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Proprietary Rights in Remote Sensing Images

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Abstract

Although the non-authorized reproduction of satellite remote sensing images is not yet an everyday problem, the protection of proprietary rights in remote sensing data is an open question. Besides contractual arrangements between providers and users, which are general practice in remote sensing data distribution, there is no general regime for its protection. Private companies and regional international organizations including the European Space Organization (ESA) claim to need urgently regulation on this matter. As a result, an amendment to the Draft Directive of the European Commission on the Legal Protection of Databases was proposed, in order to include protection of remote sensing satellite data.

This study analyzes the European Directive Draft on Databases, its proposed amendments and some neighboring rights treaties, which protect works with no personal stamp upon presentation. The later will be analyzed under the Agreement on Trade-Related Aspects of Intellectual Property Rights (GATT-Uruguay, 1994).

1. Introduction

Illegal copies of software, videos and recorded music are causing substantial financial losses¹. But in respect to remote sensing satellite data, only few conflict cases have been so far reported, where institutions have claimed "rights" in remote sensing satellite data.

In one case, the Soviet Academy of Sciences had asked the Jodrell Bank Observatory of the UK Manchester University, a scientific institution, to assist in the reception of video signals transmitted by the Luna-9 probe, which orbited and landed on the Moon in 1966. Although an informal agreement was concluded, the Jodrell Bank Observatory published pictures of the Moon landscapes without the prior consent of the Soviet side, turning down the claims of the Academy of Sciences². The issue was if the Soviet Academy of Sciences could have rights in raw data³. Although the raw data were for scientific rather than for commercial purposes, no legal solution was found.

Another case involved the Meteosat System, before its transfer from ESA to the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT). In 1984, processed data⁴ was marketed by an ESA distributor in Germany under an agreement that specified that ESA had copyrights in Meteosat data. A commercial private company, who bought a Meteosat image, published it with the prior consent of the

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German distributor, but failed to make reference to ESA as the copyright holder. The German distributor, supported by ESA, brought the case before the Berlin First Instance Court. It was claimed that ESA had copyrights on the image. The Court held that according to German Law, only a natural person could be recognized as an author of a work. ESA could not prove before the Court which employee (natural person) was the author of the image that had transferred the copyrights to ESA within the scope of employment; therefore, the case was dismissed for substantial reasons⁵.

2. The Claims of Operators.

The Centre National D'Etudes Spatiales of France (CNES) claims to be the owner and to have "droits d'auteur" on all the SPOT data⁶.

Another example is ESA which claims to retain "full title and ownership as the holder of the intellectual property rights over the satellite produced data" of its ERS System⁷.

Also EUMETSAT claims ownership and intellectual property rights on all its Meteosat "products" (images and processed data). Although it was already suggested by EUMETSAT executives⁸ to introduce an amendment to its Convention, whereunder the member States recognize the organization as the copyright holder of the Meteosat data, as of April 1995 no amendment to the aforementioned Convention has come into effect⁹.

Normally, remote sensing data distributors rely on contract law as the basis for marketing their products to users. Users are required to sign contracts with licensing conditions preventing the non-authorized re-distribution of remote

sensing data to third parties. In most of these documents, also clauses are used, that expressly state the copyright protection of the licensed data. Of course, copyright cannot be created by private law agreements, if copyright protection for remote sensing data is not recognized by the applicable law.

3. European Directive on Protection of Databases.

In 1992, the Commission of the European Communities proposed a Council Directive on the Legal Protection of Databases. Under this Directive, databases are protected by copyright and by a right to prevent unfair extraction¹⁰. In mid 1993, as a part of its approval process, the European Parliament proposed modifications¹¹, but some of these were not accepted by the Commission.

"Database" is defined in the Draft Directive as a collection of data, works or information which are arranged, stored and accessed by electronic means (Art.1)¹². Also, the holder of rights in a database is defined as the author of a database or authorized person, who was granted the right by the author to restrict unauthorized extraction from a database or, in case that the database do not qualify for copyright protection, the establisher of the database¹³. In the Draft Directive two alternative rights are granted to protect databases: copyright and a sui generis right to prevent unfair extraction.

a) Copyright on Databases

In Chapter two of the Draft Directive the copyright protection on databases is addressed. The only criterion for the granting of copyright is originality, in the sense that the selection or arrangement constitutes the author's own intellectual creation (Art. 2.3). No esthetic or qualitative criterion should be applied for the granting of copyright protection (Preamble, par. 15). The duration of the protection is the same as that for literary works already established in international agreements and national legislations.

