CODE CLASSIFICATION 05 04
DESCRIPTEUR(S) Propriété industrielle*;Brevet*;Invention*;Organisation internationale;Défense Nationale;Innovation;Marque;Modèle;Licence;Fiscalité;Priorité;Concurrence;Protection;Ouvrage
IDENTIFICATEUR(S) Brevet européen*;Exploitation brevet*;Certificat addition*;Droit auteur;Marque déposée;Brevetabilité;Contrefaçon;Antériorité

39/54 - (C) C.cedocar
NUMERO SIGNALEMENT C-82-F00145
TITRE FRANCAIS Le **droit** d'**auteur** français et l'Etat.
AUTEUR(S) KEREVER A.
AFFILIATION (1) Conseiller d'Etat (FR)
TYPE DE DOCUMENT Publication en Série
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE Revue Internationale de Droit d'Auteur (FR)
SOURCE NO 110 (10/81), PP. 3-135; quelq. réf.
CODEN RIDAAM
GISEMENT 05; P.1471
CLASSIFICATION INT 0504
RESUME On distingue deux questions : la communication aux usagers des

	services publics d'oeuvres protégées par la loi du 11/3/57, et le statut des oeuvres créées par les fonctionnaires ou agents de la fonction publique dans l'exercice de leus fonctions.On présente des solutions qui paraissent découler de la législation actuelle.
SIGNATURE ANALYSTE	ATRE/GR
CODE CLASSIFICATION	05 04
DESCRIPTEUR(S)	Droit*;Législation;France;Service Public
IDENTIFICATEUR(S)	Droit auteur*;Fonction

40/54 - (C) C.cedocar

NUMERO SIGNALEMENT	C-81-002642
TITRE FRANCAIS	Réemploi d'informations extraites de banques de données et droit de reproduction.Approche pragmatique des problèmes
TITRE ANGLAIS	The re-use of machine readable data and copyright.A pragmatic approach to the problems
AUTEUR(S)	HOLMES P. L.
AFFILIATION	(1) Blackwells (UK)
TYPE DE DOCUMENT	Ouvrage
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	GB
EDITEUR	Learned Information Oxford and New Jersey (GB)
SOURCE	(1980), PP. 1-13; 11 réf. (4e Congrès International de l'Information en Ligne tenue à Londres du 9-11/12/80)
ISBN	0-904933-28-8
GISEMENT	05; M.5789
CLASSIFICATION INT	0904
RESUME	Est-il possible d'utiliser des consoles rapides ou intelligentes pour l'accès à des systèmes de traitement en ligne ?Possibilité de contrôle des droits d'auteur.Mise en place d'une déontologie pouvant servir de support à une carte des utilisateurs.
SIGNATURE ANALYSTE	D1EX/AU
CODE CLASSIFICATION	09 04
DESCRIPTEUR(S)	Théorie information*;Législation*;Console;Manipulation de donnée; Base donnée;Traitement en ligne directe
IDENTIFICATEUR(S)	Système lecture donnée*;Droit auteur*;Microcalculateur

1/40 - (C) C.NTIS
NUMERO SIGNALEMENT AD-A236 125/1/XAD
TITRE ANGLAIS **Intellectual** **Property** Protection for Software.
AUTEUR(S) SAMUELSON P.; DEASY K.
AUTEUR COLLECTIF Carnegie-Mellon Univ., Pittsburgh, PA.Software Engineering Inst.
CLASSIFICATION INT 005343014; 416208
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT CMU/SEI-CM-14-2-1
SOURCE Final rept; Prepared in cooperation with Pittsburgh Univ., School of Law; NP. 58; DP. Jul 89.
CODE JOURNAL NTIS U9119
CODE TARIF NTIS NTIS Prices: PC A04/MF A01
NUMERO DE CONTRAT F19628-90-C-0003
RESUME This module provides an overview of the U.S.**intellectual** **property** laws that form the framework within which legal rights in software are created, allocated, and enforced.The primary forms of **intellectual** **property** protection that are likely to apply to software are **copyright**, patent, and trade secret laws, which are discussed with particular emphasis on the controversial issues arising in their application to software.Also included is a brief introduction to government software acquisition regulations, trademark, trade dress, and related unfair competition issues that may affect software engineering decisions, and to the Semiconductor Chip Protection Act.Many decisions about the development, distribution, maintenance, and enhancement of software are likely to be affected by constraints imposed by **intellectual** **property** laws.**Intellectual** **property** law provides a 'default setting' of rights allocation when software is created.Licensing or other contracting arrangements may satisfy those who wish to vary the rights allocation arrangements that these laws create.In order to foresee the appropriate manner in which to develop and distribute software, it is important that software developers understand the framework of legal rights and responsibilities within which arrangements for the licensing or sale of their software products takes place.
CODE CLASSIFICATION 62 02; 92 04
DESCRIPTEUR(S) Law enforcement*;Acquisition;Allocations;Computer applications; Computer programs;Copyrights;Decision making;Optimization;Patents; Protection;Regulations;Setting Adjusting;Software engineering
IDENTIFICATEUR(S) Computer software*;Intellectual property laws*;NTISDODXA

2/40 - (C) C.NTIS
NUMERO SIGNALEMENT ED-328 262
TITRE ANGLAIS **Copyright** & Home Copying.Technology Challenges the Law.
AUTEUR COLLECTIF Office of Technology Assessment, Washington, DC.
CLASSIFICATION INT 058574000
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT OTA-CIT-422
SOURCE Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 303; DP. Oct 89.
CODE JOURNAL NTIS D9117

CODE TARIF NTIS NTIS Prices: Not available NTIS
RESUME Home recording technologies allow today's consumer to make near-perfect copies of recorded music, television shows, movies, and other copyrighted works for private use at home.With the advance of digital recording equipment, consumers will be able to reproduce these copyrighted works with even greater accuracy.This is an issue of great concern for **copyright** owners, who claim that home copying is detrimental to their sales.This report presents an examination of home recording technologies and their relationship to the legal status of home copying, a comparison of the economic effects that home audiotaping may have on the recording industry with the effects that restricting home taping might have on consumers, a discussion of legal action that Congress or the industry may initiate, and the results of a national survey of home taping and copying behavior.The report is divided into seven chapters: (1) Summary, Issues, and Options;(2) Technological Change and Home Copying;(3) Legal Aspects of **Copyright** and Home Copying;(4) An Overview of the U.S.Record Industry;(5) **Copyright** Royalties for Music and Sound Recording;(6) The OTA (Office of Technology Assessment) Survey;and (7) Economic Perspectives on Home Copying.Appendixes contain a description of the survey development and review, a copy of the survey questionnaire, OTA survey tables, and a list of contractor reports related to the study.(MAB).
CODE CLASSIFICATION 88 00
DESCRIPTEUR(S) Audiotape recordings*;Economic impact*;Information technology*; Intellectual property*;Legal responsibility*;Electronic equipment; Fair use Copyrights;Information transfer;Questionnaires; Reprography;Surveys;Technological advancement;Videotape recordings
IDENTIFICATEUR(S) Home Recording*;NTISHEWERI

3/40 - (C) C.NTIS
NUMERO SIGNALEMENT PB91-177931/XAD
TITRE ANGLAIS Strengthening Protection of **Intellectual** **Property** in Developing Countries: A Survey of the Literature.
AUTEUR(S) SIEBECK W. E.; EVENSON R. E.; LESSER W.; PRIMO BRAGA C. A.
AUTEUR COLLECTIF International Bank for Reconstruction and Development, Washington, DC.
CLASSIFICATION INT 063877000
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT WORLD BANK/DP-112; ISBN-0-8213-1730-X
SOURCE World Bank discussion paper; Library of Congress catalog card no. 90-23168; Microfiche copies only. Paper copy available from World Bank Publications, P.O. Box 7247-8619, Philadelphia, PA. 19170-8619. Phone: (201) 225-2165; NP. 143; DP. 1990.
CODE JOURNAL NTIS U9114
CODE TARIF NTIS NTIS Prices: MF A01
RESUME The report examines whether developing countries would benefit economically from strengthening their protection of **intellectual** **property**.The authors review a substantial body of economic literature, theoretical and empirical, covering the economics of patents and other instruments of **intellectual** **property**.Past research suggests that increases in **intellectual** **property** protection generate research and development (R&D) activity sufficient to offset the social cost of

	the limited monopoly granted to patentees, **copyright** holders, and other owners of **intellectual** **property**.For developing countries, unfortunately, similar research is lacking.The paper proposes a research agenda that includes an assessment of **intellectual** **property** protection in developing countries, the incentive effects on local R&D, foreign direct investment and technology licensing, and the potential benefit to developing countries of 'petty patents' and plant breeders' rights.
CODE CLASSIFICATION	88 00; 70 05; 92 04; 96 07
DESCRIPTEUR(S)	Developing countries*;Protection*;Research and development;Patents; Copyrights;Licenses;Claims;Regulations;Economic analysis;Economic theory;Creativity;Inventions;Royalties;Chemical industry; Information industry;Agriculture;Plants Botany
IDENTIFICATEUR(S)	Intellectual property*;NTISTWB

4/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-960301/XAD
TITRE ANGLAIS	Czechoslovak **Copyright** Law (1990) (in Czech).
CLASSIFICATION INT	888888888
TYPE DE DOCUMENT	Report
CODE LANGUE	CZE
CODE PAYS D'ORIGINE	US
SOURCE	Export trade information; Text in Czech; summary in English. This document was provided to NTIS by Office of General Counsel, Washington, DC; Paper copy also available on Standing Order, deposit account required ($150 for single category or $500 for all categories); NP. 11; DP. 1991.
CODE JOURNAL NTIS	U9111
CODE TARIF NTIS	NTIS Prices: PC A03
RESUME	Official text in Czech of **copyright** law of 1990.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Czechoslovakia*;Copyright law*;Intellectual property*;Law Jurisprudence
IDENTIFICATEUR(S)	Eastern Europe*;NTISCOMITG;NTISLNCZE

5/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158279/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1980.
AUTEUR(S)	LILLIS M. A.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-44
SOURCE	NP. 1338; DP. 1985.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99
RESUME	The bulletin of **copyright** decisions is the twenty-eighth in a series compiled by the **Copyright** Office for official and public use, covering the period 1909 to 1980.Volume 44 contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the calendar year 1980.Most of the citations are to the National Reporter System, issued by the West Publishing Company, and to the United States

	Patents Quarterly, published by the Bureau of National Affairs, Inc.A supplemental list of decisions, which do not directly involve **copyright**, but which may be of related interest, are included in the appendix of the bulletin.Certain features of these cases have been summarized.Citations are given to reporter systems in which the cases as reported may be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

6/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158261/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1979.
AUTEUR(S)	LILLIS M. A.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-43
SOURCE	NP. 1058; DP. 1985.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99
RESUME	The bulletin of **copyright** decisions is the twenty-seventh in a series compiled by the **Copyright** Office for official and public use.Volume 43 contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the calendar year 1979.Most of the citations are to the National Reporter System, issued by the West Publishing Company, and to the United States Patents Quarterly, published by the Bureau of National Affairs, Inc.A supplemental list of decisions, which do not directly involve **copyright**, but which may be of related interest, are included in the appendix of the bulletin.Certain features of these cases have been summarized.Citations are given to reporter systems in which the cases as reported may be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

7/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158253/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1978.
AUTEUR(S)	LILLIS M. A.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-42
SOURCE	NP. 1021; DP. 1982.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99

RESUME	The bulletin of **copyright** decisions is the twenty-sixth in a series compiled by the **Copyright** Office for official and public use, covering the period 1909 to 1978.Volume 42 contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the calendar year 1978.Most of the citations are to the National Reporter System, issued by the West Publishing Company, and to the United States Patents Quarterly, published by the Bureau of National Affairs, Inc.A supplemental list of decisions, which do not directly involve **copyright**, but which may be of related interest, are included in the appendix of the bulletin.Certain features of these cases have been summarized.Citations are given to reporter systems in which the cases as reported may be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

8/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158246/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1977. .
AUTEUR(S)	LILLIS M. A.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-41
SOURCE	NP. 1372; DP. 1982.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99
RESUME	The bulletin of **copyright** decisions is the twenty-sixth in a series compiled by the **Copyright** Office for official and public use, covering the period 1909 to 1978.Volume 42 contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the calendar year 1978.Most of the citations are to the National Reporter System, issued by the West Publishing Company, and to the United States Patents Quarterly, published by the Bureau of National Affairs, Inc.A supplemental list of decisions, which do not directly involve **copyright**, but which may be of related interest, are included in the appendix of the bulletin.Certain features of these cases have been summarized.Citations are given to reporter systems in which the cases as reported may be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

9/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158238/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1975-1976.
AUTEUR(S)	DAVIS W. S.

AUTEUR COLLECTIF Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT 000975033
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT BULL-40
SOURCE NP. 1552; DP. 1978.
CODE JOURNAL NTIS U9110
CODE TARIF NTIS NTIS Prices: PC A99
RESUME The bulletin of **copyright** decisions is the twenty-fourth in a series compiled by the **Copyright** Office for official and public use.Substantially all **copyright** cases, as well as those dealing with related subjects in the field of **intellectual** **property**, which have been decided during the years 1975 and 1976 in the federal and state courts have been included.Most of the citations are to the National Reporter System, issued by the West Publishing Company and to the United States Patents Quarterly, published by the Bureau of National Affairs.A supplemental list of cases, which do not directly involve **copyright**, but may be of related interest, have been included in the appendix of the bulletin.These cases were also decided during 1975-76.Certain features of the cases have been summarized.Citations to reporter systems where the opinions may be found printed in their entirety are included.
CODE CLASSIFICATION 88 00; 92 04
DESCRIPTEUR(S) Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S) NTISLCCO

10/40 - (C) C.NTIS
NUMERO SIGNALEMENT PB91-158220/XAD
TITRE ANGLAIS Decisions of the United States Courts Involving **Copyright**, 1973-1974.
AUTEUR(S) RUDD B. W.
AUTEUR COLLECTIF Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT 000975033
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT BULL-39
SOURCE NP. 1141; DP. 1976.
CODE JOURNAL NTIS U9110
CODE TARIF NTIS NTIS Prices: PC A99
RESUME The bulletin of **copyright** cases is the twenty-third in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1973 and 1974.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1973 and 1974, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full text of the cases can be found.

