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WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

STANDING COMMITTEE ON COPYRIGHT AND RELATED RIGHTS

First Session

Geneva, November 2 to 10, 1998

agenda item 5: protection of databases

information received from intergovernmental
and non-governmental organizations

Memorandum prepared by the International Bureau

1. The Information Meeting on Intellectual Property in Databases, held in Geneva, from September 17 to 19, 1997, adopted the following recommendation (document DB/IM/6 Rev., paragraph 12 (ii) and (iii)):

“(ii) the International Bureau... should invite Member States of WIPO and the European Community, as well as the intergovernmental and non-governmental organizations invited to the Information Meeting, to submit, by the end of April 1998, information concerning the questions included in the above-mentioned document and on any other related questions they may find relevant;

“(iii) the International Bureau should make available such information in a concise form, by the end of June 1998, to the Member States of WIPO and the European Community, so as to facilitate consultations on the issues concerning intellectual property in databases at national and regional level, as well as to the organizations mentioned in item (ii), on the understanding that the information received from intergovernmental and non-governmental organizations will be made available in the languages in which it is submitted;”

2. This document contains the submissions received from Intergovernmental and Non-governmental Organizations. In accordance with the decision mentioned in paragraph 1, these submissions have not been translated into other languages.

3. The submissions received from the Member States of WIPO and the European Community are contained in document SCCR/1/INF/2, which is available in English, French and Spanish.

4. As a consequence of the new governance structure of WIPO which was adopted during the Assemblies of the Member States of WIPO in March 1998, in conjunction with the Program and Budget for the biennium 1998-1999, the activity described in Sub-program 10.3 (Protection of Databases) is now within the competence of the Standing Committee on Copyright and Related Rights.

[Annex follows]

ANNEX

I. INTERGOVERNMENTAL ORGANIZATIONS

WORLD METEOROLOGICAL ORGANIZATION (WMO)

(Referring to the “Analytic Table of Questions Raised,” document DB/IM/7:)

It may be recalled that WMO submitted a discussion paper during the Information Meeting (DB/IM/4). This paper, as well as the statement of the WMO representative, contain the views of our Organization. For the most part, the questions WMO has raised have been incorporated in the above-mentioned analytical table. Nonetheless, I would like to suggest the consideration of the following:

1. Please add the question “What should be the objectives, guiding principles and framework for an international database protection mechanism?”

This should be a fundamental consideration prior to exploring a *sui generis* system of protection or other possible alternatives. For our part, we believe that the principle of the full and open exchange of data and information vital to the protection of life and property, safeguarding the environment and addressing global issues should be a recognized principle and contained in any international database protection mechanism. In particular, the free and unrestricted exchange of meteorological and related data should be assured, especially those relating to natural disaster mitigation activities such as severe weather warnings.

2. The second question under the section “The impact of a possible *sui generis* system on the access to databases” reads: Would such protection aim to restrict, or result in restriction of, certain non-commercial information, for example, meteorological data, and, in general, publicly financed databases?

The specific reference to meteorological data is appreciated. It is suggested that this be phrased in a less negative way as follows: “Would such protection *promote, or result in the promotion of,* or will it aim to restrict or result in the restriction of *the availability and exchange of* certain non-commercial information, for example meteorological data, and, in general, publicly financed databases?” (words in italics added).

3. Under the “Exceptions” part of the section “Main elements of a protection system,” it is suggested that “scientific and technical data, such as meteorological data” be included in the list given under the third question which begins with “What exceptions may be necessary for...?”

It would be highly appreciated if the above suggestions can be taken into consideration in the ongoing process on this subject under the aegis of WIPO.

II. NON-GOVERNMENTAL ORGANIZATIONS

INTERNATIONAL COUNCIL FOR SCIENCE (ICSU)

The International Council for Science (ICSU) was created in 1931 to promote international scientific activities in all areas of natural science and their applications for the benefit of humanity. More than 135 nations adhere to ICSU or its scientific unions. Since its creation, a major objective of ICSU has been to assure that scientists in all nations can obtain access to data and other types of technical information that are essential to their work. In April, 1998, the name of ICSU was changed to the International Council for Science (formerly International Council of Scientific Unions).

ICSU and its member organizations have become increasingly concerned about the recent proposals pending before WIPO and some national legislatures to introduce a new form of *sui generis* intellectual property protection for the contents of databases, which would fall outside the traditional patent and copyright regimes. Because of this concern, ICSU and its Committee on Data for Science and Technology (CODATA) have jointly created a Group on Data and Information. This document has been prepared by the Group and has not been reviewed by ICSU.

I. Need For and Justification of a *Sui Generis* System of Protection

Neither the European Union nor the World Intellectual Property Organization ever commissioned an impartial legal and economic study to demonstrate the shortcomings of existing laws pertaining to investments in databases. In the absence of such a study, assertions that investors are deterred by a perceived lack of incentives remain anecdotal and unsubstantiated, and they ignore the arsenal of legal and technical measures currently available to data vendors. In fact, the rapid growth in the past few years of electronic databases of all kinds, including hundreds aimed at the scientific market, hardly suggests a lack of incentives.

The need for a new intellectual property right has not been demonstrated

Copyright laws still cover the bulk of all factual compilations and databases, because only a minimum quantum of selection or arrangement is required to qualify under these laws. Thus, they suffice to protect most investors against wholesale copying for the purpose of developing a competing product.

To the extent that copyright law fails to protect the contents of any given database, contract and unfair competition laws provide additional layers of protection. Access to all databases transmitted via the Internet or other telecommunications networks is already subject to the contractual conditions of the providers, as is the distribution of data via CD-ROMs. As regards on-line bibliographic databases covering papers in scientific journals and other such dynamic databases, which are updated on a continuing basis, the provider can simply deny copiers further access to them. Because the value of these databases derives primarily from their being up-to-date, denial of access will quickly reduce the value of an old database in the

customer's possession.

Moreover, contract law has been reinforced by self-help technical measures, such as encryption devices, technical brakes on downloading, and electronic "tagging," which provide database makers with formidable weapons to protect their investments against free-riding appropriations of the data they compile. These technological measures are expected to become even more powerful in the future.

In the event that copyrights, contracts, and self-help technical devices failed to repress wholesale copying—a remote possibility, in our view—the unfair competition laws already extant in most countries would suffice to interdict parasitical or market-destroying business practices. The fact that courts have shown a willingness to apply unfair competition law in appropriate cases indicates a viable alternative to far reaching intellectual property legislation. If necessary, unfair competition laws can be fine-tuned to meet future needs as they emerge.

Given this arsenal of weapons, there appears to be no basis for claiming that would be investors in database production face an imminent loss of incentives. Nor does it seem wise to proceed further with untried and socially costly forms of legislative relief for a problem whose existence has not been demonstrated. On the contrary, contracts law—in combination with encryption devices and other technology—now appears to provide such a formidable means of regulating the flow of data that there is, if anything, a need to legislate limits on the burdensome terms and conditions that some on-line data providers have contractually imposed upon educational and research libraries.

