

# Copyright: Evolution, Not Revolution

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The development of digital infrastructures and the Internet has made the marketplace for literature, music, images, computer programs, and databases a truly global one. Protection of works of the mind must be a part of the new digital environment. The financial basis for production and distribution of information services, audiovisual services, computer programs, music, entertainment, and so on is ever more dependent on the existence of a clear and stable underlying legal framework. Harmonization of the laws in different nations is vital in order to avoid unacceptable market distortions. Authors, producers, publishers, and other right-holders are unlikely to make their productions available in a networked environment unless they are accorded sufficient legal security. Global phenomena can only be dealt with by a global approach and, where necessary, by global rules.

In 1993, the Clinton Administration gave the National Information Infrastructure high political priority. On the basis of the Bangemann Report, European heads of state accepted an action plan at their Corfu summit in June 1994 to stimulate activity in the market. As part of the preparations for updating the international copyright regime, "a digital agenda" was established to run alongside the so-called "traditional issues."

In December 1996, a diplomatic conference organized by the World Intellectual Property Organization (WIPO) met to update the international system of copyright established by the 1886 Berne Convention for the Protection of Literary and Artistic Works. The need to update the international norms of copyright was generally recognized, as more than a quarter of a century had elapsed since the last revision conferences in 1967 and 1971. On 20 December, delegates of 128 governments, in the presence of representatives of about 100 international organizations, adopted the results of 5 years of preparatory work by WIPO Expert Committees.

Before the meeting took place, an unusual amount of concern regarding the out-

come was expressed by the scientific community (1). In the United States, a letter to Michael Kantor, secretary of commerce, from the presidents of the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine claimed that the new regime "would seriously undermine the ability of researchers and educators to access and use scientific data, and would have a deleterious long-term impact on our nation's research capabilities" [as quoted in (1)]. These academic leaders' concern focused on the proposed "Draft Treaty on Intellectual Property in Respect of Databases." The draft treaty on the protection of databases, the third in a series of three draft treaties prepared for the diplomatic conference, was in actual fact not discussed at all. Priority was given to the first two treaties: the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty, both of which dealt with fundamental issues in the field of copyright. This de facto revision began the process of adapting the international copyright system to today's digital environment. This policy forum focuses on the issues relevant to the scientific community in the copyright treaty that was concluded, as well as issues that may feature in future discussions about the protection of databases.

## The Battle over the Right of Reproduction

The right of reproduction is one of the core elements of copyright. The basic provisions of this right are found in Article 9 of the Berne Convention. According to this provision, the exclusive right of authorizing the reproduction of their works in any manner or form is vested in the authors of literary and artistic works. (Here the term "authors" will also include other copyright owners.) The scope of this right is therefore already very broad, but there remains some room for interpretation—for example, regarding the life-span of a copy established by an act of reproduction.

In the computer and network environment, many economically relevant uses of protected works are based on temporary copies that reside in the memory devices of computers. Such uses should not be outside the scope of copyright rules. The proposed Article 7 of the draft copyright treaty would have confirmed that the scope of the right of reproduction in Article 9 of the Berne

Convention includes both permanent and temporary reproduction. Governments would be allowed to legislate for provisions limiting the right of reproduction in the case of transient or incidental reproductions. These exceptions were intended to cover reproductions made in the working memory of a computer while browsing through material from the Internet and auxiliary, technologically indispensable reproductions that form part of the transmission process across networks. The exceptions were intended to allow the exclusion of acts of reproduction that have no economic relevance from the field of operation of copyright. As is usual in these matters, governments would be allowed to introduce the exceptions in their national legislation.

In general, right-holders and representatives of the contents industries were comfortable with Article 7 as proposed, but the United States Internet industry and the computer hardware industry resisted the proposal strongly. The fears of coalitions and associations lobbying on behalf of the telecommunications industry centered around the risk of excessive liabilities. Library representatives expressed concern that the public's access to information would be in jeopardy. The critics demanded either mandatory exceptions for certain types of incidental reproduction or deletion of the whole of Article 7 as proposed.

Groups from African and Asian developing countries took the view that both the browsing and telecommunication exceptions to the right of reproduction should be mandatory. Negotiations became very complex. The European Union (EU) and U.S. delegations worked to keep the proposed Article 7 in the treaty, with the rule about exceptions being optional.

In the end, lack of time and disagreement over the rule about exceptions sank the whole of Article 7. The United States accepted deletion of Article 7 on the condition that a statement on the right of reproduction be adopted. After long and difficult deliberations and roll-call voting, an agreed-on statement was adopted. It declares that the reproduction right, as set out in the Berne Convention, "fully applies in the digital environment." The statement also confirms that the storage of a protected work in digital form in an electronic medium constitutes a reproduction.