CODE CLASSIFICATION 88 00; 92 04
DESCRIPTEUR(S) Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S) NTISLCCO

11/40 - (C) C.NTIS
NUMERO SIGNALEMENT PB91-158212/XAD
TITRE ANGLAIS Decisions of the United States Courts Involving **Copyright**, 1971-1972.
AUTEUR(S) RUDD B. W.
AUTEUR COLLECTIF Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT 000975033
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT BULL-38
SOURCE NP. 986; DP. 1974.
CODE JOURNAL NTIS U9110
CODE TARIF NTIS NTIS Prices: PC A99
RESUME The bulletin of **copyright** cases is the twenty-second in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1971 and 1972.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1971 and 1972, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.
CODE CLASSIFICATION 88 00; 92 04
DESCRIPTEUR(S) Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S) NTISLCCO

12/40 - (C) C.NTIS
NUMERO SIGNALEMENT PB91-158204/XAD
TITRE ANGLAIS Decisions of the United States Courts Involving **Copyright**, 1969-1970.
AUTEUR(S) RUDD B. W.
AUTEUR COLLECTIF Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT 000975033
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT BULL-37
SOURCE NP. 690; DP. 1972.
CODE JOURNAL NTIS U9110
CODE TARIF NTIS NTIS Prices: PC A99
RESUME The bulletin of **copyright** cases is the twenty-first in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1969 and 1970.Most of the citations are to the National

	Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1969 and 1970, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

13/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158196/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1967-1968.
AUTEUR(S)	RUDD B. W.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-36
SOURCE	Portions of this document are illegible in microfiche products; NP. 904; DP. 1970.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99
RESUME	The bulletin of **copyright** cases is the twentieth in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1967 and 1968.An unreported decision by the late Judge Learned Hand in the case of Myers v.Mail and Express Co., although decided in 1919, is included in the volume because it contains an illuminating rule as to the treatment of historical works under the Act of 1909.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1967 and 1968, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

14/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158188/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1965-1966.
AUTEUR(S)	RUDD B. W.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report

CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-35
SOURCE	Portions of this document are illegible in microfiche products; NP. 962; DP. 1967.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99
RESUME	The bulletin of **copyright** cases is the nineteenth in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1965 and 1966.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1965 and 1966, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

15/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB91-158170/XAD
TITRE ANGLAIS	Decisions of the United States Courts Involving **Copyright**, 1963-1964.
AUTEUR(S)	RUDD B. W.
AUTEUR COLLECTIF	Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT	000975033
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	BULL-34
SOURCE	Portions of this document are illegible in microfiche products; NP. 628; DP. 1965.
CODE JOURNAL NTIS	U9110
CODE TARIF NTIS	NTIS Prices: PC A99
RESUME	The bulletin of **copyright** cases is the eighteenth in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1963 and 1964.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1963 and 1964, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO

16/40 - (C) C.NTIS
NUMERO SIGNALEMENT PB91-158162/XAD
TITRE ANGLAIS Decisions of the United States Courts Involving **Copyright**, 1961-1962.
AUTEUR(S) RUDD B. W.
AUTEUR COLLECTIF Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT 000975033
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT BULL-33
SOURCE Portions of this document are illegible in microfiche products; NP. 727; DP. 1963.
CODE JOURNAL NTIS U9110
CODE TARIF NTIS NTIS Prices: PC A99
RESUME The bulletin of **copyright** cases is the seventeenth in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1961 and 1962.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve **copyright**, also reported during 1961 and 1962, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.
CODE CLASSIFICATION 88 00; 92 04
DESCRIPTEUR(S) Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S) NTISLCCO

17/40 - (C) C.NTIS
NUMERO SIGNALEMENT PB91-158154/XAD
TITRE ANGLAIS Decisions of the United States Courts Involving **Copyright**, 1959-1960.
AUTEUR(S) RUDD B. W.
AUTEUR COLLECTIF Library of Congress, Washington, DC.Copyright Office.
CLASSIFICATION INT 000975033
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
NUMERO DE RAPPORT BULL-32
SOURCE NP. 755; DP. 1972.
CODE JOURNAL NTIS U9110
CODE TARIF NTIS NTIS Prices: PC A99
RESUME The bulletin of **copyright** cases is the sixteenth in a series compiled by the **Copyright** Office for official and public use.It contains substantially all Federal and State **copyright** cases, as well as cases involving related subjects in the field of **intellectual** **property**, reported during the years 1959 and 1960.Most of the citations are to the National Reporter System and the United States Patents Quarterly, issued by the West Publishing Company and the Bureau of National Affairs, respectively.A supplemental list of related cases, which do not directly involve

	copyright, also reported during 1959 and 1960, is included in the appendix to the bulletin.Certain features of each of these cases have been summarized.The list contains citations to reporter systems in which the full cases can be found.The bulletin includes a cumulative table of cases covering the period from 1955 through 1960.
CODE CLASSIFICATION	88 00; 92 04
DESCRIPTEUR(S)	Copyrights*;Judicial decisions*;Law Jurisprudence;Courts of law; Court cases
IDENTIFICATEUR(S)	NTISLCCO
18/40 - (C) C.NTIS	
NUMERO SIGNALEMENT	ED-320 593
TITRE ANGLAIS	Curbing International Piracy of **Intellectual** **Property**.Policy Options for a Major Exporting Country.
AUTEUR(S)	HOFFMAN G. M.; MARCOU G. T.
AUTEUR COLLECTIF	Northwestern Univ., Washington, DC.Annenberg Washington Program in Communication Policy Studies.
CLASSIFICATION INT	098510001
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
SOURCE	International Piracy Project of the Annenberg Washington Program; Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 40; DP. 1989.
CODE JOURNAL NTIS	D9102
CODE TARIF NTIS	NTIS Prices: Not available NTIS
RESUME	This report of the International Piracy Project addresses three major topics: (1) The Costs and Complications of Piracy;(2) Rights Enforcement Today;and (3) Policy Options for Curbing Piracy.The first section discusses piracy of copyrights, patents, and other **intellectual** **property**, including economic losses and damage to the finances and reputation in the communications and information industries, and gives several examples of cases where **copyright** enforcement is extremely difficult.International systems of protection are described in the second section, including recent U.S.antipiracy laws and private-sector initiatives.A dozen policy options for the public and private sectors to consider are presented in the third section for the Executive Branch, Congress, international organizations, and the private sector.Actions suggested include the following: (1) demonstrate how **intellectual** **property** protection benefits developing nations;(2) monitor the effectiveness of U.S.Trade Representative actions;(3) strengthen enforcement of **intellectual** **property** rights;(4) establish a presidential commission to analyze U.S.policy and establish mechanisms for implementation;(5) hold congressional oversight hearings;(6) expand criminal penalties for piracy in new media technologies;(7) increase efforts of global organizations and establish worldwide minimum standards;(8) standardize requirements and sanctions for enforcement overseas;(9) expand private international organizations' initiatives;(10) involve local creative industries abroad;(11) set prices at levels affordable for foreign consumers;and (12) establish educational programs.An executive summary and commentaries by the panel are also provided.Relevant materials from the Business Software Association, the

	International **Intellectual** **Property** Alliance, and the Motion Picture Association of America are appended.(MES).
CODE CLASSIFICATION	88 00
DESCRIPTEUR(S)	Intellectual property*;Laws*;Developing nations;Electromechanical technology;Foreign countries
IDENTIFICATEUR(S)	Piracy*;NTISHEWERI

19/40 - (C) C.NTIS

NUMERO SIGNALEMENT	ED-318 415
TITRE ANGLAIS	Policy Issues in Computer Networks: Multi-Access Information Systems.
AUTEUR(S)	LYONS P. A.
CLASSIFICATION INT	888888888
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
SOURCE	Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 24; DP. Oct 89.
CODE JOURNAL NTIS	D9101
CODE TARIF NTIS	NTIS Prices: Not available NTIS
RESUME	As computer databases become more publicly accessible through public networks, there is a growing need to provide effective protection for proprietary information.Without adequate assurances that their works will be protected, authors and other **copyright** owners may be reluctant to allow the full text of their works to be accessed through computer networks.There may also be a hesitancy on the part of users, such as librarians, to avail themselves of the material that may be accessible online, where the terms and conditions of access, if any, are unclear, or where the costs are prohibitive.The development of transactional frameworks for the collection and distribution of royalties in connection with computer networks, including possible mechanisms for obtaining required permissions online, is by far the most important undertaking in this context.However, there are several related measures that also require clarification in order that computer networks may achieve their promise of wide-spread access to information in electronic form.The paper discusses five issues that require further consideration: (1) ownership of rights in pre-existing works;(2) copyrightability of databases;(3) the Electronic Communications Privacy Act;(4) identification and **intellectual** **property**;and (5) digital libraries.(GL).
CODE CLASSIFICATION	88 00; 45 03
DESCRIPTEUR(S)	Computer networks*;Copyrights*;Databases*;Information systems*;Intellectual property*;Ownership*;Online systems;Privacy;Telecommunications
IDENTIFICATEUR(S)	Digital Libraries;NTISHEWERI

20/40 - (C) C.NTIS

NUMERO SIGNALEMENT	ED-318 389
TITRE ANGLAIS	Satellite Home Viewer **Copyright** Act.Hearings on H.R.2848 before the Subcommittee on Courts, Civil Liberties, and the Administration of Justice of the Committee on the Judiciary, House of Representatives, One Hundredth Congress (November 19, 1987 and January 27, 1988).
AUTEUR COLLECTIF	Committee on the Judiciary (U.S.House).
CLASSIFICATION INT	059939000

TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
SOURCE	Serial No. 89. Portions contain marginally legible type; Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 751; DP. 1989.
CODE JOURNAL NTIS	D9101
CODE TARIF NTIS	NTIS Prices: Not available NTIS
RESUME	These hearings on the Satellite Home Viewer **Copyright** Act (H.R.2848) include: (1) the text of the bill;(2) prepared statements by expert witnesses (including executives of satellite companies, the Motion Picture Association of America, and cable television associations);(3) transcripts of witness testimonies;and (4) additional statements (consisting mostly of letters from telecommunications executives to Congressman Robert W.Kastenmeier).Appended are legislative materials (Parts 1 and 2 of House of Representatives Report Number 100-887, on the Satellite Home Viewer **Copyright** Act), additional materials provided by witnesses, and miscellaneous correspondence.(GL).
CODE CLASSIFICATION	45 01; 45 03
DESCRIPTEUR(S)	Cable television*;Communications satellites*;Copyrights*; Intellectual property*;Legal responsibility*;Policy formation*; Federal legislation;Hearings;Telecommunications
IDENTIFICATEUR(S)	Congress 101st;NTISHEWERI

21/40 - (C) C.NTIS

NUMERO SIGNALEMENT	PB90-220005/XAD
TITRE ANGLAIS	Computer Software and **Intellectual** **Property**.Background Paper.
AUTEUR COLLECTIF	Office of Technology Assessment, Washington, DC.
CLASSIFICATION INT	058574000
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	OTA-BP-CIT-61
SOURCE	Also available from Supt. of Docs; NP. 41; DP. Mar 90.
CODE JOURNAL NTIS	U9016
CODE TARIF NTIS	NTIS Prices: PC A03/MF A01
RESUME	The background paper reviews **copyright**, patent, and trade secret protections;discusses current issues regarding legal protection for computer software;and identifies some of the normative and positive questions that Congress should consider in its continuing oversight of computers, software, and **intellectual** **property**.
CODE CLASSIFICATION	62 02; 88 00; 92 04
DESCRIPTEUR(S)	Protection*;Copyrights;Patents;Legislation;Law Jurisprudence; Technology assessment
IDENTIFICATEUR(S)	Computer software*;Legal aspects;NTISCONOTA

22/40 - (C) C.NTIS

NUMERO SIGNALEMENT	ED-313 027
TITRE ANGLAIS	Legal Guide for the Software Developer.
AUTEUR COLLECTIF	Minnesota Small Business Assistance Office, St.Paul.
ORGAN FINANCEMENT	North Carolina Univ., Chapel Hill. Commission on Higher Education Facilities.
CLASSIFICATION INT	096734000

TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
SOURCE A collaborative effort of the Minnesota Small Business Assistance Office and Merchant, Gould, Smith, Edell, Welter & Schmidt, P.A; Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 57; DP. Sep 88.
CODE JOURNAL NTIS D9014
CODE TARIF NTIS NTIS Prices: Not available NTIS
RESUME This booklet has been prepared to familiarize the inventor, creator, or developer of a new computer software product or software invention with the basic legal issues involved in developing, protecting, and distributing the software in the United States.Basic types of software protection and related legal matters are discussed in detail, including patent protection, **copyright** protection, trade secret protection, protective legends, trademark protection, acquisition of rights in software, and distribution of software.An example is provided to illustrate the application of these basic types of protection and related legal matters to the development of a hypothetical spreadsheet software product.(GL).
CODE CLASSIFICATION 62 00
DESCRIPTEUR(S) Computer software*;Copyrights*;Intellectual property*;Legal responsibility*;Patents*
IDENTIFICATEUR(S) Software Development*;NTISHEWERI

23/40 - (C) C.NTIS
NUMERO SIGNALEMENT ED-311 934
TITRE ANGLAIS Guide to **Intellectual** **Property** Protection, Third Edition.
AUTEUR COLLECTIF Minnesota Small Business Assistance Office, St.Paul.
ORGAN FINANCEMENT Minnesota State Dept. of Energy and Economic Development, St. Paul.
CLASSIFICATION INT 096734000
TYPE DE DOCUMENT Report
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
SOURCE Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 42; DP. Aug 88.
CODE JOURNAL NTIS D9011
CODE TARIF NTIS NTIS Prices: Not available NTIS
RESUME Protecting an idea is often a difficult process.Some ideas and inventions cannot be protected, while others are eligible for only narrow or partial immunity from potential competition and imitation.Obtaining even minimal protection can often be expensive, time consuming, and ultimately result in uncertain or even negative benefits to the inventor.This report was prepared to familiarize the inventor, creator, or developer of a new idea with the basic legal framework that is available to protect the idea and the products that result from it.More importantly, it is designed to help the inventor decide which, if any, type of protection is available for a particular idea, and whether such protection is worth obtaining.Each of the four types of **intellectual** **property** protection--i.e., patent, **copyright**, trademark, and trade secret--is discussed in a separate section.The issues addressed include requirements for patentability, components of patent applications, information

	about examination of the patent by patent officers, practical considerations, enforcement of patent rights, trademark infringement, and fair use.The final section provides answers to 24 commonly asked questions about **intellectual** **property** protection.(SD).
CODE CLASSIFICATION	88 00
DESCRIPTEUR(S)	Copyrights*;Entrepreneurship*;Intellectual property*;Legal problems*;Patents*;Inventions
IDENTIFICATEUR(S)	Trademarks*;Fair Use;Trade Secrets;NTISHEWERI