ICSU's Position in a Nutshell

The ICSU Group contends that the EU Directive represents an unwise and unjustified response to the database publishers' weak case for relief, one which was based on insufficient study of the relevant empirical and economic data. The Group further contends that implementation or emulation of a *sui generis* exclusive property right in the contents of databases along the lines of the EU Directive could irreparably disrupt the full and open flow of scientific data which ICSU has long labored to achieve, and that it could otherwise seriously compromise the worldwide scientific and educational missions of its member bodies and agencies. In this document, the ICSU Group has accordingly sought to acquaint governments, inter-governmental agencies, and other concerned parties with the growing body of evidence that supports the following conclusions:

- There is, in fact, no failure of incentives that would justify enacting a new exclusive property right in the contents of databases.
- If such a failure of incentives should materialize in the future, other, socially more desirable means of dealing with it are available in domestic laws.
- Even if these socially more desirable alternatives were to be adopted, special care must be taken to promote the public interest in science, education, and research libraries and to ensure that these institutions are left in no worse a position than they occupied before any such remedial action was taken.
- No new international treaty regulating intellectual property rights in the contents of databases should be proposed or adopted without serious, sustained, and impartial study of all

its potential effects. As stakeholders in the information economy, the worldwide scientific and educational communities should participate fully in the relevant deliberations.

- Any proposed treaty must respect the special needs of the developing and least-developed countries, which look to the acquisition of scientific and technical knowledge as the foundation of their future economic progress.

- If further studies eventually lead to a consensus concerning the need for international action to protect the contents of databases, any such action should be premised upon a cautious, minimalist approach that leaves maximum flexibility to each participating state.

In the following sections, we seek briefly to explain and support these conclusions.

II. Nature and Extent of a Possible *Sui Generis* System of Protection

The scientific community does not condone free-riding and does not oppose reasonable measures to encourage investment in the compilation of commercial databases, if a demonstrable need should arise. However, the Group believes that investment should not result in “ownership” of data discovered in nature or in the power to exercise an exclusive property right in the building blocks of knowledge.

The EU Directive is not a suitable model

The ICSU Group, therefore, opposes efforts to internationalize the EU’s *sui generis* database law. This law posits an exclusive property rights model that is paradoxically stronger than the mature copyright paradigm itself and that also lacks the kind of public-interest safeguards and limitations that are built into the “cultural bargain” underlying the copyright paradigm. The EU Directive and, implicitly, the proposals made to WIPO in 1996, which are based on that model, have many troublesome features:

- The creation of an absolute exclusive property right in the contents of databases.
- Reliance on a very broad and inclusive definition of databases that potentially covers every information product that has heretofore been freely available from the public domain.

- The introduction of long and potentially perpetual terms of protection based on unlimited renewal rights in a database as a whole whenever updates are added to it.

- No evolving public domain from which previously compiled data could ever freely be used.

- No mandatory public-interest limitations of any consequence for the preservation of public-good activities, such as research, education, and libraries.

- No mandatory legal licenses or other limitations requiring sole-source providers to make data available on reasonable terms and conditions, with due regard for the preservation of competition and the public interest in research, education, and economic development.

- Such a broad and pervasive concept of use or extraction of a substantial part of a protected database as to vitiate the one exception that nominally allows use of insubstantial parts of that same database.

- No preservation of value-adding or transformative user rights either in the same or distant markets.
- The introduction of strong civil (and, possibly, even criminal) remedies for infringement that could have a chilling effect on the use of data for any purpose, including public-good purposes.

The end result is a blueprint for an extremely restrictive intellectual property right, one that will become engrafted upon the natural monopolies that already characterize the market for databases and which could lead to effective ownership of the building blocks of knowledge.

If data piracy should empirically become more of a problem than it has proved to be so far, then the appropriate remedy is to attack piratical conduct as such, mainly by means of unfair competition law. Therefore, the ICSU Group feels that there should be no presumption that the EU's *sui generis* database regime is the appropriate model to follow. On the contrary, the first lawsuits based on the EU Database Directive may well prove that the Directive is a product of inadequate theoretical and empirical study, that it contains serious technical and conceptual flaws, and that it is economically unsound. It is also worth noting that another EU Directive, i.e., the Council Directive on the Freedom of Access to Information on the Environment, requires that relevant data collected by public authorities must be provided at a reasonable cost to users, and that provisions of the EU Directive on Databases may be inconsistent with this requirement. Until these issues are properly evaluated, the rest of the world cannot afford to adopt the intellectual property laws of the European Union.

In sum, the Group agrees that courts and legislatures may legitimately repress certain uses of data when these uses amount to parasitical or predatory forms of competition that inhibit investment in the compilation of commercial databases. If and when it is shown that more is needed, the Group could support minimalist, pro-competitive efforts to interdict parasitical copying, but cannot support the imposition of an exclusive property right in data.

Action on an international treaty is premature

The foregoing discussion reveals the extent to which *sui generis* database protection remains untried and untested even in the European Union, whose member states are still implementing the EU Directive of 1996. Furthermore, the need for such regimes has yet to be demonstrated in the rest of the world. There is, accordingly, no solid foundation for adopting an international treaty concerning the legal protection of non-copyrightable databases, because treaties governing international intellectual property rights require a consensus about needs and modalities that will take years, if not decades, to form.

In the meantime, the most appropriate action for WIPO is to undertake a serious, impartial, broad-ranging study of the issues, without any preconceptions or biases with regard to any particular set of proposals or solutions. The scientific and educational communities should participate fully in these deliberations, along with all other stakeholders whose interests might be affected by an international treaty to encourage investment in databases.

As regards the argument that the reciprocity clause of the EU Directive requires action at the international level, it should be understood that many—if not most—of the Continental

European countries have fallback laws (especially unfair competition laws) that could prevent free-riding duplication of the contents of databases; access to these laws by foreign vendors cannot be denied under the national treatment and MFN clauses of the TRIPS Agreement. Moreover, there is reason to question the compatibility of the EU's reciprocity clause with the now universal norm of national treatment under the Paris, Berne, and TRIPS Agreements, and with the "chapeau clause" of Article XX (g) of the GATT 1994's component of the WTO Agreement itself, which forbids use of domestic intellectual property laws to create disguised barriers to trade.

This tension would become especially acute if other countries rejected the EU's exclusive rights model and insisted on more pro-competitive approaches and on national treatment. This would place the EU in the difficult position of protecting foreign data vendors under its Directive, or risking retaliation by other states and widespread recourse to similar reciprocity clauses in future legislation of interest to innovators and investors in the developing countries.

If, after thorough study, it should eventually appear that some international action to deter the wholesale copying of the contents of databases were still needed, then a cautious and minimalist treaty to prevent piratical conduct by specified means could be considered. In that event, the Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms of October 29, 1971 ("Geneva Phonograms Convention") might provide a suitable model. That Convention leaves the mode of implementation up to the contracting states and allows them to choose from a menu of legal options that include "protection by means of the grant of a copyright or other specific right; protection by means of the law relating to unfair competition; protection by means of penal sanction." Such an approach would not oblige any country or group of countries to adopt any particular anti-piracy law, so long as some effective anti-piracy regime were set in place.