The right is already very broad ("in any manner or form") and the agreed statement further clarifies its application. For the EU and the United States, the proposals in Article 7 concerning the right of reproduction implied nothing new. Legislation in Europe and the United States (as in many other countries) already covers temporary reproduction, but the limits of the scope of

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the right are still being explored. Deletion of the proposed article from the treaty means that the question of reproduction in the context of browsing and transmitting over networks is still a matter to be dealt with by each contracting party.

### **The Communication Right: A New Role for an Old Right**

The right of communication is another cornerstone of the copyright system. The right of communication means that the author has the right to authorize communication of the work. The most important new provision in the new WIPO Copyright Treaty, Article 8, completes and clarifies the right of communication, adapting it to operation in the digital environment. First, Article 8 extends the right of communication to all categories of works, including literary works in written form (such as computer programs), photographic works, and works of pictorial art. Second, Article 8 makes it clear that the right of communication is applicable to interactive on-demand deliveries over digital networks.

The provision in Article 8 will now function as the basic rule for digital stores (including department, book, record, and video stores). Making protected works accessible to the public, which for a database could mean linking it to the Internet, is covered by copyright law. The provision makes national legislatures interoperable; in other words, it acts as an umbrella so that laws using different concepts to describe the same transaction can function together. Governments can choose to fulfill the requirements of the treaty by granting authors a right of communication or an equivalent right, such as right of transmission.

The concept of this provision gave rise to some dispute before the conference. Telecommunications companies were concerned that they might be held liable for activities that merely constituted the act of providing a conduit for transmissions of copyrighted material. The notes for the diplomatic conference on the proposal contained in Article 8 explained: "The relevant act is the making available of the work by providing access to it. What counts is the initial act of making the work available, not the mere provision of server space, communication connections, or facilities for the carriage and routing of signals" (2). Legal security for online service providers and telecommunications companies was ensured by the adoption of an agreed statement along the same lines. The precise wording is: "The mere provision of physical facilities for enabling or making a communication does not itself amount to communication within the meaning of

this treaty or the Berne Convention" (2). It seemed that all parties were satisfied with this outcome.

The rules for exceptions do not prevent national governments from reaching reasonable solutions to particular problems. Any limitations imposed in national legislation must pass a three-step test: (i) They shall only concern certain special cases, (ii) they may not conflict with normal exploitation of the work, and (iii) they may not unreasonably prejudice the legitimate interests of the authors. The "fair use" exemption found in U.S. legislation (which has been viewed as highly important to academic exchanges of information) and many other exceptions survive.

### **Database Treaty Deferred**

In 1995 and 1996, WIPO received a large number of proposals from governments on matters concerning the draft treaties. One of the most significant of these came in February 1996, when the EU presented a proposal on the *sui generis* protection (in other words, specific legal protection unique to its subject) of databases, based on a new Community Directive related to such protection. In May 1996, the United States presented WIPO with a similar but not identical proposal. The draft treaty on the protection of databases prepared for the diplomatic conference defined a database as a "collection of independent works, data or other materials arranged in a systematic or methodical way and capable of being individually accessed by electronic or other means." As proposed, the draft treaty would extend *sui generis* protection to any database if the collection, verification, or other steps in its production are the subject of substantial investment. Such investment might consist of the use of human or financial resources or both.

The maker of a database would enjoy an exclusive right to authorize, or to prohibit, the extraction or utilization of the contents of his or her database. Protection provided by the proposed treaty would cover only the extraction or utilization of all or a substantial part of a database. A part is considered substantial if it is of qualitative or quantitative significance to the value of the database. Is "substantiality" too vague a term to determine the borderline between the protected and the unprotected? A decision on this can be made by considering current practice in different fields of legislation. For instance, the system of copyright is largely based on flexible norms such as "fair use," which in practice delimit protection satisfactorily.

According to the draft treaty, a database has to be a "collection" of "independent

works, data, or other materials. Consequently, that which is not collected by the maker of the database, and which does not consist of items that were independent at the time they were collected by the maker of the database, remains outside the scope of protection. A data file that consists of a notation representing a natural phenomenon in which the elements or qualities are *a priori* in a given order, such as sequence data for the human genome or data in a digital recording, would not be protected as such. On the other hand, a compilation of several such data files would fall within the definition of a database in the draft treaty and could therefore be protected if other requirements were met.

The draft treaty would allow contracting parties to leave databases made by government entities outside the scope of protection. The term of protection would be a fixed number of years: the United States has proposed 25 years and the EU 15 years, counted from the date of the making of the database or from the date on which the database was made available to the public. It has been pointed out that "dynamic" (that is, continuously updated) databases would appear to enjoy perpetual protection. This would not in fact be so. Each version made or published would enjoy its own protection and would become public domain according to the general rule.