24/40 - (C) C.NTIS

NUMERO SIGNALEMENT	ED-308 856
TITRE ANGLAIS	Computer Software: **Copyright** and Licensing Considerations for Schools and Libraries.ERIC Digest.
AUTEUR(S)	REED M. H.
AUTEUR COLLECTIF	ERIC Clearinghouse on Information Resources, Syracuse, NY.
ORGAN FINANCEMENT	Office of Educational Research and Improvement (ED), Washington, DC.
CLASSIFICATION INT	060920000
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	EDO-IR-89-2
SOURCE	Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 4; DP. Jul 89.
CODE JOURNAL NTIS	D9005
CODE TARIF NTIS	NTIS Prices: Not available NTIS
NUMERO DE CONTRAT	RI88062008
RESUME	This digest notes that the terms and conditions of computer software package license agreements control the use of software in schools and libraries, and examines the implications of computer software license agreements for classroom use and for library lending policies.Guidelines are provided for interpreting the **Copyright** Act, and insuring the fair use of software by libraries, classroom teachers, and students.(GL).
CODE CLASSIFICATION	88 00
DESCRIPTEUR(S)	Classrooms*;Computer software*;Copyrights*;Legal problems*;Legal responsibility*;Libraries*;Elementary secondary education;Guidelines;Higher education;Intellectual property;Librarians;Library services;Media specialists
IDENTIFICATEUR(S)	Copyright Act 1978*;ERIC Digests;Fair Use;NTISHEWERI

25/40 - (C) C.NTIS

NUMERO SIGNALEMENT	ED-308 855
TITRE ANGLAIS	Videotapes: **Copyright** and Licensing Considerations for Schools and Libraries.ERIC Digest.
AUTEUR(S)	REED M. H.
AUTEUR COLLECTIF	ERIC Clearinghouse on Information Resources, Syracuse, NY.
ORGAN FINANCEMENT	Office of Educational Research and Improvement (ED), Washington, DC.
CLASSIFICATION INT	060920000
TYPE DE DOCUMENT	Report
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
NUMERO DE RAPPORT	EDO-IR-89-1
SOURCE	Available from ERIC Document Reproduction Service (Computer

	Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110; NP. 4; DP. Jun 89.
CODE JOURNAL NTIS	D9005
CODE TARIF NTIS	NTIS Prices: Not available NTIS
NUMERO DE CONTRAT	RI88062008
RESUME	Much of the concern among librarians and educators as to the legality of library lending and classroom use of copyrighted videotapes is the result of 'Home Use Only' labeling and other information supplied by the Motion Picture Association of America and some of its members.Much of this labeling and information is misleading and inapplicable to libraries and schools.This document provides guidelines for interpreting the **Copyright** Act for the classroom and library use of videotape recordings.(GL).
CODE CLASSIFICATION	88 00
DESCRIPTEUR(S)	Classrooms*;Copyrights*;Legal problems*;Legal responsibility*; Libraries*;Videotape recordings*;Elementary secondary education; Guidelines;Higher education;Intellectual property;Librarians; Library services;Library technical processes;Media specialists
IDENTIFICATEUR(S)	Copyright Act 1978*;ERIC Digests;NTISHEWERI

1/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C91050380
TITRE ANGLAIS Moral issues involved in protecting software as intellectual property
TITRE DU CONGRES DIAC-90.Directions and Implications of Advanced Computing
LIEU DU CONGRES Boston, MA, USA
DATE DU CONGRES 28 July 1990
AUTEUR(S) DANDEKAR N.
ORGAN. FINANCEMENT Comput.Professionals for Social Responsibility
TYPE DE DOCUMENT Conference paper
CODE TRAITEMENT General
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
EDITEUR Comput.Professionals for Social Responsibility;Palo Alto, CA, USA
SOURCE NP. 262; PP. 219-35; 11 Ref.; DP. 1990
RESUME The author explores the question of whether and to what extent computer software deserves **copyright** protection in a world where computer literacy is becoming an important element of employability, and computer software is a necessary part of technology transfers between countries with highly developed economies and countries with less developed economies
CODE CLASSIFICATION C0230
DESCRIPTEUR(S) computer software;industrial property;social aspects of automation
IDENTIFICATEUR(S) moral issues;intellectual property;computer software;copyright protection;computer literacy;employability;technology transfers

2/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C91050387
TITRE ANGLAIS The protection of high technology intellectual property
AUTEUR(S) BROWN J. E.
AFFILIATION Brown & Bain, Phoenix, AZ, USA
TYPE DE DOCUMENT Journal paper
CODE TRAITEMENT General
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE Comput.Law Pract.(UK);Computer Law & Practice
SOURCE VOL. 7; NO. 4; PP. 193-7; 27 Ref.; DP. March-April 1991
CODEN CLPRER
ISSN 0266-4801
RESUME Intellectual property today prominently includes not only the product of the traditional informational and entertainment businesses but also the products and processes of high technology industries.For such products and processes in those industries, the protection of intellectual property against the appropriation by competitors or free dissemination is crucial and assumes a high priority.The author considers patent protection for computer programs under **copyright** law and the enforcement of these patents.He discusses the increasing efforts of the World Intellectual Property Organization and other organizations to harmonize the intellectual property laws of the member nations
CODE CLASSIFICATION C0230B
DESCRIPTEUR(S) industrial property;legislation
IDENTIFICATEUR(S) intellectual property;patent protection;computer programs; copyright law

3/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C91049114

TITRE ANGLAIS	**Copyright** of electronic information: issues and questions
AUTEUR(S)	DUGGAN M. K.
AFFILIATION	Sch.of Lib.& Inf.Studies, California Univ., Berkeley, CA, USA
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	Practical
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Online (USA);Online
SOURCE	VOL. 15; NO. 3; PP. 20-6; 20 Ref.; DP. May 1991
CODEN	ONLIDN
ISSN	0146-5422
RESUME	After every revision of the **copyright** act in the US, it has been necessary for the courts and the **copyright** office to interpret the law in the light of technological advances.Librarians have learned how to respond to code revisions.But with the presence of copy machines in dormitories and even homes, publishers cannot rely on libraries and copy shops to monitor fair copying.They must appeal to the user's scruples and awareness of the law.Realistic legal rules must depend upon a social consensus about what kind of behavior is acceptable and what is not.That consensus is still being created for electronic publishing.It is the library user of today's 'library without walls' who will respect or infringe **copyright** of printed or electronic information.The fair use principle must be extended to electronic information.The very notion of **copyright**, or intellectual property, may be too restrictive for the development of the new laws that will by the year 2000 cover the control of and access to information
CODE CLASSIFICATION	C7230; C7210L; C0230B
DESCRIPTEUR(S)	electronic publishing;industrial property;legislation;library automation
IDENTIFICATEUR(S)	copyright act;US;courts;copyright office;law;technological advances;code revisions;copy shops;fair copying;legal rules;social consensus;electronic publishing;library user;electronic information;fair use principle;intellectual property

4/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C91044248
TITRE ANGLAIS	Computers and intellectual property
AUTEUR(S)	BIGELOW R.
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	Practical
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Comput.Law (UK);Computers and Law
SOURCE	VOL. 2; NO. 2; PP. 12-15; 0 Ref.; DP. May 1991
CODEN	CLAWDY
ISSN	0140-3249
RESUME	It was quite a year in the United States for computers and intellectual property rights in 1990.Most of the action was in the **copyright** area, but other fields have seen some developments.This report is not all inclusive, just an observer's selection from many developments.In a series of cases, the courts held that the several States of the United States could not be held liable under the **Copyright** Act Title 17 of the United States Code for **copyright** infringements.The report also discusses the banning of software rental.It looks at case studies

	including the Lotus Case which concerns Lotus Development's 1-2-3 spreadsheet program and the Keeton Test to solve this matter.**Copyright** in databases is then discussed, along with security interests in **copyright**
CODE CLASSIFICATION	C0230B
DESCRIPTEUR(S)	industrial property;legislation;security of data;spreadsheet programs
IDENTIFICATEUR(S)	intellectual property;copyright;Copyright Act;software rental; Lotus;1 2 3 spreadsheet program;Keeton Test;databases;security

5/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C91019524
TITRE ANGLAIS	**Copyright** and new technology
TITRE DU CONGRES	Online Information 90.14th International Online Information Meeting.Proceedings
LIEU DU CONGRES	London, UK
DATE DU CONGRES	11-13 Dec. 1990
AUTEUR(S)	ROSENBERG V.; RAITT D. I.(Ed.)
AFFILIATION	Personal Bibliographic Software Inc., Ann Arbor, MI, USA
TYPE DE DOCUMENT	Conference paper
CODE TRAITEMENT	General; Practical
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
EDITEUR	Learned Information;Oxford, UK
SOURCE	NP. xii+531; PP. 457-60; 0 Ref.; DP. 1990
ISBN	0-904933-75-X
RESUME	The protection that **copyright** offered to authors and publishers is breaking down in the face of new technologies that virtually demand that **copyright** be violated in order to have the new systems function.In place of **copyright**, new protections will emerge that are based not so much on litigation, but on self interest and a realization that paying for intellectual property is more cost effective than not paying
CODE CLASSIFICATION	C0230B; C7290
DESCRIPTEUR(S)	industrial property
IDENTIFICATEUR(S)	protection;copyright;authors;publishers;self interest;intellectual property

6/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C91019507
TITRE ANGLAIS	International **copyright**: users and abusers
TITRE DU CONGRES	Online Information 90.14th International Online Information Meeting.Proceedings
LIEU DU CONGRES	London, UK
DATE DU CONGRES	11-13 Dec. 1990
AUTEUR(S)	PAGELL R. A.; RAITT D. I.(Ed.)
AFFILIATION	Lippincott Libr.of the Wharton Sch., Pennsylvania Univ., Philadelphia, PA, USA
TYPE DE DOCUMENT	Conference paper
CODE TRAITEMENT	General; Practical
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
EDITEUR	Learned Information;Oxford, UK
SOURCE	NP. xii+531; PP. 439-48; 19 Ref.; DP. 1990
ISBN	0-904933-75-X
RESUME	International **copyright**, a subset of intellectual property issues, is complicated for users and providers of information.In

	addition to traditional print media, machine readable data and computer software are potential targets of **copyright** abuse.Information needs of developing countries have been engulfed by the importance of intellectual property to industrialized nations, placing **copyright** in the international arena as an issue for trade sanctions and tariff debate
CODE CLASSIFICATION	C0230; C7290
DESCRIPTEUR(S)	industrial property;information needs;politics
IDENTIFICATEUR(S)	information needs;tariffs;intellectual property;print media; machine readable data;computer software;copyright abuse;developing countries;industrialized nations;international arena;trade sanctions

7/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C91019521
TITRE ANGLAIS	Contractual and intellectual property protection of databases
TITRE DU CONGRES	Conference on Computing Systems and Information Technology 1989.Preprints of Papers
LIEU DU CONGRES	Sydney, NSW, Australia
DATE DU CONGRES	8-10 Aug. 1989
AUTEUR(S)	LEONARD P. G.; SPENDER P. A.
AFFILIATION	Media & Commun.Div., Sly & Weigall Solicitors, Sydney, NSW, Australia
ORGAN. FINANCEMENT	Instn.Eng.Australia;IEEE;et al
TYPE DE DOCUMENT	Conference paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	AU
EDITEUR	Instn.Eng.Australia;Barton, ACT, Australia
SOURCE	NP. 195; PP. 95-101; 0 Ref.; DP. 1989
RESUME	It appears that the provision of maximum possible protection for computer technology enhances a country's economic prospects.But such massive protection may also stifle the future development of computing by preventing adoption of successful ideas as 'industry standards'.The author examines this conflict within the context of the development of the law concerning databases and software over the last few years.Although currently the adequacy of **copyright** and intellectual property protection for computer programs and databases is flimsy, time will tell if the law adapts to the changes and if so how quickly.It is a vexed question as to what is the 'right' approach since it depends on where you stand
CODE CLASSIFICATION	C0230B; C6160; C7250
DESCRIPTEUR(S)	contracts;database management systems;industrial property; information retrieval systems;legislation
IDENTIFICATEUR(S)	contracts;database protection;intellectual property;economic prospects;industry standards;law;software;copyright;computer programs

8/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C91013373
TITRE ANGLAIS	Writing, literary work and document in United Kingdom **copyright**
AUTEUR(S)	WARNER J.
AFFILIATION	Queen's Sch.of Finance & Inf., Queen's Univ., Belfast, Northern Ireland, UK
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General; Practical
CODE LANGUE	ENG

CODE PAYS D'ORIGINE GB
TITRE DU PERIODIQUE J.Inf.Sci.Princ.Pract.(Netherlands);Journal of Information Science, Principles & Practice
SOURCE VOL. 16; NO. 5; PP. 279-89; 38 Ref.; DP. 1990
CODEN JISCDI
ISSN 0165-5515
CODE TARIF REPRO 0165-5515/90/$3.50
RESUME **Copyright** would seem to be an appropriate subject for study by the discipline of social epistemology.Social epistemology was to be concerned with the intellectual processes of society as a whole, rather than primarily of the individual.The paper traces the development of significant terms in United Kingdom **copyright**: of writing, of a literary work representing intellectual skill or labour in which intellectual property can inhere, and of a document for legal deposit.The analysis is undertaken with a triple intention: first, to support the thesis that writing and the faculty for intellectual labour are unifying principles for documents and computers;secondly, to place the **Copyright**, Designs and Patents Act 1988 in its historical context;and, thirdly, to develop the divergence between a work in which **copyright** can subsist and a document for deposit into a measure for the diminishing proportion of published information captured by legal deposit
CODE CLASSIFICATION C0230B
DESCRIPTEUR(S) industrial property;legislation
IDENTIFICATEUR(S) literary work;United Kingdom copyright;social epistemology; intellectual skill;intellectual property;legal deposit; intellectual labour;computers