III. The Impact of a Possible *Sui Generis* System on the Access to Databases

Scientists are both users and producers of databases. However, scientific databases are seldom static; in the course of their research, scientists frequently draw on several existing databases from which they create a new database that is tailored to their specific research objectives. The synthesis of data from different sources in order to provide new insights and advance our understanding of nature is an essential part of the scientific process. The history of science is rich with examples of data collections which played a crucial part in a scientific revolution that in turn had a major impact on human society. It may truly be said that data are the lifeblood of science.

Impact of Database Protection on the Conduct of Science

The following set of broad principles for the conduct of science is an attempt to provide standards against which organizations and individuals can evaluate legislative proposals that affect the use of scientific databases.

– Science is an investment in the public interest. Through research and education, scientists foster the creation and dissemination of knowledge, which has profound effects on the well being of people and the economies of the world. Science is increasingly recognized as a critical public investment in the future, a resource with extraordinary dividends.

– Scientific advances rely on full and open access to data. Both science and the public are well served by a system of scholarly research and communication that moves rapidly and openly with minimal constraints on the availability of data for further analysis. The tradition of full and open access to data has led to breakthroughs in scientific understanding, as well as to downstream economic and public policy benefits. The idea that an individual or organization can control access to or claim ownership of the facts of nature is anathema to science.

– A market model for access to data and other technical information is unsuitable for scientific research and education. Science is a cooperative, rather than a competitive, enterprise. No individual, institution, or country can collect all the data it needs to address important scientific issues. Thus, practices that encourage data sharing are necessary to advance many fields of science and to achieve the resulting social benefits. Such data sharing is possible only when the data are affordable within tight research budgets. If data are formally made available for scientific access, but the prices charged for such access are prohibitively high, the negative impact on science is the same as if access had been legally denied. This is especially the case for scientists in developing countries.

– Publication of data is essential to scientific research and the dissemination of knowledge. The credibility of research depends on the publication of the data that back up the conclusions from the research and permit reproduction of the results by colleagues. Any restriction on data publication or any requirement that the database be recompiled from original sources for validation purposes compromises the ability of scientists to advance knowledge.

– The interests of database owners must be balanced with society's need for the full and open exchange of ideas. Given the substantial investment in data collection and its importance to society, it is equally important that data are used to the maximum extent possible. Data that were collected for a variety of purposes—basic research, environmental monitoring, industrial R&D, etc.—are useful to science, so legal foundations and societal attitudes should foster an appropriate balance between individual rights to data and the public good of shared information.

It follows that, when legislators consider enacting intellectual property laws to promote investment in the compilation of databases, they must take into account the potential impact such laws may have on science and education in general and on the complex worldwide network through which scientific data are currently exchanged in particular. The guiding principle should be that any domestic or international initiative in this direction should leave science and education in no worse a condition than they were in prior to its adoption.

The risk of monopoly pricing and other constraints on the exchange of data

A recent study by the US National Research Council stresses the extent to which the existing market for scientific and technical databases is characterized by natural monopolies and by a distinct lack of competition. Under present-day conditions, the costs of entry are typically so high, while the niche market segments on which commercial exploitation becomes feasible are typically so small, that sole-source providers are the norm. Moreover, in the case of databases of observed values of time-dependent (or one-time) natural phenomena, such as sun spot cycles or earthquakes, the data are inherently unique, so that it is impossible to recreate the database.

If investment in databases lags behind some hypothetically desirable but still unattained level, despite the arsenal of existing legal and technical protective measures identified above, the reason is that user markets remain small in relation to the high costs of entry. A new exclusive property right will not increase the size of those markets and may actually decrease overall investment by impeding value-adding uses and by erecting otherwise insuperable barriers to entry.

Proponents of a *sui generis* approach argue that second comers can independently create a database from scratch, but this is often economically unfeasible in practice. In addition, the observations of interest to science may not be repeatable or the relevant data may be proprietary to begin with. Even when independent creation becomes feasible, reinventing the wheel is not consistent with either the norms of science or of market economics. Rather, science builds cumulatively upon its preceding contributions, and any legal solution that compelled users either to recompile data from scratch or to pay monopoly prices would greatly elevate the costs of both basic and applied research.

Because most databases are either natural monopolies or intrinsically defended by high barriers to entry, implanting a strong exclusive property right into this environment will tend to produce an absolute legal barrier to entry. This, in turn, facilitates monopoly pricing and fosters a substantial risk that big commercial providers will gradually control the building blocks of knowledge.

Under these circumstances, the potential harm to the scientific enterprise is enormous. Basic science needs abundant, unrestricted flows of both raw and evaluated data at prices it can accommodate within the present severely restricted research budgets. Indeed, the evidence suggests that "efficient" use of data is a concept antithetical to the norms and practice of basic science. On the contrary, by using all available data in ways that encourage serendipity and imaginative exploration, basic science arrives at precisely those breakthroughs that lead to technical applications later on. When, instead, data become too expensive, scientific research is retarded. We see a concrete example in the failed attempt by the US Government to privatize Landsat data in the 1980's, which raised the price of data sets from \$400 to \$4400 per image and set back important research areas for nearly two decades.

At the very least, complicated licensing transactions that would undoubtedly arise if protection is extended to the contents of databases used for science will deter and diminish the transborder flow of data that ICSU and its affiliates have painstakingly negotiated over the years. This will hinder scientists seeking to construct *ad hoc* databases from disparate sources

in order to attack major societal problems such as global climate change. Pressures will also be exerted against the sharing ethos and against the principle of full and open access to data in general. Because many scientific databases are worldwide in scope, the problem of integrating data sets from different sources will become acute over time if some are protected and others are not, and these complications will worsen if the norms of science themselves change in response to the advent of proprietary rights in data.

In sum, if databases that are now freely available fall under *sui generis* exclusive property rights, the cost of research will inevitably rise and much less of it will be successfully undertaken. Moreover, the culture of science, which presupposes the sharing of data among institutions, will also change, as these institutions begin to treat their own databases as profit centers. All business and government agencies that conduct or depend on research will be adversely affected in the end, whatever their expectations of short-term gain at the moment.

Special needs of the developing countries

Among the factors that can significantly affect the powers of the least-developed and developing countries to overcome technological lag and other economic disadvantages is the growing potential for rapid international diffusion of scientific and technical knowledge. Because their national systems of innovation are still in the process of formation, there is reason to hope that these countries can rapidly accommodate new information technologies in ways that accelerate leapfrogging, reduce path dependence, and overcome technological “lock out.” Measures that increase the relevant local communities’ direct access to the world’s cumulative store of technical knowledge in the cheapest, most efficient manner are thus of primary concern in any effort to boost national competitiveness.

In this context, one cannot overemphasize the extent to which the knowledge needed to embark on specific technological paradigms tends, in its early phases, to be public knowledge, often generated by universities and research institutes. Public investment in both the infrastructure for accessing foreign technical knowledge and in higher education are thus critical components of an appropriate institutional framework for catching up and leapfrogging. Assuming that a developing country can muster the investment needed to establish adequate telecommunications infrastructures, it can accelerate the transplanting of know-how from more industrialized countries through electronic transmittal and storage of technical information.