Internationally, the production and distribution of databases have become an extensive commercial activity requiring substantial levels of investment. On the other hand, identical copies of existing databases can be made and distributed further at practically no cost at all. Once established, protection would function as an incentive for investment in the production of, and trade in, databases. It would also provide protection against outright piracy and the misappropriation of the labor and effort of others. Rights granted under the proposed draft database treaty would be in addition to any copyright protection already available and would not affect other legal rights or obligations. In the United States, the kind of protection proposed would, to a great extent, restore the "sweat of the brow" principle rejected by the Supreme Court in 1991 in a case in which a regional telephone company wanted to make use of the white pages in a telephone book that had been generated by a local telephone company.

At the Geneva conference, there was insufficient time to begin negotiations on this new form of database protection. Consultations with regional groups from the developing countries showed that there was only limited readiness to discuss the matter. Scientific and library communities and gov-

ernmental and other institutions handling large volumes of data had adopted a critical view, some of them urging that no action at all should be taken.

This does not mean that a vacuum in this area currently exists. Provided that they meet the requirements for protection, databases are protected by copyright, and the new WIPO Copyright Treaty actually contains a provision that removes any uncertainty about this, because Article 5 confirms that copyright extends to databases. Protection does not extend to the actual data or material contained in the database. A database is protected as such, if, by reason of the selection or arrangement of its contents, it constitutes an intellectual creation. Although the actual data is not protected, a database may also consist of works that are themselves protected.

Before the diplomatic conference in Geneva, one persistent element of misinformation was that there would be no place under the proposed treaty for appropriate exceptions to rights in recognition of the particular needs of scientific research or education for the free use and exchange of information. In fact, the provisions on exceptions in the draft database treaty were modeled on the Article concerning the right of reproduction in the Berne Convention. This clearly allows exceptions such as the "fair use" exemption in U.S. legislation. By way of illustration, it can be mentioned that in Finland, the author's native country, a legal provision on the *sui generis* protection of databases has existed for 35 years. The protection provided has been limited by making all the exceptions to traditional copyright applicable.

Another topic much discussed before the conference was the assertion that protection would break the principle of full and

open exchange of scientific and other data among scientific institutions. In reality, no form of protection precludes the compilers of databases from exchanging their data. The protection proposed in the draft database treaty provides for the possibility of making a database available against payment of a fee. Another fact of life is that, irrespective of legal protection for compilations of data, there is a tendency (at least in Europe) to start charging for the services produced by public bodies such as national statistical organizations or meteorological institutes. This is a development fostered both by technological developments and the harsh laws of economics.

### What Comes Next?

The fact that the treaties finalized in Geneva were actually concluded proves that it is possible to come to terms on new and complex issues in WIPO, a community comprised of 160 member nations. The new treaties are not only clear evidence of a new dynamism, they also hold a promise for the future: Further agreements on new rules should be possible.

At the diplomatic conference, the industrialized and developing countries discovered that they have a degree of common interest. Many developing countries in Latin America, Africa, and Asia favor high levels of protection, something previously considered to be more in the interests of the developed countries. The political climate in this field has undergone radical change. With only a single exception (the agreed-on statement on the right of reproduction), decisions at the conference, including the adoption of the new treaties, were made unanimously.

In March 1997, the WIPO General As-

sembly decided about the methods and timetable for handling the matters left unresolved by the diplomatic conference. A committee of experts will be convened in September 1997 for the preparation of a protocol on audiovisual performances, and an information meeting concerning intellectual property in databases will be convened immediately after the committee meeting. Two other processes on related subjects will begin this year. In April, WIPO will organize two important meetings that will explore the possible need for new international rules. The first of these, a United Nations Educational, Scientific, and Cultural Organization-WIPO World Forum on the protection of folklore, will take place in Phuket, Thailand; the second, a WIPO World Symposium on broadcasting, new communication technologies, and intellectual property, will be organized in Manila, capital of the Philippines.

The search for balanced solutions in the field of copyright will continue. The scientific community, educators, librarians, right-holders, and members of the contents industries—producers, publishers, authors, and performers—have good reason to keep a sharp eye on what is going on.

### REFERENCES AND NOTES

1. In "Treaty Draft Raises Scientific Hackles" [*Science* 274, 494 (1996)], Andrew Lawler wrote of the worries of the scientific community before the diplomatic conference took place.
2. Basic proposal on the Copyright Treaty (CNRC/DC/4) prepared for the diplomatic conference.

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