9/38 - (C) C.INSPEC
NUMERO SIGNALEMENT B90067943; C90067109
TITRE ANGLAIS Changing technologies and intellectual property: the economic perspective
TITRE DU CONGRES Proceedings.Pacific Telecommunications: Weaving the Technological and Social Fabric
LIEU DU CONGRES Honolulu, HI, USA
DATE DU CONGRES 14-17 Jan. 1990
AUTEUR(S) JUSSAWALLA M.; ONIKI H.; WEDEMEYER D. J.(Ed.); LOFSTROM M. D.(Ed.)
TYPE DE DOCUMENT Conference paper
CODE TRAITEMENT Economic
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
EDITEUR Pacific Telecommun.Council;Honolulu, HI, USA
SOURCE NP. viii+762; PP. 119-28; 8 Ref.; DP. 1990
RESUME This paper deals with the intellectual property issues that confront innovators and users of computer systems linked to one another across national borders.It examines the theoretical and conceptual underpinnings of **copyright** for computer software in economic terms and with empirical illustrations.There is a brief overview of the legal aspects to explain better GATT's involvement caused by the impact of intellectual property protection on trade
CODE CLASSIFICATION B0140; B6210L; C0230B; C6155
DESCRIPTEUR(S) commerce;computer communications software;economics;industrial property;tariffs
IDENTIFICATEUR(S) linked computer systems;economic perspective;intellectual property; copyright for computer software;legal aspects;GATT;trade

10/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C90067107
TITRE ANGLAIS	**Copyright** laws and the nature of computer software
AUTEUR(S)	BHOJWANI A.
AFFILIATION	TSG Consultants Ltd., New Delhi, India
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	Practical
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	IN
TITRE DU PERIODIQUE	Softw.Prot.(USA);Software Protection
SOURCE	VOL. 9; NO. 1; PP. 1-11; 0 Ref.; DP. June 1990
CODEN	SPROES
ISSN	0733-1274
RESUME	Computer software has a nature which is different from that of other products, services, and intellectual property.Existing laws relating to intellectual property protect some of the facets of software, but not all.There is a need to understand the nature of software so that new laws can be designed.The author describes some aspects of the nature of software.He discusses what needs protection and where the real value of software lies.A balance is also suggested between protection of the creative work of software developers and their liability, responsibility and accountability.Some important issues in the laws of intellectual property are examined in this context.A conclusion is drawn that **copyright** laws, as they exist, are not quite appropriate for the protection of computer software.In fact, we may be protecting the wrong kind of things, for the simple reason that we do not know how to protect the really valuable aspects of software
CODE CLASSIFICATION	C0230B; C0310F
DESCRIPTEUR(S)	industrial property;legislation;professional aspects;software engineering
IDENTIFICATEUR(S)	intellectual property;new laws;creative work;software developers; liability;accountability;copyright laws;computer software

11/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C90060662
TITRE ANGLAIS	Hungary: protection of computer software within the framework of **copyright**
AUTEUR(S)	PALOS G.
AFFILIATION	Bur.of Copyright Protection, Budapest, Hungary
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	HU
TITRE DU PERIODIQUE	Comput.Law Pract.(UK);Computer Law & Practice
SOURCE	VOL. 6; NO. 4; PP. 123-7; 14 Ref.; DP. March-April 1990
CODEN	CLPRER
ISSN	0266-4801
RESUME	WIPO defines the field of intellectual property to include all rights resulting from intellectual activity in the industrial, scientific, literary or artistic field.On this ground it is clear that Hungary should treat computer software as an intellectual creation covered by the WIPO Convention.According to the Hungarian Civil Code, however, intellectual property is already under legal protection.This means that without any special legislation, computer software could have been protected in Hungary under the

Civil Code.The protection based on the Civil Code, however, is not as effective as the protection granted by special legal institutions in the field of industrial property and **copyright**.The result of this situation was that Hungary was obliged to examine whether computer software could be or should be covered by **copyright**

CODE CLASSIFICATION C0230B; C6000
DESCRIPTEUR(S) computer software;industrial property;legislation
IDENTIFICATEUR(S) Hungary;computer software;copyright;intellectual property;WIPO Convention;legal protection;Civil Code;legal institutions; industrial property

12/38 - (C) C.INSPEC
NUMERO SIGNALEMENT B90053979
TITRE ANGLAIS The protection of technology
TITRE DU CONGRES Proceedings of Second International Conference on Engineering Management.Managing Technology in a Competitive International Environment (IEEE Cat.No.89CH2801-9)
LIEU DU CONGRES Toronto, Ont., Canada
DATE DU CONGRES 10-13 Sept. 1989
AUTEUR(S) REED J. B.
AFFILIATION Motorola Canada Ltd., North York, Ont., Canada
ORGAN. FINANCEMENT IEEE;Eng.Inst.Canada;AIChE;ASEM;ASME;CSAA;NSPE;EIC
TYPE DE DOCUMENT Conference paper
CODE TRAITEMENT General
CODE LANGUE ENG
CODE PAYS D'ORIGINE CA
EDITEUR ICEM II;Willowdale, Ont., Canada
SOURCE NP. xii+451; PP. 407-15; 30 Ref.; DP. 1989
RESUME The author reviews the general concepts for the protection of intellectual property, some types of infringements, and the remedies available to the owners of the technology.Any particular instance would have to be specifically examined on the basis of the facts and in the context of the applicable laws.Confidential information is defined, and examples are used to illustrate various facets of this topic.Gray marketing and intellectual property, patents, **copyright**, and commercial arbitration of intellectual property are examined in detail.Remedies available for infringement of patents trademarks, and copyrights and for the misuse of confidential information are set forth
CODE CLASSIFICATION B0140
DESCRIPTEUR(S) industrial property;legislation
IDENTIFICATEUR(S) industrial property;legislation;protection;technology;intellectual property;laws;patents;copyright;arbitration;trademarks; confidential information

13/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C90049084
TITRE ANGLAIS Standardization and intellectual property
AUTEUR(S) FARRELL J.
AFFILIATION California Univ., Berkeley, CA, USA
TYPE DE DOCUMENT Journal paper
CODE TRAITEMENT Practical
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE Jurimetr.J.(USA);Jurimetrics Journal
SOURCE VOL. 30; NO. 1; PP. 35-50; 33 Ref.; DP. Fall 1989

CODEN	JURJAD
ISSN	0022-6793
RESUME	Legal protection of intellectual work may have an important effect on standardization in industries, including computers and software, where compatibility is valuable.Therefore, compatibility issues are important considerations in the choice of policy on the legal protection of intellectual works, both in the matter of how strong protection should be and also in how it is achieved.The author surveys, from an economist's perspective, the costs and benefits of compatibility, the processes of standardization and the effects of intellectual property protection on standardization.Focusing particularly on network effects, he concludes that CONTU's recommendation notwithstanding, **copyright** may be an inefficient way to protect computer software
CODE CLASSIFICATION	C0230B; C0310F
DESCRIPTEUR(S)	industrial property;legislation;software portability;standards
IDENTIFICATEUR(S)	CONTU;economist perspective;intellectual property;intellectual work;standardization;compatibility issues;legal protection;network effects;computer software

14/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C90017797
TITRE ANGLAIS	A new perspective on patent and intellectual property
AUTEUR(S)	NISHIZAWA T.
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General; Practical
CODE LANGUE	JAP
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Joho Kanri (Japan);Joho Kanri
SOURCE	VOL. 32; NO. 7; PP. 543-60; 0 Ref.; DP. Oct. 1989
CODEN	JOKAAB
ISSN	0021-7298
RESUME	The recently proposed problem of intellectual property, including patents, especially concerning high technology such as computer software and gene manipulation, are discussed.Patent applications in Japan amount to 500 thousand cases a year, which causes international friction between Japan and USA or European countries.What does such an enormous volume of application mean, or how have their contents changed in recent years?**Copyright** problems is the field of gene engineering including amino acid sequence are partially common to those of the software.A trend of such gene-related **copyright** in Japan and other countries is reviewed
CODE CLASSIFICATION	C0230B
DESCRIPTEUR(S)	industrial property
IDENTIFICATEUR(S)	intellectual property;patents;high technology;computer software; gene manipulation;Japan;amino acid sequence;gene related copyright

15/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C90015962
TITRE ANGLAIS	Electronic and computer-aided publishing: opportunities and constraints
AUTEUR(S)	SOLOMON R. J.
AFFILIATION	Media Lab., MIT, Cambridge, MA, USA
TYPE DE DOCUMENT	Book chapter
CODE TRAITEMENT	General

CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE Information technology and new growth opportunities
EDITEUR OECD;Paris, France
SOURCE NP. 201; PP. 101-31; 12 Ref.; DP. 1989
RESUME Emerging computer and telecommunications technologies are likely to change the nature of today's printing, distribution, graphics, photographic, writing, and allied industries by the end of this decade.This will create new opportunities for information accessibility and industrial growth in the generic publishing area.By definition, publishing in the electronic era will encompass all forms of textual and graphics distribution including full-motion video.In this diffusion process, these technologies will create a number of problems, for example: (i) intellectual property;(ii) telecommunication standards and interconnection;(iii) industrial re-structure, labour mobility;and (iv) protection against fraudulent documentation.Information can now be produced, stored, retrieved, and transmitted in ways that bring out anomalies in the old methods and which create and amplify connections which were impossible before.Mechanisms which access numerous online data sources involving multiple jurisdictions, and which use artificial intelligence techniques to automatically combine, re-write, and modify this input in order to re-distribute the information ('publish') electronically also do not fit well with conventional views of **copyright**
CODE CLASSIFICATION C7230; C0230
DESCRIPTEUR(S) economic and sociologic effects;electronic publishing;industrial property;publishing
IDENTIFICATEUR(S) electronic publishing;photography;industrial restructuring; information redistribution;computer aided publishing;printing; distribution;graphics;writing;information accessibility;industrial growth;full motion video;intellectual property;telecommunication standards;interconnection;labour mobility;fraudulent documentation; online data sources;multiple jurisdictions;artificial intelligence techniques;copyright

16/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C90008769
TITRE ANGLAIS **Copyright** in the electronic environment (NAC recommendations)
AUTEUR(S) AVRAM H. D.
AFFILIATION Libr.of Congress, Washington, DC, USA
TYPE DE DOCUMENT Journal paper
CODE TRAITEMENT General
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE EDUCOM Rev.(USA);EDUCOM Review
SOURCE VOL. 24; NO. 3; PP. 31-3; 2 Ref.; DP. Fall 1989
ISSN 0424-6268
RESUME The Library of Congress' Networking Advisory Committee has made several recommendations concerning issues pertinent to intellectual property in an information network environment.Issues that were highlighted for action by NAC are presented along with the alternatives.The various questions included in a background paper prepared as a framework for discussion at the March, 1988 NAC meeting are also covered.To aid the NAC membership in its deliberations and in reaching a concensus opinion on the many difficult issues, five working groups came up with recommendations

	to be considered.The conclusions that emerged from the membership, concerning the **Copyright** Act, after these reports were assimilated are summarised
CODE CLASSIFICATION	C7210L; C0230B; C7290
DESCRIPTEUR(S)	industrial property;legislation;library automation
IDENTIFICATEUR(S)	Library of Congress;Networking Advisory Committee;intellectual property;information network environment;NAC;Copyright Act

17/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	B89074485; C90000090
TITRE ANGLAIS	Protection of intellectual property
TITRE DU CONGRES	IEE Colloquium on 'Management of Intellectual Property' (Digest No.104)
LIEU DU CONGRES	London, UK
DATE DU CONGRES	18 Oct. 1988
AUTEUR(S)	HOSTE G.
AFFILIATION	GEC Patents Dept., Wembley, UK
ORGAN. FINANCEMENT	IEE
TYPE DE DOCUMENT	Conference paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	GB
EDITEUR	IEE;London, UK
SOURCE	NP. 14; PP. 1/1-5; 0 Ref.; DP. 1989
RESUME	The various kinds of intellectual property fall into two broad classes;those protected by statute and those based on equitable rights.In practice the former tend to be the more important and include patents, **copyright**, registered designs and trade marks.The latter include rather more intangible things such as know-how and trade secrets.The author describes how all are intended to protect the results of investment, whether the investment be in speculative research or new product development, or in the development of market and business areas, and as such they can legitimately be regarded as being commercial tools
CODE CLASSIFICATION	B0140; C0230B
DESCRIPTEUR(S)	industrial property;legislation
IDENTIFICATEUR(S)	industrial property;intellectual property;statute;equitable rights; patents;copyright;registered designs;trade marks;research;product development

18/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	B89057108; C89052243
TITRE ANGLAIS	The impact of facsimile technology on intellectual property
TITRE DU CONGRES	National Online Meeting Proceedings - 1989
LIEU DU CONGRES	New York, NY, USA
DATE DU CONGRES	9-11 May 1989
AUTEUR(S)	DUSTON B.
ORGAN. FINANCEMENT	Learned Inf
TYPE DE DOCUMENT	Conference paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
EDITEUR	Learned Inf;Medford, NJ, USA
SOURCE	NP. xv+506; PP. 137-41; 10 Ref.; DP. 1989
ISBN	0-938734-34-2
RESUME	The advent of new technologies which enables users to access information more readily and inexpensively will have a profound

	effect on traditional sources of information.Facsimile technology, for example, is becoming more accessible and user friendly for the information gatherer.Moving and transferring information containing pictures and graphs can be accomplished with a telephone line and can bypass the computer entirely.Conversely, by using a faxboard, this information can be stored, modified, and manipulated in the user's computer.The facsimile technology and **copyright** issues are examined;however, it is clear that this new technology will affect publishers, librarians, and other information users
CODE CLASSIFICATION	B6210H; B0180; C0230; C7200; C7100
DESCRIPTEUR(S)	facsimile;industrial property
IDENTIFICATEUR(S)	facsimile technology;intellectual property;user friendly;faxboard; copyright

19/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C89045292
TITRE ANGLAIS	Why the look and feel of software user interfaces should not be protected by **copyright** law
AUTEUR(S)	SAMUELSON P.
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Commun.ACM (USA);Communications of the ACM
SOURCE	VOL. 32; NO. 5; PP. 563-72; 0 Ref.; DP. May 1989
CODEN	CACMA2
ISSN	0001-0782
CODE TARIF REPRO	0001-0782/89/0500-0563$1.50
RESUME	The Lotus and Apple lawsuits have made user interface designers aware that they can no longer safely ignore the intellectual property implications of user interface design.Yet until these cases are decided, it is hard for those in the industry to know how they are supposed to behave.If the look and feel of the Lotus and Apple interfaces are held to be protected by **copyright**, such protection will have a profound effect on the industry.The article addresses the most pressing questions raised by the Lotus and Apple lawsuits.The author concludes that it is more consistent with legal tradition to protect most aspects of software user interfaces through patent law than through **copyright** law
CODE CLASSIFICATION	C0230B; C6180
DESCRIPTEUR(S)	industrial property;legislation;user interfaces
IDENTIFICATEUR(S)	intellectual property protection;court decisions;software user interfaces;copyright law;Lotus;Apple;lawsuits;user interface designers;intellectual property;user interface design;look;feel; legal tradition;patent law