The advent of the Internet as a low-cost method of conveying digital information could thus make specialized, heretofore path-dependent know-how universally accessible. To the extent that basic science lends itself to industrial applications, electronic databases can facilitate its translation into new technologies everywhere, so long as the receivers are otherwise capable of absorbing the data and of defraying their cost. It is therefore in the interest of developing countries to fashion a legal framework that enhances the flow of information along telecommunications networks and that otherwise accelerates the transfer of know-how.

Proposals to encumber the full and open access to scientific and technical data by means of a *sui generis* exclusive property right in the contents of databases would severely compromise these prospects for more rapid economic growth in the developing countries. Such laws would, at the very least, increase the costs of acquiring data and of conducting

research at the very time when developing countries must spend huge sums to adapt their own institutional framework to the changing universe of digital communications networks and to provide their local scientific and technical communities with the equipment to access available resources. At worst, such laws would balkanize the transborder flow of data and restore the conditions in which technological lockout previously flourished.

The developing countries are, moreover, already subject to considerable economic and political strains due to the need to enhance their existing intellectual property systems in order to comply with the high international minimum standards that the TRIPS Agreement of 1994 mandates for all WTO member countries. There is no reason for these countries to assume additional intellectual property burdens without countervailing trade concessions, especially when such new burdens could compromise their ability to access needed scientific and technical data.

Many developing countries in the ICSU family believe that an international treaty such as that under consideration by WIPO could weaken the growth of science and innovation in the less-developed world, and pose a serious threat to the integrity of science. The Group believes that ICSU should not support any treaty that would exploit developing countries' vulnerability in terms of preparedness level and affordability.

IV. Main Elements of a Protection System

Information and data are the raw materials of the information age. Moreover, information possesses a dual nature that legislators must take into account.

The Dual Nature of Data and Information

On the one hand, data and information are bundled into private information goods that compete on the general products market with or without intellectual property protection. On the other hand, data and information constitute the building blocks of knowledge, and there is a well-recognized public interest in ensuring its availability for the progress of education, science and research, and for the further development of new, value-adding information goods. Access to information for these public interest pursuits is guaranteed by express exceptions and limitations built into the classical intellectual property paradigms and, more generally, by the negative mandates of these same paradigms, which subject all unprotected information goods to the rigors of free competition.

Sooner or later, moreover, classical intellectual property laws relegate all protected information goods to the public domain. One cannot sufficiently emphasize the extent to which the exceptions and limitations built into the classical intellectual property paradigms in order to promote the public interest in education, science, research, and free competition end by stimulating the creation of new information goods that are privately exploited either on the general products market or on the specialized market for literary and artistic works.

Given the dual nature of data and information, legislators must avoid overprotecting them lest such protection inadvertently obstruct the hitherto unrestricted upstream flows and consequent social benefits that were previously taken for granted. Overprotection would deprive basic and applied research of their essential nutrients and retard the progress of worldwide economic development. We are not just concerned about today's information industry, but about the industry of tomorrow and the day after that. In the information economy, we are all generators of information and we are all users and borrowers of other peoples' data and information as well.

For technical and scientific purposes, moreover, there is simply no valid distinction between data and the database. Strong protection of databases means that our future technological growth and production will become subject to the permission of publishers and to the ability of users and researchers to pay the fee-per-use prices that publishers will impose under electronically controlled, "take it or leave it" access contracts.

Preserving the public-good uses of data

If circumstances were to justify international action to protect the contents of databases (and even if such action were rooted in unfair competition law rather than an exclusive property right), the relevant international and national laws should provide measures to safeguard the scientific and educational communities' ability to obtain access to both publicly and privately funded data on reasonable terms and conditions. This need has, of course, already arisen in the European Union, where the EU Directive allows member states the option of enacting limited exceptions to, and limitations on, the new *sui generis* right that favor teaching and scientific research. The ICSU Group urges the EU and affiliated governments to implement such exceptions broadly, with due regard for the principle of full and open access to data generated with public funds, and it hopes that the European Union will encourage the member governments in this respect.

Implementing appropriate exceptions and limitations will require careful distinctions between uses that are "free" and those that providers must permit, but on fair and reasonable terms and conditions. Beyond these technical considerations, the scientific and educational communities need:

- Access to data on reasonable terms and conditions.
- The ability to use the data thus accessed for any research or educational purposes, including publication.
- Freedom from contractual or technical interference with these privileges.

A bedrock principle should be that whenever a given database is substantially funded by government and made available to the public, such data should always be accessible to the scientific and educational communities at no more than the cost of fulfilling the user's request (i.e., the marginal cost of reproduction and dissemination). This same principle should apply even when the database is partly or insubstantially funded by the private sector, as might occur with regard to private sector dissemination of government data, irrespective of the prices that providers and distributors may charge other users for other purposes.

Conversely, when the private sector or other non-governmental entities fund the generation or distribution of data that are made available to the public, the ability of scientists and educators to gain access to those data for public-good activities remains indispensable, even if a different calculus of rights and duties is required. Database producers who benefit from legal protection of their databases should charge scientific and educational users fair and reasonable prices that take account of the overriding public interests at stake.

When, accordingly, data not funded by government are made available to the public under any domestic law that protects investments in databases (including unfair competition laws or variants thereof), that law should preclude the provider from denying access on preferential terms to the data for research or educational purposes. The law could also require that researchers and educators who thus obtain privately funded data should pay equitable compensation for these uses.

In putting forward these constructive proposals for balancing the interests of private data vendors with those of the research, educational, and library communities, the ICSU Group does not concede the propriety of enacting exclusive property rights in data—on the contrary, the Group wishes to reiterate what was earlier affirmed to be the single most basic proposition for the WIPO inquiry getting underway, namely, that all data—including scientific data—should not be subject to exclusive property rights on public policy grounds.

V. Conclusions and Recommendations

The ICSU Group believes that the need for *sui generis* legislative action to protect the contents of databases has not been demonstrated at either the national or international levels, and that the burden of proof lies on those who claim existing laws are inadequate. Furthermore, new legal and technical developments that strengthen the capacity of existing laws to prevent parasitical and predatory forms of competition should be carefully evaluated and encouraged before introducing a radical new protection paradigm.

Nothing prevents courts, administrators, and legislators from devising reasonable constraints on free-riding conduct that destroys the incentive to invest in the compilation and dissemination of databases, and efforts to inhibit parasitical or predatory copying as such merit further study. To do so does not require either an exclusive property right or any legal definition of databases.

Legal restrictions on the full and open exchange of data inherently conflict with freedom of speech, and the imposition of exclusive property rights on data would seem to encounter insuperable constitutional impediments in some countries, such as the United States, as well as fundamental public policy objections in all countries. Developing countries, in particular, have much to lose and nothing to gain from such initiatives.

In this connection, any legislative action at either the national or international levels should be demonstrably pro-competitive in effect, and should contain built-in measures to avoid abuse without the need to invoke antitrust or ancillary remedies. Care must also be taken to preserve adequate incentives for follow-on innovation and transformative uses of data

in both the commercial and non-commercial spheres of activity.

If additional international regulation of databases becomes necessary—a remote possibility, in our view—then it should be premised upon a minimalist approach that affords the maximum flexibility for each member state to address parasitical copying by means that are consistent with its own legal and economic policies. In all such cases, appropriate exceptions and limitations must be devised to maintain the full and open flow of data and information to the research, educational, and library communities and to ensure that these communities are left in no worse condition than they were in before any such action was taken.