20/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C89036193
TITRE ANGLAIS	Comments on chapter 5: computer programs
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Comput.Law Pract.(UK);Computer Law & Practice
SOURCE	VOL. 5; NO. 2; PP. 72-5; 0 Ref.; DP. Nov.-Dec. 1988
CODEN	CLPRER

ISSN 0266-4801
RESUME The Japanese computer industry believes computer programs must be protected as intellectual property.The paper gives the comments of the Japan electronic industry development association on chapter 5 of the EC Green paper on **copyright** and the challenge of technology
CODE CLASSIFICATION C0230B
DESCRIPTEUR(S) industrial property;legislation
IDENTIFICATEUR(S) Japanese computer industry;computer programs;intellectual property; Japan electronic industry development association;chapter 5;EC Green paper;copyright;challenge of technology

21/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C89017101
TITRE ANGLAIS Intellectual property and information controversy.I.The present status and future of intellectual property
AUTEUR(S) AOYAMA H.
AFFILIATION Dept.of Appeals, Tokyo, Japan
TYPE DE DOCUMENT Journal paper
CODE TRAITEMENT General
CODE LANGUE JAP
CODE PAYS D'ORIGINE JP
TITRE DU PERIODIQUE Joho Kanri (Japan);Joho Kanri
SOURCE VOL. 31; NO. 7; PP. 589-607; 0 Ref.; DP. Oct. 1988
CODEN JOKAAB
ISSN 0021-7298
RESUME Deals with intellectual property as the result of various intellectual activities such as R & D, and intellectual proprietary rights which protect it.New technology, designs, literary works, computer programs, semiconductor chips, new plant breeding, brands, trade secrets, and others, and legislations which protect them are described.Then, the background of the fact that intellectual proprietary rights are emphasized as analyzed.The author points out items as follows: movement toward much larger size of R & D, generation of areas to be newly protected, trends in enforcement of intellectual property protection, commercialization of intellectual property, trends in software evolution, movement in technological protectionism, and the present status of each item
CODE CLASSIFICATION C0230B
DESCRIPTEUR(S) industrial property;legislation
IDENTIFICATEUR(S) research and development;new technology;patents;copyright;unfair competition;information controversy;intellectual property; intellectual activities;proprietary rights;designs;literary works; computer programs;semiconductor chips;plant breeding;brands;trade secrets;legislations;enforcement;commercialization;software evolution;technological protectionism

22/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C88037179
TITRE ANGLAIS The Canadian computer industry: factors affecting government policy making
AUTEUR(S) FORAN M.
TYPE DE DOCUMENT Journal paper
CODE TRAITEMENT Practical
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ

TITRE DU PERIODIQUE Optimum (Canada)
SOURCE VOL. 18; NO. 4; PP. 79-107; 23 Ref.; DP. 1987-1988
CODEN OPTIEA
ISSN 0475-1906
RESUME With Canada moving even further into the information age, the computer industry has assumed great importance for public sector policy makers and administrators.The author looks at several significant dimensions of this industry and how these relate to public policy development and issues management in such areas as intellectual property and **copyright** protection laws, research and development, information technology standards, transborder data flow, and trade and tariffs.She also outlines the policy and issue management implications of this industry's characteristics, trends and activities for government procurement in general, and Supply and Services in particular, in such areas as pricing policy, promoting a competitive environment, meeting small business and regional development concerns, and research and development
CODE CLASSIFICATION C0230
DESCRIPTEUR(S) DP industry;economic and sociologic effects;industrial property; politics;standards
IDENTIFICATEUR(S) Canadian computer industry;government policy making;information age;public sector policy;intellectual property;copyright protection laws;research and development;information technology standards;transborder data flow;trade;tariffs;government procurement;pricing policy;competitive environment;small business; regional development concerns

23/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C88032824
TITRE ANGLAIS In defence of Jackie Paper or Puff the Conspiracy
TITRE DU CONGRES Proceedings of the Thirteenth Biennial Symposium on Communications
LIEU DU CONGRES Kingston, Ont., Canada
DATE DU CONGRES 2-4 June 1986
AUTEUR(S) LANG G. R.
AFFILIATION Morotola Inf.Syst.Ltd., Brampton, Ont., Canada
TYPE DE DOCUMENT Conference paper
CODE TRAITEMENT Application; General
CODE LANGUE ENG
CODE PAYS D'ORIGINE CA
EDITEUR Queen's Univ.;Kingston, Ont., Canada
SOURCE NP. 288; PP. C4/1-4; 3 Ref.; DP. 1986
RESUME Low-end PC software piracy is considered, including intellectual property and **copyright**.Experiences, protection methods, piracy tools, encouragement by industry are all commented.In conclusion, a projection is given for the future and advice is provided for authors.This paper is derived from experiences with a low-end PC, the Commodore 64
CODE CLASSIFICATION C0310D; C0230B
DESCRIPTEUR(S) security of data
IDENTIFICATEUR(S) low end PC software piracy;intellectual property;copyright; protection methods;piracy tools;Commodore 64

24/38 - (C) C.INSPEC
NUMERO SIGNALEMENT C88026676
TITRE ANGLAIS Intellectual property right and its protection in the information industry;a criticism of a theory of characterizing programs as

	special copyrightable works
AUTEUR(S)	TAKAISHI Y.
AFFILIATION	IBM Japan, Tokyo, Japan
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General
CODE LANGUE	JAP
CODE PAYS D'ORIGINE	JP
TITRE DU PERIODIQUE	Joho Kanri (Japan)
SOURCE	VOL. 30; NO. 10; PP. 945-56; 11 Ref.; DP. Jan. 1988
CODEN	JOKAAB
ISSN	0021-7298
RESUME	A strong interest has been shown in the legal protection of computer programs, a typical intellectual property in the information industry.In Japan, there is a strong belief that the scope of **copyright** protection of a program should be restricted, and the degree of its protection should be weakened as compared with the protection given to other ordinary works, since a program is a specific type of copyrightable work.The purpose of this article is to review such a special copyrightable work theory and to develop a criticism of such a theory from both theoretical and practical aspects, as well as to validate the appropriateness of the **copyright** protection, since one can use an abundant accumulation of precedents under the **copyright** laws to give a practical solution to specific problems arising in connection with the legal protection of programs.An interface issue and the protection of a program's structure, sequence and organization (SSO) is also reviewed from such a viewpoint
CODE CLASSIFICATION	C0230B; C6000
DESCRIPTEUR(S)	computer software;DP industry;industrial property;legislation
IDENTIFICATEUR(S)	program structure;program sequence;program organization;sui generis;independent development of works;layout;information industry;special copyrightable works;legal protection;computer programs;intellectual property;copyright protection;precedents; interface

25/38 - (C) C.INSPEC

NUMERO SIGNALEMENT	C88021638
TITRE ANGLAIS	The **copyright** issue
AUTEUR(S)	HOFFMAN J.
AFFILIATION	Idaho State Lib., Idaho Falls, ID, USA
TYPE DE DOCUMENT	Journal paper
CODE TRAITEMENT	General
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Small Comput.Libr.(USA)
SOURCE	VOL. 8; NO. 1; PP. 20-3; 0 Ref.; DP. Jan. 1988
CODEN	SCLIDO
ISSN	0275-6722
RESUME	The author attempts to answer a number of questions regarding software **copyright**.These include: Is a particular computer program, like a child, unique?What is the inner limit on subtle difference between one program and another-that is, when does one program cease being 'different' from another?Do computer programs have a 'right' to their own identity?And what about the copying of computer programs?
CODE CLASSIFICATION	C0230B
DESCRIPTEUR(S)	industrial property

1/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-91-004992
TITRE ANGLAIS	Protecting and policing your technology.
TITRE DU CONGRES	Fourteenth Annual Conference on Composites and Advanced Ceramic Materials
LIEU DU CONGRES	Cocoa Beach, FL, USA
DATE DU CONGRES	1990 Jan 14-17
NUMERO CONGRES	13787
AUTEUR(S)	SAHR R. L.
AFFILIATION	Carborundum Co, Niagara Falls, NY, USA
ORGAN. FINANCEMENT	Engineering Ceramics Div;American Ceramic Soc, Columbus, OH, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Ceramic Engineering and Science Proceedings
EDITEUR	American Ceramic Soc, Westerville, OH, USA.
SOURCE	VOL. 11; NO. 9-10; PART. 2; PP. 1263-1277; DP. 1990
CODE JOURNAL	9102
CODEN	CESPDK
ISSN	0196-6219
RESUME	Guidelines for management of inventions patents and trade secrets are given.The emphasis is placed on the protection methods of inventions as intellectual property.
CODE CLASSIFICATION	812; 902; 903
DESCRIPTEUR(S)	CERAMIC PLANTS*;Patents and Inventions*;Patents And Inventions ; Marketing;Information Science ;Information Use
IDENTIFICATEUR(S)	Infringement;Trade secrets;Commercialization;Intellectual property

2/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-91-004990
TITRE ANGLAIS	Creating a new product line with acquired technology.
TITRE DU CONGRES	Fourteenth Annual Conference on Composites and Advanced Ceramic Materials
LIEU DU CONGRES	Cocoa Beach, FL, USA
DATE DU CONGRES	1990 Jan 14-17
NUMERO CONGRES	13787
AUTEUR(S)	GREENLEAF J. M.
AFFILIATION	Greenleaf Corp, Sagertown, PA, USA
ORGAN. FINANCEMENT	Engineering Ceramics Div;American Ceramic Soc, Columbus, OH, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Ceramic Engineering and Science Proceedings
EDITEUR	American Ceramic Soc, Westerville, OH, USA.
SOURCE	VOL. 11; NO. 9-10; PART. 2; PP. 1261; DP. 1990
CODE JOURNAL	9102
CODEN	CESPDK
ISSN	0196-6219
RESUME	Small companies can benefit significantly from new products generated via acquired technology.Industry leaders have been slow to introduce new technologies into the mature cutting tool market.Before acquiring a technology a company should determine what it needs.This would fall into any one of three categories of technologies: process, use, or composition of matter.The pros and cons of each of these categories should be discussed and must be related on that technology relative to company interests.(Edited author abstract)
CODE CLASSIFICATION	912; 902; 812
DESCRIPTEUR(S)	INDUSTRIAL MANAGEMENT*;Patents and Inventions*;Patents And

	Inventions ;Industrial Applications;Ceramic Plants
IDENTIFICATEUR(S)	Abstract only;Profit sharing;Intellectual property;Product development

3/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-91-004989
TITRE ANGLAIS	Locating and acquiring technology.
TITRE DU CONGRES	Fourteenth Annual Conference on Composites and Advanced Ceramic Materials
LIEU DU CONGRES	Cocoa Beach, FL, USA
DATE DU CONGRES	1990 Jan 14-17
NUMERO CONGRES	13787
AUTEUR(S)	DE LA GARZA C. H.
AFFILIATION	Arnold, White, and Durkee, Houston, TX, USA
ORGAN. FINANCEMENT	Engineering Ceramics Div;American Ceramic Soc, Columbus, OH, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Ceramic Engineering and Science Proceedings
EDITEUR	American Ceramic Soc, Westerville, OH, USA.
SOURCE	VOL. 11; NO. 9-10; PART. 2; PP. 1255-1260; DP. 1990
CODE JOURNAL	9102
CODEN	CESPDK
ISSN	0196-6219
RESUME	Locating and acquiring technology which results in a commercial success is an art.The process from search for the technology to acquisition frequently results in failure for the uninitiated.Even veterans of the experience fail.An appreciation of the process and employment of knowledgeable consultants will enhance the likelihood of success.
CODE CLASSIFICATION	812; 903; 912; 901
DESCRIPTEUR(S)	CERAMIC PLANTS*;Information Science ;Information Use;Industrial Management ;Production Control;Technology
IDENTIFICATEUR(S)	Computerized searches;Intellectual property;Newsletters;Joint ventures;Licensed technology

4/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-87-086083
TITRE ANGLAIS	'patents and intellectual property as a profit base for research'.
TITRE DU CONGRES	Polymeric Materials Science and Engineering, Proceedings of the ACS Division of Polymeric Materials: Science and Engineering.;Held at the 193rd National Meeting of the American Chemical Society.
LIEU DU CONGRES	Denver, CO, USA
DATE DU CONGRES	1987 Apr
NUMERO CONGRES	10444
AUTEUR(S)	BERRY J. E.
ORGAN. FINANCEMENT	ACS, Div of Polymeric Materials: Science & Engineering, Washington, DC, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Polymeric Materials Science and Engineering, Proceedings of the ACS Division of Polymeric Materials Science and Engineering
EDITEUR	ACS, Washington, DC, USA
SOURCE	VOL. 56; PP. 29; DP. 1987
CODE JOURNAL	8712
CODEN	PMSEDG
ISBN	0-8412-1051-9
ISSN	0743-0515

RESUME	An outline for general patent law and chemical patent practice is presented.Included are in the discussion practical suggestions, together with examples, for working with patent attorneys and general lawyers in patent draft preparation, prosecution and litigation including the types of information and data required the relative advantages and disadvantages for protecting intellectual property and research by patent vs.trade secrets and possible variations in licensing arrangements with industry and/or government.Current trends as well as many of the predicted changes in patent practice and general handling of intellectual property with the resulting effects on current decision making are discussed.(Edited author abstract)
CODE CLASSIFICATION	902; 802
DESCRIPTEUR(S)	PATENTS AND INVENTIONS*;Chemical Engineering;Patents and Inventions
IDENTIFICATEUR(S)	Abstract only;General patent law;Patent draft preparation; Intellectual property

5/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-87-048605
TITRE ANGLAIS	Security through licensing.
TITRE DU CONGRES	Wescon/86 - Conference Record.
LIEU DU CONGRES	Anaheim, CA, USA
DATE DU CONGRES	1986 Nov 18-20
NUMERO CONGRES	09753
AUTEUR(S)	ISHIMARU M.
AFFILIATION	John Fluke Manufacturing Co, Everett, WA, USA
ORGAN. FINANCEMENT	IEEE, Los Angeles Council, Los Angeles, CA, USA;IEEE, San Francisco Bay Area Council, CA, USA;Electronic Representatives Assoc, Southern California Chapter, CA, USA;Electronic Representatives Assoc, Northern California Chapter, CA, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Wescon Conference Record.
EDITEUR	Electronic Conventions Management, Los Angeles, CA, USA
SOURCE	Pap 23/2; NP. 13; 6 Ref.; DP. 1986
CODE JOURNAL	8707
CODEN	WCREDI
RESUME	To protect intellectual property, it is necessary to understand which forms of protection are most advantageous: patents, trade secrets, copyrights, mask work rights, or trademark.It is pointed out that in order to profit while maintaining security, it is necessary to have a license which covers: warranties and liabilities, taxes, export regulations, market share, and fees.
CODE CLASSIFICATION	902; 723
DESCRIPTEUR(S)	PATENTS AND INVENTIONS*;Computer Programming;Legislation
IDENTIFICATEUR(S)	Patented programming;Trade secret laws;Copyrights;Trademarks; Intellectual property;Licensing

6/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-87-019124
TITRE ANGLAIS	New technology and patents.
TITRE DU CONGRES	Collection of Technical Papers - AIAA/ASIS/DODCI Second Aerospace Computer Security Conference.
LIEU DU CONGRES	McLean, VA, USA
DATE DU CONGRES	1986 Dec 2-4
NUMERO CONGRES	09103
AUTEUR(S)	NEWMAN D. B.

ORGAN. FINANCEMENT	AIAA, New York, NY, USA;American Soc for Industrial Security, Washington, DC, USA;US Dep of Defense Computer Inst, Washington, DC, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	AIAA Paper
EDITEUR	AIAA , New York, NY, USA
SOURCE	CP8612; PP. 102-105; 12 Ref.; DP. 1986
CODE JOURNAL	8703
CODEN	AAPRAQ
ISSN	0146-3705
RESUME	A device using new technology developed after a patent has issued can infringe that patent under the Doctrine of Equivalents.An inventor is required to disclose the best mode known to him for practicing his invention at the time of filing for a patent;however, he is not required to predict all future developments which will enable practice of the invention.(Author abstract)
CODE CLASSIFICATION	902; 901
DESCRIPTEUR(S)	PATENTS AND INVENTIONS*;Engineering;Professional Aspects
IDENTIFICATEUR(S)	Intellectual property;Patent infringement

7/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-87-019120
TITRE ANGLAIS	Protection of intellectual property in space.
TITRE DU CONGRES	Collection of Technical Papers - AIAA/ASIS/DODCI Second Aerospace Computer Security Conference.
LIEU DU CONGRES	McLean, VA, USA
DATE DU CONGRES	1986 Dec 2-4
NUMERO CONGRES	09103
AUTEUR(S)	LANDENBERGER J. L.
AFFILIATION	Booz, Allen & Hamilton Inc, Bethesda, MD, USA
ORGAN. FINANCEMENT	AIAA, New York, NY, USA;American Soc for Industrial Security, Washington, DC, USA;US Dep of Defense Computer Inst, Washington, DC, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	AIAA Paper
EDITEUR	AIAA , New York, NY, USA
SOURCE	CP8612; PP. 80-85; 16 Ref.; DP. 1986
CODE JOURNAL	8703
CODEN	AAPRAQ
ISSN	0146-3705
RESUME	This paper addresses issues concerning the protection of intellectual property in the space industry, for the Space Shuttle and Space Station.The author defines intellectual property and discusses the current functional and security environments of the Space Shuttle and the proposed Space Station.The protection of intellectual property is defined as a fundamental operational consideration in the Space Shuttle and Space Station because corporations and international users will provide confidential and proprietary data to operating teams and crews in order to conduct onboard experiments.The author also addresses the fact that onboard defense missions require intellectual property protection to protect national security.The paper concludes by identifying methods for improving the protection of intellectual property in the Space Station environment.(Author abstract)

CODE CLASSIFICATION	655; 902; 656; 657; 723
DESCRIPTEUR(S)	SPACE SHUTTLES*;Patents And Inventions;Space Research;Data Processing;Security of Data
IDENTIFICATEUR(S)	Intellectual property;Space industry;Copyrights;Space station computer network

8/8 - (C) C.ei-meetings

NUMERO SIGNALEMENT	EIM-87-019109
TITRE ANGLAIS	Collection of technical papers - aiaa/asis/dodci second aerospace computer security conference.
TITRE DU CONGRES	Collection of Technical Papers - AIAA/ASIS/DODCI Second Aerospace Computer Security Conference.
LIEU DU CONGRES	McLean, VA, USA
DATE DU CONGRES	1986 Dec 2-4
NUMERO CONGRES	09103
ORGAN. FINANCEMENT	AIAA, New York, NY, USA;American Soc for Industrial Security, Washington, DC, USA;US Dep of Defense Computer Inst, Washington, DC, USA
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	AIAA Paper
EDITEUR	AIAA , New York, NY, USA
SOURCE	CP8612; NP. 132; DP. 1986
CODE JOURNAL	8703
CODEN	AAPRAQ.
ISSN	0146-3705
RESUME	This conference proceedings consists of 19 papers.The main subjects are secure computer systems, electronic mail privacy enhancement, multilevel secure database management system, multilevel data store design, secure database management system architectural analysis, space station information system network security, access control and privacy in large distributed systems, verification of integrity, protecting proprietary rights in the computer industry, computer security acquisition management, and computer security and user authentication.
CODE CLASSIFICATION	723; 722; 901; 902
DESCRIPTEUR(S)	DATA PROCESSING*;Security of Data*;Computer Systems Digital; Protection;Engineering Research;Patents And Inventions;Electronic Mail;Protection;Database Systems;Protection
IDENTIFICATEUR(S)	Secure database systems;Intellectual property;Information system network security;Computer security management;Eirev

1/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-91-083970
TITRE ANGLAIS Medical technology transfer.The inventor's prespective.
AUTEUR(S) MARKS L. A.
AFFILIATION John Hopkins Univ, Baltimore, MD, USA
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT General Review
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE Biomed Instrum Technol
SOURCE VOL. 25; NO. 1; PP. 35-41; 10 Ref.; DP. Jan-Feb 1991
CODE JOURNAL 9107
CODEN BITYE2
ISSN 0899-8205
RESUME The purpose of this paper is to provide insight into the technology transfer process from the inventor's perspective.Topics addressed include a brief history of the technology transfer process, a look at how technology transfer is faring over time, and discussions of ways in which the inventor can participate in and benefit from the technology transfer process, means by which technology can be transferred, the protection of **intellectual** **property**, and license structuring.
CODE CLASSIFICATION 902
DESCRIPTEUR(S) PATENTS AND INVENTIONS*;Technology Transfer*
IDENTIFICATEUR(S) MEDICAL TECHNOLOGY TRANSFER;INVENTION PROTOTYPING;INTELLECTUAL PROPERTY PROTECTION

2/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-91-078069
TITRE ANGLAIS Writing, literary work and document in united kingdom copyright.
AUTEUR(S) WARNER J.
AFFILIATION Queen's Univ of Belfast, Belfast, N Irel
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT General Review
CODE LANGUE ENG
CODE PAYS D'ORIGINE GB
TITRE DU PERIODIQUE J Inf Sci (Amsterdam)
SOURCE VOL. 16; NO. 5; PP. 279-289; DP. 1990
CODE JOURNAL 9107
CODEN JISCDI
ISSN 0165-5515
RESUME Copyright would seem to be an appropriate subject for study by the discipline of social epistemology envisaged by Shera.Social epistemology was to be concerned with the intellectual processes of society as a whole, rather than primarily of the individual.This paper traces the development of significant terms in United Kingdom copyright: of writing, of a literary work representing intellectual skill or labour in which **intellectual** **property** can inhere, and of a document for legal deposit.The analysis is undertaken with a triple intention: first, to support the thesis that writing and the faculty for intellectual labour are unifying principles for documents and computers;secondly, to place the Copyright, Designs and Patents Act 1988 in its historical context;and, thirdly, to develop the divergence between a work in which copyright can subsist and a document for deposit into a measure for the diminishing proportion of published information captured by legal deposit.(Author

abstract)
CODE CLASSIFICATION 902; 903
DESCRIPTEUR(S) COPYRIGHTS*;United Kingdom*;INFORMATION SCIENCE;Information Use; INFORMATION DISSEMINATION;Reproduction
IDENTIFICATEUR(S) COPYRIGHT LAWS

3/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-91-065992
TITRE ANGLAIS Harnessing university research for competitiveness, industry support.
AUTEUR(S) CHEN K. T.
AFFILIATION IEEE Spectrum, New York, USA
TYPE DE DOCUMENT Journal Article
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE IEEE Spectrum
SOURCE VOL. 27; NO. 10; PP. 73-76; DP. Oct 1990
CODE JOURNAL 9106
CODEN IEESAM
ISSN 0018-9235
RESUME The effects of changes in the industrial R&D climate on research performed at universities in both the East and West are examined.The approaches to using university research for industrial problems taken by SRC, a nonprofit industry consortium based in Research Triangle Park, NC, by the National Science Foundation, and by other university-industry collaborations are described.In Europe, Great Britain has taken the lead in making its institutions of higher education more market-driven by requiring them to compete for contracts from industry as well as from the public sector.Its universities (and their European counterparts) also have become more conscious of the value of their **intellectual** **property**.In Japan, where industrial researchers have dominated and academic R&D has not enjoyed much esteem, support continues for fields of basic research where the Japanese have established themselves, such as controlled nuclear fusion and high-energy physics.Universities also receive considerable funding from the Ministry of Education, Science, and Culture, and sometimes additional funding is available at the prefectural level.
CODE CLASSIFICATION 901; 912
DESCRIPTEUR(S) ENGINEERING RESEARCH*;ENGINEERING EDUCATION
IDENTIFICATEUR(S) UNIVERSITY RESEARCH;UNIVERSITY INDUSTRY COOPERATION

4/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-91-012301
TITRE ANGLAIS Cooperative research opportunities expand with doe national labs.
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT General Review
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE Am Ceram Soc Bull
SOURCE VOL. 69; NO. 9; PP. 1462-1464; DP. Sep 1990
CODE JOURNAL 9102
CODEN ACSBA7
ISSN 0002-7812
RESUME The National Competitiveness Technology Transfer Act of 1989 grants national laboratories the authority to establish more

aggressive working relationships with state and local governments, industry, and universities for the purpose of developing and transferring commercially valuable technologies to the private sector.They now can negotiate Cooperative Research and Development Agreements (CRADA's) that offer many advantages both to U.S.industry and to the laboratories.Implicit in a CRADA is the idea that the participants are equal partners bringing to the interaction complementary identifiable capabilities that will lead to a new or improved product for the marketplace.The primary purposes of CRADA's are the advancement of technological knowledge and the effective transfer of technology, processes, R&D capabilities, and technical know-how to the private sector.

CODE CLASSIFICATION 812; 901
DESCRIPTEUR(S) CERAMIC MATERIALS*;Technology Transfer*;GLASS INDUSTRY;Research; RESEARCH LABORATORIES;Legislation
IDENTIFICATEUR(S) COMPETITIVENESS;INTELLECTUAL PROPERTY;COOPERATIVE RESEARCH;DOE NATIONAL LABS

5/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-90-114724
TITRE ANGLAIS Reverse-engineering someone else's software: is it legal?.
AUTEUR(S) SAMUELSON P.
AFFILIATION Univ of Pittsburgh, Pittsburgh, PA, USA
TYPE DE DOCUMENT Journal Article
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE IEEE Software
SOURCE VOL. 7; NO. 1; PP. 90-96; 9 Ref.; DP. Jan 1990
CODE JOURNAL 9010
CODEN IESOEG
ISSN 0740-7459
RESUME The author covers the legal issues of reverse-engineering someone else's software, explaining what reverse-engineering activities the courts have found to be acceptable and what legal applications are for the knowledge you gained from reverse engineering.She also defines double prime reverse engineering double prime and presents two theories regarding its use: the strict-constructionist theory, which holds that reverse-engineering copyrighted software is always illegal, and the pragmatist theory, which takes a much more liberal view of the fair-use privilege.
CODE CLASSIFICATION 723
DESCRIPTEUR(S) COMPUTER SOFTWARE*
IDENTIFICATEUR(S) REVERSE ENGINEERING;LEGAL FACTORS;INTELLECTUAL PROPERTY; COPYRIGHTED SOFTWARE

6/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-90-116593
TITRE ANGLAIS Some legal aspects of engineering.
AUTEUR(S) JARZEMBSKI W. B.
TYPE DE DOCUMENT Journal Article
CODE LANGUE ENG
CODE PAYS D'ORIGINE ZZ
TITRE DU PERIODIQUE IEEE Potentials
SOURCE VOL. 8; NO. 4; PP. 30-31; DP. Dec 1989
CODE JOURNAL 9010
CODEN IEPTDF
ISSN 0278-6648

RESUME Several legal areas of interest to the practicing engineer are discussed.They are: **intellectual** **property** (ideas, copyrights, patents);working papers (confidentiality, employees' right to copies);working conditions (environment, relations with others, compensation);government regulations (rules defining a qualified engineer);ethics (moral judgments resulting in legal consequence);and forensic engineering (responsibility for design decisions, depositions)
CODE CLASSIFICATION 901; 902
DESCRIPTEUR(S) ENGINEERING*;Legislation*
IDENTIFICATEUR(S) INTELLECTUAL PROPERTY;FORENSIC ENGINEERING;ENGINEERING ETHICS

7/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-90-110672
TITRE ANGLAIS Proceedings of the colloquium on manned space stations - legal issues.
CONFERENCE GENERALE Eur Space Agency Spec Publ ESA SP.
NUMERO CONGRES 13307
AUTEUR(S) GUYENNE D. (Ed.)
AFFILIATION ESA, Paris, Fr
TYPE DE DOCUMENT Conference Proceedings
CODE TRAITEMENT General Review
CODE LANGUE MUL
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE Eur Space Agency Spec Publ ESA SP.Publ by ESA Publ Div, Noordwijk, Neth
EDITEUR ESA Publ Div, Noordwijk, Neth.Proceedings of the Colloquium on Manned Space Stations - Legal Issues, Paris, Fr.Nov 7-8 1989.
SOURCE NO. 305; PP. 19-141; DP. 1989; LA. French, English
CODE JOURNAL 9009
CODEN ESPUD4
ISSN 0379-6566
RESUME This conference proceedings contains 15 papers on the development of a space law applicable to the International Space Station (Freedom).The legal issues considered include the definition of the concepts of space object and jurisdiction and control;the responsibility for damage to the Space Station or damage caused by it;the concept of partnership and international management;the conditions of access to and utilization of the Space Station;the legal status of astronauts;transnational movements of goods, persons and technologies;Space Station **intellectual** **property** rights and patent law;and protection of inventions made during commercial activity in space.Technical and professional papers from this conference are indexed and abstracted with the conference code no.13307 in the Ei Engineering Meetings (TM) database produced by Engineering Information, Inc.In French, English
CODE CLASSIFICATION 655; 902; 656; 657
DESCRIPTEUR(S) SPACE PLATFORMS*;International Agreements*;SPACECRAFT; International Law;PATENTS AND INVENTIONS;Legislation;SPACE RESEARCH;Protection
IDENTIFICATEUR(S) INTERNATIONAL SPACE STATION;SPACE LAW;INTERGOVERNMENTAL AGREEMENT; INTERNATIONAL PARTNERSHIP;INTELLECTUAL PROPERTY RIGHTS Z76EIREV

8/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-90-110681
TITRE FRANCAIS Les solutions possibles.