Moreover, such exceptions should not expose these ongoing public-good activities to the vagaries of case-by-case decisions, and must instead stabilize and institutionalize long-term practices of price discrimination and product differentiation. The difficulties of identifying and implementing a suitable balance between incentives to invest and the preservation of both free competition and essential public-good uses should not be underestimated, nor should legislation be rushed before a full understanding of the consequences is reached.

JAPAN ELECTRONIC INDUSTRY DEVELOPMENT ASSOCIATION (JEIDA)

ANSWERS TO THE “ANALYTIC TABLE OF QUESTIONS RAISED”

[General Remarks]

Premises of the answers

Because what “a *sui generis* system” and “a *sui generis* right” mean is not very clear to us as used in this questionnaire, we answer on the assumption that

a) “a *sui generis* system” is a system similar to one suggested in the draft treaty submitted to the December 1996 Diplomatic Conference, namely, a system which grants, to a person who made a substantial investment in creation of a database, exclusive rights to control extraction (including temporary storage in RAMs) and re-utilization of a quantitatively or qualitatively substantial Part of the database, for the period of which is 15 or 25 years, and therefore it is not the synonym for “a new system;” and

b) “a *sui generis* right” is the exclusive right mentioned in above a).

1. JEIDA's Basic Opinions

- (1) JEIDA, the Japan Electronic Industry Development Association, as an industrial association representing database makers, vendors of systems for databases and users of databases, basically understands that development of circulation of contents should be promoted over the future, which shall contribute to the progress of culture and industry.
- (2) On the other hand, when we think of a possible new way of protection of databases circulated through digitalization and networking, it should be considered that there remain some factors left in the future which we will have to wait and see, including such factors that technological measures to control access and reproduction and technological infrastructures which make it possible to collect the charge in accordance with the manner of utilization through networks are going to be improved.
- (3) Besides, at least in Japan, it is said that the originality test as the requisite for protection by copyright has been established at a low level, and almost all databases have been protected by the Copyright Act, and therefore there have been few cases in which a particular database was not protected because of lack of creativity, which led to material loss of the investment therein. When we carefully evaluate the realities, protection through the existing legislation (Copyright Act, Unfair-Competition Prevention Act, Rule of Torts, etc.), contracts and technological measures generally meets with the necessity, and any need for urgent legislation at this stage has not yet actually come out.
- (4) If a treaty which realizes a new protection (especially, grant of “a *sui generis* right”) were to be concluded by easily looking into the future, there would be such possibility that circulation of contents might be hampered because of excessive rights afforded to database makers.
- (5) On the other hand, if such a problem would really exist that if any new protection is not afforded, the social fairness is remarkably damaged, we would understand the necessity to consider to take some measures.
- (6) But, we would not agree to grant of “a *sui generis* right” from the beginning. It is appropriate to only give the minimum restriction necessary to secure fair competition in the database market, and review it in the future, if necessary. We explain our thoughts in detail in *infra* 2. below.
- (7) And, in the context of international study, the necessity and the propriety of a new treaty should be considered by taking the realities in individual countries into consideration. Further, even if the necessity and the propriety of a new treaty were proved, a flexible framework should be considered so that each member country could implement it in harmony with its existing legislation.

2. Acts to be restricted

(1) Supposing that a new protection system were proved as necessary, it should be clearly recognized that its nature is to afford protection even to what can not be called as intellectual property due to lack of originality, to begin with.

(2) Such acts which clearly impair the interest of the original makers of databases which represent their considerable investment may well be restricted, as to make verbatim copies of all or most part of their databases, make them available to the public by disguising them as their own products and thus compete with the original makers' databases.

(3) But, it would not appropriate to restrict *a priori* other acts, without judging whether those clearly impair the interest of database makers.

(4) In particular, when we take the following issues into consideration, we cannot but have negative views as to restriction of extraction.

a) Unauthorized access to databases can be avoided by technological measures such as encryption, and therefore any particular damage thereby has not been brought out. Accordingly, temporary storage of data which is incidentally caused through access to a database need not be restricted, at least at this stage.

b) Further, there is such a point at issue that access providers should not be imposed an unjust liability as to temporary or permanent storage of data which would be incidentally or inevitably caused through operation of their systems or transfer of data through the Internet.

c) Even if the scope of protection were defined as a "substantial part" of a database, when researchers (including ones in companies) search data by PCs, it would be difficult for them to clearly judge in advance what constitutes the "substantial part." Partly because the concept of implied license is not very clear, if restriction of extraction were strictly applied, it would become necessary, in order to avoid a possible infringement, to obtain the permission of the right holder at each time of utilization, which would inhibit circulation and fair utilization of databases.

d) As it is regulated by contracts in most cases whether those who are authorized to access to databases by PCs can download into a recording medium or print out the result of their search, there is not a need for restriction of such acts, at least at the present time.

(5) Also, as to re-utilization, the following issues should be taken into consideration.

a) There is such a question as whether re-utilization by a bona fide third party should be restricted.

b) There could be such a way of thinking that if a newly added value could be born through utilization of data contained in databases, it is not desirable to excessively restrict utilization of data, so far as not restricted by other laws including trade secret laws. This point should be considered by taking into account how a balanced legislation should be, and should be approached from the point of view to establish fair business rules.

c) And, what should be restricted should not be decided, *a priori*, only based on whether or not most part of another person's database was utilized. If those who have once obtained contents could be given an official go ahead to maintain advantageous positions in every business aspect after that, which could lead to unfair results. Also, information contained in databases may be a fact itself or may accompany value analysis, and affording an exclusive right to the former might force others to invest in discovering the fact again. One could question whether such a result might be appropriate.

d) Further, if an appropriate consideration is not paid, the degree of adverse influences would be increased, when data contained in a database cannot be developed, collected or obtained, or social or public value of which is high, or protection of which could lead to monopolization.

3. Subject matter

- (1) By affording a new protection to databases, individual data itself should not be newly protected.
- (2) It should be made clear that acts not relating to a or most part of a database to which a considerable investment was made should not be restricted.
- (3) It should also be considered to limit the subject matter of protection to electronic databases, which can be easily copied, rearranged, processed and disseminated through networks, and if free-ridden, the degree of damage is supposed to be large.

4. Claimant

Protection should not indiscriminately be afforded to makers of databases, but to those whose business interest is impaired by certain acts to be restricted (see above 2.).

5. Duration

- (1) Because we oppose to the adoption of "a *sui generis* system," we are not in a position to make a comment on duration of the exclusive right.
- (2) It would be appropriate to permit a claim only within a certain period from the occurrence of certain acts to be restricted (see above 2.)
- (3) If the idea of thinking mentioned in above (2) is adopted, in addition, a consideration from the comprehensive point of view would be necessary, as there could be a way of dunking that when the public interest regarding utilization of data is taken into consideration, it is not necessary to permit a claim after the period corresponding to the return of investment was over, and that balance between the term of protection of the industrial property rights (except trademarks, term of protection is not renewable) should be considered.