TITRE ANGLAIS Possible solutions
AUTEUR(S) MURPHY M. F.
AFFILIATION Service Juridique, Les Mureaux, Fr
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT General Review
CODE LANGUE FRE
CODE PAYS D'ORIGINE FR
TITRE DU PERIODIQUE Eur Space Agency Spec Publ ESA SP.Proceedings of the Colloquium on Manned Space Stations - Legal Issues, Paris, Fr.Nov 7-8 1989.
SOURCE NO. 305; PP. 123-126; 6 Ref.; DP. 1989
CODE JOURNAL 9009
CODEN ESPUD4
ISSN 0379-6566
RESUME The author is concerned with the problem of providing protection for inventions realized in space by private companies engaged in industrial activity in space for commercial purposes.The author proposes that inventions realized in space be protected by legislation on the patents of the company originating the experiments generating these inventions.The ultimate solution appears to be the construction of an international body which would issue a 'space patent', a unique industrial title of ownership.In French.
CODE CLASSIFICATION 656; 657; 902
DESCRIPTEUR(S) SPACE RESEARCH*;Protection*;PATENTS AND INVENTIONS;Legislation
IDENTIFICATEUR(S) SPACE MANUFACTURING;INTELLECTUAL PROPERTY PROTECTION;PATENT LAW

9/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-90-110680
TITRE ANGLAIS Production activities in space.The problems of protection.
AUTEUR(S) STAUDER D.
AFFILIATION Max Planck Inst for Foreign & Int Patent, Munich, West Ger
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT General Review
CODE LANGUE ENG
CODE PAYS D'ORIGINE DE
TITRE DU PERIODIQUE Eur Space Agency Spec Publ ESA SP.Proceedings of the Colloquium on Manned Space Stations - Legal Issues, Paris, Fr.Nov 7-8 1989.
SOURCE NO. 305; PP. 117-121; DP. 1989
CODE JOURNAL 9009
CODEN ESPUD4
ISSN 0379-6566
RESUME Patent law, as the most important instrument for the protection of technical innovations, can apply on space stations, objects, labs, modules, etc.In principle, there are mainly the same legal problems in patent law to be resolved both on space stations and on earth;the protection of new knowledge and inventions.The special difficulties are caused by the application of different national patent systems in the very confined area of a space station.(Author abstract
CODE CLASSIFICATION 656; 657; 902
DESCRIPTEUR(S) SPACE RESEARCH*;Protection*;PATENTS AND INVENTIONS;Legislation
IDENTIFICATEUR(S) SPACE MANUFACTURING;INTELLECTUAL PROPERTY PROTECTION;PATENT LAW

10/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-90-109676
TITRE FRANCAIS Les fabrications dans l'espace.Protection & valorisation des innovations le point de vue d'un utilisateur.

TITRE ANGLAIS	Manufacturing in space.Protection of and assigning a value to innovations.A user's viewpoint
AUTEUR(S)	RAYNAUD J. P.; VACHE V.
AFFILIATION	Innovation & de la Prospective, Paris, Fr
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	General Review
CODE LANGUE	FRE
CODE PAYS D'ORIGINE	FR
TITRE DU PERIODIQUE	Eur Space Agency Spec Publ ESA SP.Proceedings of the Colloquium on Manned Space Stations - Legal Issues, Paris, Fr.Nov 7-8 1989.
SOURCE	NO. 305; PP. 115-116; 3 Ref.; DP. 1989
CODE JOURNAL	9009
CODEN	ESPUD4
ISSN	0379-6566
RESUME	Space agencies are promoting the use of space by manufacturers who can, over a period of time, help to turn a profit on certain investments made by these agencies.However, in order to induce manufacturers to take the risk of manufacturing in space, it is necessary to ensure the protection of their discoveries.Manufacturing under microgravity conditions should be particularly attractive to the bio-technology industry for the production of natural or modified proteins.The authors cite the case of a collaborative project involving manufacturers from several different European countries for carrying out space bioseparation and note the minimum requirement defined by the partners with regard to the protection of their interests.In French.
CODE CLASSIFICATION	655; 656; 657; 902; 461
DESCRIPTEUR(S)	SATELLITES*;Zero Gravity Materials Processing*;SPACE RESEARCH; Protection;PATENTS AND INVENTIONS;BIOTECHNOLOGY
IDENTIFICATEUR(S)	SPACE MANUFACTURING;SPACE BIOSEPARATION;INTELLECTUAL PROPERTY PROTECTION;MICROGRAVITY MATERIALS PROCESSING

11/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-110670
TITRE ANGLAIS	Space station **intellectual** **property** rights and u.S.patent law.
AUTEUR(S)	GANTT J. B.
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	General Review
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	ZZ
TITRE DU PERIODIQUE	Eur Space Agency Spec Publ ESA SP.Proceedings of the Colloquium on Manned Space Stations - Legal Issues, Paris, Fr.Nov 7-8 1989.
SOURCE	NO. 305; PP. 107-114; 5 Ref.; DP. 1989
CODE JOURNAL	9009
CODEN	ESPUD4
ISSN	0379-6566
RESUME	This paper examines the principles governing **intellectual** **property** rights associated with Space Station activity, set forth in Article 21 of the Intergovernmental Agreement.The principles, which are largely choice-of-law provisions, are grounded in the Space Station jurisdictional maxim that the provider of a Space Station flight element retains 'jurisdiction and control' over it and is responsible for registering it as a space object.The current status of United States Patent Law as it relates to inventions in outer space is examined and the

	provisions of pending legislation in implementation of the IGA and clarifying U.S.law are analyzed.(Edited author abstract)
CODE CLASSIFICATION	655; 902
DESCRIPTEUR(S)	SPACE PLATFORMS*;International Agreements*;PATENTS AND INVENTIONS; Legislation
IDENTIFICATEUR(S)	INTERNATIONAL SPACE STATION;SPACE STATION INTELLECTUAL PROPERTY; INTELLECTUAL PROPERTY PROTECTION;U S PATENT LAW

12/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-107881
TITRE ANGLAIS	Protect your **intellectual** **property**.
AUTEUR(S)	OMAN P. W.; SAEED T.
AFFILIATION	Dep of Comput Sci, Univ of Idaho, ID, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Applications
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	IEEE Potentials
SOURCE	VOL. 9; NO. 2; PP. 23-24; DP. Apr 1990
CODE JOURNAL	9009
CODEN	IEPTDF
ISSN	0278-6648
RESUME	An explanation is given of the four basic mechanisms for safeguarding **intellectual** **property** rights: copyrights, patent rights, trademarks, and trade secret laws.The extent to which they can be applied to computer hardware and software, and to what purpose and with what results, is explored
CODE CLASSIFICATION	902; 722; 723
DESCRIPTEUR(S)	PATENTS AND INVENTIONS*;COMPUTER HARDWARE;COMPUTER SOFTWARE;TRADE MARKS;LEGISLATION
IDENTIFICATEUR(S)	INTELLECTUAL PROPERTY;TRADE SECRET LAWS

13/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-098289
TITRE ANGLAIS	**Intellectual** **property** protection for neural networks.
AUTEUR(S)	WENSKAY D. L.
AFFILIATION	Harness, Dickey and Pierce, Troy, MI, USA
TYPE DE DOCUMENT	Journal Article
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Neural Networks
SOURCE	VOL. 3; NO. 2; PP. 229-236; 3 Ref.; DP. 1990
CODE JOURNAL	9008
CODEN	NNETEB
ISSN	0893-6080
RESUME	The principal forms of **intellectual** **property** protection for neural networks in the United States include patents, copyrights, trade secrets, and mask works.As with previous forms of new technology, some aspects of neural networks transcend existing legal categories.This is primarily due to their dynamic nature, as well as the impossibility of predefining the trained state of the system.As a result, these aspects of neural network technology may be left with limited protection until Congress or the courts respond by customizing current laws to fit this technology, much as they have already done with computer software.This article discusses the ways in which neural networks pose novel issues in **intellectual** **property** law, issues

	that will challenge the ability of the legal system to provide adequate protection by stretching the current categories.A strategy is recommended for inventors and attorneys in this field to mitigate the weakness in current laws by making optimum use of a combination of the existing forms of protection.(Author abstract)
CODE CLASSIFICATION	723; 902
DESCRIPTEUR(S)	SYSTEMS SCIENCE AND CYBERNETICS*;Neural Nets*;PATENTS AND INVENTIONS
IDENTIFICATEUR(S)	INTELLECTUAL PROPERTY;COPYRIGHTS;TRADE SECRETS

14/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-070510
TITRE ANGLAIS	Patents and technology transfer.
AUTEUR(S)	WEISBACH J. A.; BURKE H. T.
AFFILIATION	Rockefeller Univ, New York, NY, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	General Review
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Trends Biotechnol
SOURCE	VOL. 8; NO. 2; PP. 31-35; DP. Feb 1990
CODE JOURNAL	9006
CODEN	TRBIDM
ISSN	0167-9430
RESUME	In this article, we review briefly the major historical events in the evolution of the process, describe the current situation in technology transfer in universities and highlight points of importance in the prosecution and maintenance of a strong **intellectual** **property** program in the area of biotechnology.It is shown that a combination of a carefully monitored patent program and a vigorous licensing program are required if a University Technology Transfer program is to be effective.However, once established, it should be an important source of revenue and public recognition for both the inventor and the parent university
CODE CLASSIFICATION	902; 901
DESCRIPTEUR(S)	PATENTS AND INVENTIONS*;TECHNOLOGY;Economic and Sociological Effects;BIOTECHNOLOGY;Technology Transfer
IDENTIFICATEUR(S)	INTELLECTUAL PROPERTY PROGRAM;COHEN BOYER GENE SPLICING;LICENSING AGREEMENT;UNIVERSITY TECHNOLOGY TRANSFER

15/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-050990
TITRE ANGLAIS	Legal trends and agricultural biotechnology.Effects on developing countries.
AUTEUR(S)	BARTON J. H.
AFFILIATION	Stanford Univ, Stanford, CA, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Economic/Cost Data/Market Survey; General Review
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Trends Biotechnol
SOURCE	VOL. 7; NO. 10; PP. 264-268; 14 Ref.; DP. Oct 1989
CODE JOURNAL	9005
CODEN	TRBIDM
ISSN	0167-9430
RESUME	The application of agricultural biotechnology in developing

	nations is influenced by certain current legal trends.In addition to the traditional issues of **intellectual** **property** and environmental safety, the practical regulatory issues that restrict biotechnology research and application are considered in this paper.(Edited author abstract)
CODE CLASSIFICATION	802; 821; 902; 911; 454
DESCRIPTEUR(S)	BIOTECHNOLOGY*;Agricultural Applications*;AGRICULTURE;Developing Countries;LEGISLATION;PATENTS AND INVENTIONS;ECONOMICS; ENVIRONMENTAL PROTECTION
IDENTIFICATEUR(S)	INTELLECTUAL PROPERTY PROTECTION;COMMON FOREIGN INVESTMENT AND TECHNOLOGY LICENSING CODE

16/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-019237
TITRE ANGLAIS	Cooperative research at mcc: a focus on semiconductor-related efforts.
AUTEUR(S)	DOVE G. A.
AFFILIATION	Microelectron & Comput Technol Corp, Austin, TX, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Management Aspects
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Proc IEEE
SOURCE	VOL. 77; NO. 9; PP. 1364-1375; 20 Ref.; DP. Sep 1989
CODE JOURNAL	9002
CODEN	IEEPAD
ISSN	0018-9219
RESUME	The Microelectronics and Computer Technology Corporation (MCC) is a cooperative research venture owned by US corporations.MCC's mission is to accelerate the creation, delivery, and commercialization of advanced microelectronic and computer technology by providing participants with timely and competitive research results.The author presents the unique history, operation, and research and technology transfer activities of the collaborative venture.The review of MCC's five research efforts focuses primarily on the computer-aided design, packaging/interconnect, and high-temperature superconductor programs.Selected research results are presented, and shareholder use of MCC technology in internal processes, as well as products, is discussed.Concluding remarks summarize MCC's accomplishments and continuing challenges.
CODE CLASSIFICATION	713; 714; 723; 701
DESCRIPTEUR(S)	MICROELECTRONICS*;Research*;COMPUTERS;Research;COMPUTER AIDED DESIGN;COMPUTER SOFTWARE;ELECTRONICS PACKAGING;SUPERCONDUCTIVITY; Research
IDENTIFICATEUR(S)	MICROELECTRONICS COMPUTER TECHNOLOGY RESEARCH;INTELLECTUAL PROPERTY;TECHNOLOGY TRANSFER

17/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-019236
TITRE ANGLAIS	Semiconductor research corporation: cooperative research.
AUTEUR(S)	CAVIN R. K.; SUMNEY L. W.; BURGER R. M.
AFFILIATION	Semicond Research Corp, Research Triangle Park, NC, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Applications; Management Aspects; Literature Review/Bibliography
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US