6. Exceptions, regulations regarding permitted acts

- (1) In order to secure fair utilization of information, it should be avoided to restrict such acts as are permitted by copyright laws under the exceptions to rights.
- (2) Because the progress of culture and industry cannot be achieved without referring to the results made by predecessors, if a possible protection is partial to providers of databases and utilization of information by users of databases including followers is excessively restricted, such a serious problem could be born that it could shrink not only companies' free economic activities but also intellectual activities at an individual level.
- (3) Also, it should be considered to adopt, in addition to exceptions to or limitations of rights based on each individual point of view, a legal system which leaves room for courts to judge other cases on a case-by-case basis, such as the fair-use rules of the US Copyright Law.

[Answers]

We add numbers and alphabets in front of each title and question for convenience' sake.

1. Need and justification of a *sui generis* system of protection

- (1) Is there a need for a treaty on a *sui generis* system of protection for databases?

No, if such a system as defined in a) of the premises of the answers of the General Remarks is mentioned here. The reasons are stated in the General Remarks.

- (2) What are the justifications for such a system?

We do not recognize that there exists any particular justification. On the contrary, it should be noted that adverse influences might be born as stated in 1.(4) of the General Remarks.

- (3) Is there presently sufficient incentive in domestic legislation and international law for investment in, and use of, databases, without additional intellectual property protection?

As stated in 1.(3) of the General Remarks, in Japan, the current level of protection generally meets with the necessity, and there does not exist any particular obstructive factor. In this connection, according to some statistics published by the Ministry of International Trade and Industry, the number of databases available in Japan has been doubled in the past ten years. Legal frameworks in most other countries are similar to those in Japan, and therefore we do not think that incentives to investment are damaged due to existence of deficiency in the existing protection.

- (4) Would makers and/or users benefit from the increased level of protection?

When considering as a whole, we are rather concerned about adverse influences. As stated in 1.(4) of the General Remarks, if a new protection were to be easily concluded, there could be a strong risk that circulation of databases might be hampered adversely, and interests of makers and users might be impaired.

- (5) Would there be more or less investment into the production and dissemination of databases if a *sui generis* system of protection would be applied?

Not known. But, if an extraction right were also to be afforded, we fear that circulation of databases might be hampered and therefore investment might be decreased.

- (6) Would this encourage or discourage value-added uses?

Not known. But, if right holders refuse licensing or demand unreasonably high royalty, value-added uses could be naturally discouraged.

- (7) Would such a system advance or retard economic and technological progress?

Economic progress could be retarded because of the reasons stated in the above. We cannot but think that technological progress would be retarded, when we take adverse influences to research and development into consideration.

- (8) Would database producers make available their productions in the information networks if there were no guarantees for recouping their investments on the basis of a *sui generis* protection system?

As stated in 1.3) of the Answers, we think there does not exist any particular minus factor.

- (9) What are the proofs that more stringent protection for databases would spur investment considering the great number of databases available without such protection?

We understand that there does not exist any enough evidence to conclude that investment is not spurred because a new protection of databases is not afforded.

2. Possible alternatives for a *sui generis* system

- (1) How many databases do not qualify for copyright protection; consequently how many databases might fall only under the *sui generis* system?

There are few, especially when commercial databases are concerned. As stated in 1.(3) of the General Remarks, at least in Japan, most databases are protected by the Copyright Act, and there have been few cases in which a particular database was not protected because of lack of creativity, which led to material loss of the investment therein.

(2) In some countries, the originality test has been established at a very low level, and, thus, the overwhelming majority of databases is protected by copyright; is this, however, sufficient for the protection of such databases in an international context?

Protection of databases by copyright is regulated by WTO-TRIPS Agreement and WIPO Copyright Treaty respectively. Both treaties apparently recognize that there may be differences among the member countries on the concept of originality as the requisite for copyright protection, but do not touch it. It would not be appropriate here to criticize the differences of the originality test among the member countries. Even if it were a problem, it would not be appropriate to discuss it here, because it is not a matter related to databases, only but rather a fundamental matter regarding copyrightable works as a whole.

(3) Should there be a parallel protection by a *sui generis* system also for original databases protected by copyright?

As stated in the above, as we do not support the “*sui generis* system,” we cannot answer this question. If, however, a possible new treaty were to be concluded after a thorough study on problems and the propriety, it would not be necessarily inappropriate to extend a new protection also to databases which qualify copyright protection, since such a protection would be based on a different viewpoint.

(4) Can market solutions or other legal models, such as protection against unfair competition or technical means, adequately address the interests of database producers in protecting the non-copyright aspects of database productions?

Yes, at least when the situations in Japan are concerned. See 1.(3) of the General Remarks.

(5) Would not certain notions, such as those suggested in the draft treaty submitted to the December 1996 Diplomatic Conference—for example, in relation to “substantiality”—create greater uncertainty than protection against unfair competition?

Yes. As stated in 1.(3) of the General Remarks, it would create greater uncertainty. The notion “substantial” is used in two contexts in the draft treaty; one way of usage is “substantial investment” as a requisite for protection and the other is “substantial part” as a scope of protection. Both definitions are ambiguous and unclear regarding what and to what extent databases should be protected. This would lead to significant lack of predictability on users in particular. It would contribute more to preserving the social fairness to determine by an objective test of effects on the market from the viewpoint of protection against unfair competition.

(6) Is protection against unfair competition sufficiently safe considering its case-by-case approach?

Yes. It would be sufficiently safe in that it would be able to exclude, at least, typically unfair activities.

(7) Would it not be appropriate to consider whether the possibilities offered by the existing systems have been fully taken into account and exhausted before trying to establish a new system?

Yes. Without analysis and evaluation on that point, it cannot be said that the necessity and the propriety for establishing a new system has been proved. As stated in 1. of the General Remarks, it should be considered as a requisite at an international discussion to achieve a balanced protection as a whole, in combination of the existing protection available under legislation, contract and technology.

(8) Is it sufficient to use *a posteriori* protection, such as protection against unfair competition or against parasitic uses, rather than *a priori* intellectual property system like the proposed *sui generis* protection?

Yes. See 1.(6) of the General Remarks.

(9) Would not *a priori* protection offer grater legal security, particularly for small and medium size industries, which do not have specialized legal units?

No. It would be important that individual employees belonging to a company, irrespective of its size, or private persons who do not have legal background can easily judge the legality of their acts. *A posteriori* protection would be able to achieve equal level of legal security, if restricted acts were clearly provided.

(10) Is protection against unfair competition sufficient as a basis for licensing practices?

Yes. In Japan, for example, trade secrets are protected against unfair competition under the Unfair-Competition Prevention Act, and are licensed under contracts. Existence of licensing practices for trade secrets can be supported by the guideline of the Japanese Fair Trade Commission on the application of Antimonopoly Act to patent and know-how licensing.

(11) Is protection also needed against misappropriation for other than competitive purpose?

Suppose, for example, that a person prejudices a database maker's interests in the market by making all or most part of data in the maker's database accessible to the public without fee. Such an act may not involve a competitive purpose, but it may well be subject to consideration on whether it should be restricted.