TITRE DU PERIODIQUE	Proc IEEE
SOURCE	VOL. 77; NO. 9; PP. 1327-1344; 74 Ref.; DP. Sep 1989
CODE JOURNAL	9002
CODEN	IEEPAD
ISSN	0018-9219
RESUME	The SRC (Semiconductor Research Corporation) was formed in 1982 to conduct generic, cooperative university research in the field of integrated circuits.An overview is provided of the methodologies used by the SRC for the identification of pacing integrated-circuit technologies, for research program planning and management, and for the transfer of research results to members.Several case studies are developed that illustrate the SRC approach to the conduct of research and that give a perspective on the broad spectrum of research results being produced.The SRC has found that the process of defining generic research goals, followed by the development and implementation of research plans to achieve the stated goals, provides effective focus and metrics for measuring research progress.It is the SRC's experience that focused university research can provide substantial contributions to the advancement of semiconductor technology as well as an additional work force to enhance the industry, university, and government technical infrastructure of the United States.
CODE CLASSIFICATION	713; 714; 723
DESCRIPTEUR(S)	MICROELECTRONICS*;Research*;INTEGRATED CIRCUITS;Research;COMPUTER AIDED DESIGN;COMPUTER AIDED MANUFACTURING
IDENTIFICATEUR(S)	SEMICONDUCTOR RESEARCH CORPORATION;IC COOPERATIVE RESEARCH; TECHNOLOGY TRANSFER;INTELLECTUAL PROPERTY

18/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-90-019235
TITRE ANGLAIS	New joint r&d.
AUTEUR(S)	OUCHI W. G.
AFFILIATION	Univ of California, Anderson Graduate Sch of Manage, Los Angeles, CA, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Management Aspects
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	Proc IEEE
SOURCE	VOL. 77; NO. 9; PP. 1318-1326; 12 Ref.; DP. Sep 1989
CODE JOURNAL	9002
CODEN	IEEPAD
ISSN	0018-9219
RESUME	During the 1980s, a new form of collaborative research and development emerged in Europe, the US, and Japan.In this new form of joint R&D, companies that compete against one another join together for the purpose of creating new process technology in specified domains.This collaboration among competitors is justified for the development of technologies that many companies will ultimately use in a common manner.Such leaky technology typically cannot be effectively protected by patent or other means, and thus will not be developed except through collaborative means, in which those who benefit jointly incur the R&D expense.In Europe and Japan, governments typically provide 50-70% of the cost of such a joint project, while in the United States, government support for joint R&D is just now beginning to become available.The R&D collaboratives are described as being of two

	types: the secretariat, which is a coordinative body, and the operating entity, which operates its own R&D laboratory facilities.The conditions under which each organizational form appears, as well as the kinds of effort each form typically undertakes, are described.
CODE CLASSIFICATION	713; 714; 901; 912
DESCRIPTEUR(S)	MICROELECTRONICS*;Research*;ENGINEERING;Research
IDENTIFICATEUR(S)	LEAKY INTELLECTUAL PROPERTY;MULTICOMPANY COLLABORATION;JOINT R D

19/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-89-125979
TITRE ANGLAIS	Property rights in knowledge-based products and applications:
AUTEUR(S)	CLARKE R.
AFFILIATION	Australian Natl Univ, Canberra, Aust
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	General Review; Literature Review/Bibliography; Management Aspects
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	AU
TITRE DU PERIODIQUE	Expert Syst
SOURCE	VOL. 6; NO. 3; PP. 158-165; 46 Ref.; DP. Aug 1989
CODE JOURNAL	8912
CODEN	EXSYEX
ISSN	0266-4720
RESUME	As Knowledge-Based Technology (KBT) becomes commercially exploitable, large financial commitments are being made, and businessmen are increasingly concerned to protect those investments.The nature of property rights in software is outlined.Issues arising in relation to software in general, and KBT in particular, are considered, and some significant areas of uncertainty are identified.It should not be assumed that investment in KBT-based products and applications automatically gives rise to property rights in the resulting software.Investors and technologists should seek legal advice as to whether, in the relevant legal jurisdictions, copyright or other **intellectual** **property** rights apply to their software.Further, they should take the steps necessary to establish and retain such rights.(Author abstract)
CODE CLASSIFICATION	723; 902
DESCRIPTEUR(S)	ARTIFICIAL INTELLIGENCE*;Expert Systems*;COMPUTER SOFTWARE; Legislation
IDENTIFICATEUR(S)	KNOWLEDGE BASED TECHNOLOGY KBT;PROPERTY RIGHTS

20/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-89-111260
TITRE ANGLAIS	U.S.government policies and hypersonic flight in the 21st century.
AUTEUR(S)	GOLDBERG T. R.
AFFILIATION	Radian Corp, Herndon, VA, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Applications; Economic/Cost Data/Market Survey; Management Aspects
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	IEEE Aerosp Electron Syst Mag .First International Conference on Hypersonic Flight in the Twenty-First Century, Grand Forks, ND, USA.Sep 1988.
SOURCE	VOL. 4; NO. 5; PP. 26-31; 5 Ref.; DP. May 1989
CODE JOURNAL	8911
CODEN	IAEMEE

ISSN	0885-8985
RESUME	The author examines the potentially negative impact of the US regulations on the development of advanced materials, components, and systems.He gives high priority to modification of US antitrust laws if the US is to have the best possible opportunity to compete with more aggressive economies abroad.He identifies export controls as limiting the availability of data to US firms engaged in developing commercial applications.He asserts that policies must also be enacted to better protect **intellectual** **property** rights.
CODE CLASSIFICATION	658; 901; 911; 902
DESCRIPTEUR(S)	AEROSPACE ENGINEERING*;United States*;TECHNOLOGY;ECONOMICS;PATENTS AND INVENTIONS
IDENTIFICATEUR(S)	HYPERSONIC FLIGHT;INTELLECTUAL PROPERTY RIGHTS;US ANTITRUST LAWS

21/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-89-095605
TITRE ANGLAIS	**Intellectual** **property** reforms and international trade.
AUTEUR(S)	NEWMAN D. B.
AFFILIATION	George Washington Univ, Dep of Electrical Engineering & Computer Science, Washington, DC, USA
TYPE DE DOCUMENT	Journal Article
CODE TRAITEMENT	Economic/Cost Data/Market Survey
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	IEEE Commun Mag
SOURCE	VOL. 27; NO. 1; PP. 41-42; DP. Jan 1989
CODE JOURNAL	8909
CODEN	ICOMD9
ISSN	0163-6804
RESUME	The **intellectual** **property** reforms relating to international trade contained in the Omnibus Trade and Competitiveness Act of 1988 are examined.These include improving process patent protection;obtaining exclusion orders from the International Trade Commission under Section 337 of the Tariff Act of 1930, which has been made easier for **intellectual** **property** owners;broadening the power of the United States Trade Representative;and providing a more prominent role for **intellectual** **property** rights in US trade negotiations
CODE CLASSIFICATION	716; 911; 902; 717; 718
DESCRIPTEUR(S)	TELECOMMUNICATION*;Marketing*;LEGISLATION;INDUSTRIAL ECONOMICS
IDENTIFICATEUR(S)	INTERNATIONAL TRADE;INTELLECTUAL PROPERTY RIGHTS

22/35 - (C) C.compendex

NUMERO SIGNALEMENT	EI-89-091772
TITRE ANGLAIS	**Intellectual** **property** right issues in the new trade bill.
AUTEUR(S)	HOFFMAN G. M.; MARCOU G. T.
AFFILIATION	Dickstein, Shapiro & Morin, Washington, DC, USA
TYPE DE DOCUMENT	Journal Article
CODE LANGUE	ENG
CODE PAYS D'ORIGINE	US
TITRE DU PERIODIQUE	IEEE Technol Soc Mag
SOURCE	VOL. 7; NO. 3; PP. 4-8, 10; DP. Sep 1988
CODE JOURNAL	8909
CODEN	ITSMDC
ISSN	0278-0097
RESUME	A discussion is presented of major features of 'The Omnibus Trade

and Competitiveness Act of 1987.' Various provisions to strengthen the **intellectual** **property** protection afforded to US inventors and to the owners of US **intellectual** **property** rights are detailed.Such provisions include: simplifying the patent infringement proceedings under paragraph 337 of the Tariff Act;providing patent owners for the first time with a new cause of action for infringement of a US process patent;and requiring the US Trade Representative to initiate accelerated investigations of and impose sanctions against countries that deny adequate and effective protection of **intellectual** **property** rights

CODE CLASSIFICATION 902
DESCRIPTEUR(S) PATENTS AND INVENTIONS*;LEGISLATION
IDENTIFICATEUR(S) INTELLECTUAL PROPERTY RIGHTS;INTERNATIONAL TRADE;COPYRIGHT PROTECTION;PATENT INFRINGEMENT PROCEEDINGS

23/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-89-072622
TITRE ANGLAIS Breaking up is hard to do - part 1.
AUTEUR(S) BURSHTEIN S.
AFFILIATION Blake, Cassels & Graydon, Toronto, Ont, Can
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT Economic/Cost Data/Market Survey; General Review; Management Aspects
CODE LANGUE ENG
CODE PAYS D'ORIGINE CA
TITRE DU PERIODIQUE Eng Dig (Toronto)
SOURCE VOL. 35; NO. 2; PP. 20-21; DP. Apr 1989
CODE JOURNAL 8908
CODEN EDIGAN
ISSN 0013-7901
RESUME This series of articles deals with several areas of **intellectual** **property** law which impact on the relationship, or its termination, between an engineer and his employer.This first part deals with the duty of fidelity and the obligations imposed in relation to confidential information.(Author abstract
CODE CLASSIFICATION 901; 912; 902
DESCRIPTEUR(S) ENGINEERS*;Contracts*;ENGINEERING;Professional Aspects;EMPLOYMENT;Contracts
IDENTIFICATEUR(S) FIDUCIARY DUTIES;CONFIDENTIAL INFORMATION

24/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-89-031212
TITRE ANGLAIS Protecting property rights: patents, trademarks, and copyrights.
AUTEUR(S) CALDERWOOD J. A.
AFFILIATION Grove, Jaskiewicz, Gilliam & Cobert, Washington, DC, USA
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT General Review; Management Aspects
CODE LANGUE ENG
CODE PAYS D'ORIGINE US
TITRE DU PERIODIQUE Am Ceram Soc Bull
SOURCE VOL. 67; NO. 12; PP. 1917-1920; DP. Dec 1988
CODE JOURNAL 8904
CODEN ACSBA7
ISSN 0002-7812
RESUME In recent years, the legal issues of designing have come to focus as a new design element.Today, not only is product liability a

dominant issue but also are copyright, trademark, and patent laws.As design becomes the critical step between manufacturer and consumer, designers and manufacturers are protecting their invested interest.In this issue the Design Division has edited papers that deal with the legal issues of design.Questions are often asked as to whether the employment contract between the employer and employee should address development of **intellectual** **property**, and if so, whether that agreement is enforceable in the courts

CODE CLASSIFICATION 812; 902
DESCRIPTEUR(S) CERAMIC PRODUCTS*;Patents and Inventions*;GLASS MANUFACTURE; Patents and Inventions
IDENTIFICATEUR(S) INTELLECTUAL PROPERTY LAW;TRADE NAMES;PATENT PROTECTION;NOVEL PROCESSES

25/35 - (C) C.compendex
NUMERO SIGNALEMENT EI-88-048233
TITRE ANGLAIS Semiconductor chip protection - part 1.
AUTEUR(S) BURSHTEIN S.
AFFILIATION Blake, Cassels & Graydon, Toronto, Ont, Can
TYPE DE DOCUMENT Journal Article
CODE TRAITEMENT Applications
CODE LANGUE ENG
CODE PAYS D'ORIGINE CA
TITRE DU PERIODIQUE Eng Dig (Toronto)
SOURCE VOL. 33; NO. 7; PP. 10-11; DP. Aug 1987
CODE JOURNAL 8805
CODEN EDIGAN
ISSN 0013-7901
RESUME In today's computer age, one of the most valuable forms of **intellectual** **property** is the right to prohibit reproduction of a semiconductor chip.Computers were originally developed without semiconductor chips.With the miniaturization of circuits and the development of semiconductor chips, computers have become more valuable tools.Behind the manufacture of any chip there is an extremely elaborate 3D design.The first step in the production of a chip is the making of 'masks' that are in the nature of photographic templates and are used in a way somewhat reminiscent of a photographic process to etch or deposit microscopic circuits and components on a silicon chip.A different mask is needed to produce each layer making up the chip.(Author abstract
CODE CLASSIFICATION 714; 914
DESCRIPTEUR(S) SEMICONDUCTOR DEVICES*;Protection*;SEMICONDUCTOR DEVICE MANUFACTURE;SECURITY SYSTEMS;LEGISLATION
IDENTIFICATEUR(S) SEMICONDUCTOR CHIP;MASKING

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14. Abstract

Intellectual property has become one of the keys to the management of high technology sectors and communication systems. The concept is, however, used to describe a variety of different situations influenced by the combined effect of technical and economic change.

From this results an intensive legal activity, not only in the passing of new legislation and the creation of jurisprudence, but also in the field of contractual and professional practice, which is becoming more important.

Although this process can be observed in a number of countries, it is far from being common to them. The clash of national, and even regional concepts has already begun with the internationalisation of technology transfer activity and the dissemination of information products and services.

The aim of this Lecture Series is therefore to provide a few markers, to look at the prospects for these trends and to assess the stakes involved, so as to enable better evaluation and control of national and international legal practices. It is thus addressed to decision-makers in both the public and private sectors, as well as to the managers of this strategic potential and those involved in the information market.

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AGARD Lecture Series 181 Advisory Group for Aerospace Research and Development, NATO INTELLECTUAL PROPERTY RIGHTS Published October 1991 238 pages Intellectual property has become one of the keys to the management of high technology sectors and communication systems. The concept is, however, used to describe a variety of different situations influenced by the combined effect of technical and economic change. From this results an intensive legal activity, not only in the passing of new legislation and the creation of jurisprudence, but also in the field of contractual and professional practice, which is becoming more important. P.T.O.	AGARD-LS-181 Copyrights Patents Technology transfers Information systems	AGARD Lecture Series 181 Advisory Group for Aerospace Research and Development, NATO INTELLECTUAL PROPERTY RIGHTS Published October 1991 238 pages Intellectual property has become one of the keys to the management of high technology sectors and communication systems. The concept is, however, used to describe a variety of different situations influenced by the combined effect of technical and economic change. From this results an intensive legal activity, not only in the passing of new legislation and the creation of jurisprudence, but also in the field of contractual and professional practice, which is becoming more important. P.T.O.	AGARD-LS-181 Copyrights Patents Technology transfers Information systems
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