We suppose that, in some countries, the existing legislation against misappropriation may require subjective competitive purposes and cannot catch other cases on its own. However, what is important in this discussion would be to restrict acts which clearly prejudice interests of other parties in the market, rather than subjective competitive purposes. It would not be impossible, as a matter of legislative technique, to regulate such acts under the framework of protection against unfair competition in a broader sense.

3. Nature and extent of a possible *sui generis* system of protection

(1) What should be the nature and extent of any new protection system for databases?

Even if a need to create a new protection system for databases were recognized, databases should not be protected by an intellectual property right as stated in 2.(1) to (3) of the General Remarks, but rather only such acts as to clearly impair the interest of the makers of original databases should be restricted from the point of the social fairness.

(2) Would the proposed *sui generis* rights be similar in nature to the so-called related (or neighboring) right or different from them?

The proposed *sui generis* rights seem to be similar to the so-called related (or neighboring) right. But, we do not agree to such type of approach as to afford an exclusive right. See 1.(6) of the General Remarks.

(3) Is it justified to speak about intellectual property in cases where there is no intellectual creation but only investment?

No. If protection by an intellectual property right were recognized only because of the investment made, all economic activities would have to be subject matters of protection by an intellectual property right.

(4) Could it not be considered as a minimum intellectual effort what was the criterion included in the draft treaty submitted to the December 1996 Diplomatic Conference, namely, arrangement of works, data or other materials in a systematic or methodological way?

No. The draft treaty made it to be the criterion for eligibility of protection whether a substantial investment was made in creation of databases, which has nothing to do with intellectual effort. A database is protected by copyright laws, if it is evaluated to be accompanied by intellectual effort in selection and/or arrangement of data in a systematic or methodological way, namely originality.

(5) Would it not be more appropriate to only identify the subject matter of protection, the acts in respect of which protection should be granted and exception allowed, and to leave national legislation choosing the legal regime—a *sui generis* or “related” right, protection against unfair competition or penal measures—to grant such protection, that is, to apply the same solution as the one included in the Phonograms Convention?

Yes. As stated in 1.(7) of the General Remarks, a possible international treaty should only provide minimum protection or acts to be restricted, and leave its type of legislation and way of implementation to each country.

4. The impact of a *sui generis* system on the access to databases

(1) What is the foreseeable impact of a *sui generis* protection on the use and exchange of information?

As stated in 1.(4) and 2.(4) of the General Remarks, circulation of information would be impaired, and the progress of culture and industry through its fair utilization would be disturbed.

(2) Would such protection aim to restrict, or result in restriction of, certain non-commercial information, for example, meteoroidal data, and, in general, publicly financed databases?

Yes. Also see 6.(4) of the General Remarks.

(3) Would such protection restrict or increase the availability of information?

As stated in 4. 1) of the Answers, the availability of information would be restricted. Also, as stated in 2.(4)a) of the General Remarks, unauthorized access to databases can already be avoided by applying technological measures such as encryption, therefore it can hardly be expected that such protection would increase the availability of information.

(4) Scientists need full databases relating to their fields. Would a *sui generis* system mean that they could only obtain the necessary data through licenses? Or should they create their databases from scratch?

Yes, in the sense that it would become necessary to obtain the permission of the right holder at each time of utilization. As stated in 2.(4)c) and 6.(2) of the General Remarks, such a serious problem could be brought out that circulation and fair utilization of databases would be inhibited, and intellectual activities not only of scientists' but also individuals' level would be shrunk.

(5) Would a *sui generis* system not lead to denial of access to data necessary for global development?

It would lead to denial of access to data.

(6) How would such a system affect scientific research and education, particularly in developing countries?

The problems stated in 4.5) of the Answers would be serious, particularly in developing countries.

5. Main elements of a protection system

A. Subject matter and criteria of protection

(1) What should be the subject matter of protection of a *sui generis* system?

Because we do not agree to a *sui generis* system, as already mentioned, we cannot answer this question. Supposing new protection for databases would be necessary, as stated in 2.(2) and (3) of the General Remarks, such acts which clearly impair the interest of the makers of original databases may well be restricted, as to make verbatim copies of all or most part of another person's database in which a considerable investment was made, and then compete with the original maker thereof, but it would not be appropriate to indiscriminately restrict other acts, without judging whether those would clearly impair interest of database makers. And, as stated in 3.(3) of the General Remarks, it should also be considered to limit the subject matter of protection to electronic databases, which can be easily copied, rearranged, processed and disseminated through networks, and if free-ridden, the degree of damage is supposed to be large.

(2) What should be the definition of "database"?

It should be a requisite for protection that a considerable investment was made to create a database. We are still in the process of considering of other (if any) requirements in detail.

(3) Should such a definition—and thus the *sui generis* protection—extend to both original and non-original databases?

As is stated in 2.3) in the Answers.

(4) Should the protection extend both to the structure and contents of databases?

The protection should not extend to the contents of databases (especially data itself). It should be the same as to the structure itself, which is not protected by copyright laws. Apart from discussing from such aspects as structure or contents of databases, possible new protection should be limited to restriction of acts which are deemed to be "a free-ride on all or most part of a database."

(5) How could a database protection system be designed to ensure that it does not extend to protection to data *per se*?

As is stated in 5.A.4) of the Answers. Also, see 6.(4) of the General Remarks.

(6) What level of investment is necessary so that the investment may be considered "substantial"?

It would not be easy to indiscriminately discuss, as situations may vary depending on kinds and natures of databases. However, supposing that new protection would be afforded without regard to creativity, the factor that a considerable investment was made should be made necessary for such a protection. Also, as to investment a "qualitative" factor should not

be considered. And, when a database was created merely as the result of a certain project, the investment made in the project itself should not be deemed to be investment made to the database.

B. Right holders

- (1) Who should be the right holder in a possible *sui generis* system?

Because we do not agree to a *sui generis* system, as already mentioned, we cannot answer this question. Supposing new protection for databases would be necessary, as stated in 5.A.1) of the Answers, the possible new protection should be given to ones all or most part of whose databases (in which a considerable investment was made) is free-ridden and whose business interest was impaired.

- (2) If the “maker of databases” is the right holder, how may this concept be defined?

As stated in 4. of the General Remarks, protection should be given to ones whose business interest was impaired but not indiscriminately to database makers. And, to say in case, ones who merely engaged in creation of a database without initiative and financial responsibility (for example, mere subcontractors) should not be deemed to be makers of databases.

C. Rights to be granted

- (1) What rights should be granted in respect of the non-copyright aspects of databases?

As is stated in 2. of the General Remarks. Also, see 5.A.(4) of the Answers.

- (2) Is it not sufficient to grant a right of reproduction?

As stated in 5.A.1) of the Answers, protection should be given to ones all or most part of whose databases (to which a considerable investment was made) is free-ridden and whose business interest was impaired, and we oppose to grant of a right of reproduction beyond such a scope.

- (3) If “extraction” and “re-use” are covered by any right, how should these notions be defined?

As stated in 1.(6) and 2.(4) of the General Remarks, we do not agree to grant of a right as to extraction. As to re-utilization, see 2.4) of the Answers.

- (4) If “substantial part” is relevant in determining the nature and extent of protection, how this concept should be defined?

It should be defined as “all or most part.” Also see 2.4) of the Answers.

- (5) If users only use a part of a database, how may they know whether or not that part is “substantial”?

A serious problem could be brought out, as stated in 2.(4) of the General Remarks.

D. Exceptions

- (1) How should exception be granted in domestic law and how should they be dealt with at the international level?

As stated in 6. of the General Remarks. In a possible treaty, it should be considered to enumerate exceptions of which an international consensus can be formed, as many as possible by way of illustration, and adopt a system which leaves flexibility to handle other cases, such as the fair-use provision of the US Copyright Law.

- (2) Would general or specific exceptions be justified?

As already stated in the above, if new protection would be afforded without regard to creativity, various specific adverse influences would be accompanied with. Accordingly, it would be well justified to provide exceptions in such ways as stated in 5. D. 1) of the Answers.

- (3) What exceptions may be necessary for private use, scientific research, education, public libraries, public security, judicial and government purposes, and handicapped people.

Firstly, it is necessary to consider what kind of new protection should be afforded or what kind of acts should be restricted. Then, as stated in 5. D. 1) of the Answers, exceptions of which international consensus can be formed should be enumerated as many as possible by way of illustration.

- (4) Should there be specific exceptions for developing countries?

If a treaty were to be easily concluded, a new North-South differentials might be brought out. Accordingly, if a need to conclude a treaty does exist, it should be considered to design uniform rules which would be acceptable to developing countries as well.

E. Duration of protection

- (1) How long should the duration of *sui generis* protection be?

Because we do not agree to a *sui generis* system, as already mentioned, we cannot answer this question. See 5. of the General Remarks.

- (2) Should the term of protection be renewable?

Because of the reason stated in 1) above, we cannot answer this question as well.

- (3) If the term is renewable, when may renewal take place and on what basis?

Because of the reason stated in 1) above, we cannot answer this question as well.

F. National treatment

- (1) How may the principle of national treatment be applied for a *sui generis* system?

Because we do not agree to a *sui generis* system, as already mentioned, we cannot answer this question. Supposing that an international legal framework might be established through creation of a treaty mentioned in 5. of the General Remarks, it should be provided that each member country should provide that it should afford the same protection to nationals of another member country as afforded to its nationals.

G. Application in time

- (1) Should any protection for non-copyright aspects of databases apply for all existing databases at the moment of the entry into force of a possible treaty?

Careful examination is necessary, by taking 5. of the General Remarks as well into consideration.

6. Exercise and infringement of rights

- (1) How may any new right be exercised in a digital context?
(2) What means may be available against infringements?
(3) How may infringements be identified?

It is too early to study, in detail, ways of enforcement of a new right and means against infringement, at the stage at which needs for and kinds and natures of such new protection have not yet been fully examined.

SOFTWARE INFORMATION CENTER (SOFTIC)

NEED AND JUSTIFICATION OF A *SUI GENERIS* SYSTEM OF PROTECTION

Is there a need for a treaty on a *sui generis* system of protection for databases?

In Japan, Article 12*bis* of Copyright Law provides that “databases which, by reason of the selection or systematic construction of information contained therein constitute intellectual creations shall be protected as independent works.” Trends in copyright precedents also indicate that, generally speaking, level for originality in works are not so high in Japan. Because this view of originality is applicable to databases, database producers generally believe that originality in their databases should easily be recognized. But there have been no precedents that took up the originality of database, and the standards of originality remain unclear.

In addition to conventional databases, recent developments in computer technology have brought new types of database into the market, particularly those with no systematically organized information, with systematic construction that users can easily change, and with no original selection of information.

POSSIBLE ALTERNATIVES FOR A *SUI GENERIS* SYSTEM

Database producers should be able to prevent users from extracting data as a whole, in part, or in substantial part and re-distributing elsewhere without authorization. But, we believe that to impose comprehensive restrictions on such actions, regardless of their purposes, would be inappropriate from the view point of fair use and free flow of information. For this reason, we believe that protection of non original database need to be adjusted in light of a doctrine such as “fair use” in US Copyright Act.

Should there be a parallel protection by a *sui generis* system also for original databases protected by copyright?

Japanese copyright law protects “original” databases, as explained earlier, but no existing legislation protects “non original” databases. Given the expected increase in the social usefulness of such databases, protection will be needed. But if non original databases enjoy protection of new types of rights such as *sui generis*, it will have to coexist with conventional copyrights on “original” database. We are afraid that inconsistencies may arise, for example, where a right holder under the copyright law differs from a right holder under *sui generis*.

Can market solutions or other legal models, such as protection against unfair competition or technical means, adequately address the interests of database producers in protecting the non copyright aspects of database productions?

We believe that a more flexible legal system such as unfair competition law will cope effectively with rapid advances in information technology. It should be guaranteed, however, that, after the expiration of a certain period, anybody is free to use information contained in a database.

Would not certain notions, such as those suggested in the draft treaty submitted to the December 1996 Diplomatic Conference—for example, in relation to “substantiality”—create greater uncertainty than protection against unfair competition?

The concept of “substantiality” is not defined in Japanese law covering intellectual property rights and this concept is not familiar in Japan. We think that this concept would create instability in our legal system.

NATURE AND EXTENT OF A POSSIBLE *SUI GENERIS* SYSTEM OF PROTECTION

Is it justified to speak about intellectual property in cases where there is no intellectual creation but only investment?

The main purpose of *sui generis* system of protection is to protect so-called “sweat of brow.” In the intellectual property field, the “law for creation” protects creation. We feel that “sweat of brow” are not within the legal scope for intellectual property—any database having intellectual originality is naturally protected by the intellectual property law. We believe that the *sui generis* as proposed by the EU, which clearly is to protect investments, is inconsistent with intellectual property law.

EXCEPTIONS

What exceptions may be necessary for?

- private use,
- scientific research,
- education,
- public liabilities,
- public security,
- judicial and government purposes, and
- handicapped people

The extent of exclusion from protection should include the above categories. Some type of information exists needs access from the society to promote the development of

democracy and the widespread of culture, subject to the interest of privacy, education and public security.

DURATION OF PROTECTION

How long should the duration of *sui generis* protection be?

Regardless of whether protected under *sui generis* or unfair competition law, databases should be excluded from protection after the expiration of a certain period.

Since database producers have helped disseminate information, not intellectual creation, we feel seven to ten years' protection is suitable.

Should the term of protection be renewable?

Most databases would probably be updated each day. If the term of protection is easily renewable, regardless of the protection duration, databases will be virtually protected for good. We think that some legal device is needed to prevent databases being permanently protected. Even if concepts are adopted from unfair competition laws, the duration of protection should be limited.

Article 2.(3) of the Unfair Competition Prevention Law of Japan defines unfair competition as “the act of assigning, leasing, displaying for the purpose of assignment or lease, exporting or importing goods which imitate the configuration of another person’s goods (excluding a configuration commonly used for goods of the same kind, or where there are no goods of the same kind which have an identical or similar function and utility as those only available for three years from the date of first sales). Furthermore, a configuration, which is commonly used for the same type of goods, is not protected. Where there are no goods of a similar kind, configurations of goods having an identical or similar function or use are also excluded from the scope of protection.”

We hope the above will be of aid to you in determining the duration of protection under unfair competition law framework.

[End of Annex and of document]