In Draft Directive, a difference is made between the database and its contents. The contents could include works already protected by copyrights or neighboring rights (Art.2.4). It is also considered that a database eligible for copyright may contain data that do not qualify itself for copyright protection¹⁴. The Commission rejected Parliament's modifications that defined the holder of copyright as the person who has taken the initiative for establishing a database and is responsible for it¹⁵. The reason was that such extensive definition should not be included in a Directive on the protection of specific types of works.

In recognition of the Commission's approach it is unlikely that the Commission would accept copyright protection for "all" automatically received and processed remote sensing satellite data. Thus, under the Draft Directive national institutions like CNES of France, or international organizations like EUMETSAT or ESA would be considered institutions who initiated the establishment of and are responsible for remote sensing systems, but without being authors of an image. In the early version of the Draft Directive, it is explained that

copyright protection is possible for databases "for the way in which the collection has been made, that is, the personal choices made by the author in selecting or in arranging the material and in making it accessible to the user"¹⁶. "The criteria and parameters for selection and arrangement have to be set by a human author, regardless of whether the selection or arrangement are performed with the aid of intelligent or expert systems incorporated in the underlying software..."¹⁷. Following this set of ideas, remote sensing data are collected by satellites automatically where human intervention set the parameters to select the surface to be sensed. But this act of human creativity can not be extended to the raw data itself. In the case that protection is accepted for a collection of raw data in a database, claims of rights may be vested in a database but not in its contents, in the raw data. Interesting is an example given in the early version of the Draft Directive for data obtained by the use of an earth observation satellite¹⁸: here, satellite data are considered as the "content" of a database, therefore it seems that the raw data itself are not copyrightable, but their later arrangement by a human author.

Another problem arises in respect of the protection of processed data in databases. Can the large amount of automatically gathered satellite data and automatically processed data be considered as a "human choice"? Was there a "selection or arrangement" of its contents by a human, with sufficient originality that it qualifies for copyright protection?. No doubt, a person may send all the commands to the satellite for gathering information and a human can program a computer to process the received data, but he can not know in advance what will be the result of all these automatic processes. Thus, he is not

adding originality to the products before they reach his hands and, consequently, this treatment of data does not qualify for copyright protection.

b) Right to Prevent Unfair Extraction

A new aspect of the Draft Directive is "the right to prevent unfair extraction". In chapter three it is defined as the "right of the establisher of a database to prevent acts of extraction and re-utilization of material from that database for commercial purposes" (Art. 10, p.1). This right is not a copyright itself and "nor a right in the contents themselves"¹⁹. The right to prevent unfair extraction "must be available regardless of whether the database itself qualifies for copyright protection"²⁰. This right extends to 15 years from the time when the database was made publicly available (Art.12).

Even if remote sensing data are not protected by copyright or neighboring rights, the contents of a database composed of remote sensing data qualifies for the protection against unauthorized extraction, independent of whether the database qualifies for copyright protection or not (Art.10.2.)²¹. Thus, a "holder of rights" (not an author) (Art. 1.2.), in this case the owners of the satellite systems, qualifies for the protection of his database containing raw and processed data. With the right to protect databases against unauthorized extraction, there is no any longer need to seek protection under the copyright scheme for a database containing raw and processed remote sensing data.

4. Amendments Proposed to the Draft Directive.

After a careful study of the early version of the Draft Directive, ESA, with the assistance of the European Centre on Space Law, came to the conclusion that only an extensive interpretation of the Draft Directive, may encompass also remote sensing satellite data. Therefore, ESA contacted the European Commission (DG XII) and proposed the introduction of amendments to cover also remote sensing "raw and processed information"²² as a database.

Although there is no specific proposed amendment assuring the copyright protection of remote sensing data, it is clear that it was intended to protect the data under intellectual property rights.

As of July 1995, the Directive Proposal had not yet completed the approval process²³ and did not include the proposed amendments.

5. Neighboring Rights

Neighboring rights could lead to other solutions for protecting the rights in data where originality is not a factor.

Various steps were undertaken in that direction. In 1960 European broadcast organizations pushed for the creation of an agreement which protects their products²⁴. Under the European Agreement of the Protection of Television Broadcasts of 1960 (Strasbourg Television Agreement)²⁵, the signatory States have the right to prohibit the unauthorized rebroadcasting, fixation, reproducing of fixations, retransmission by wire and public presentation of an unauthorized fixation (Art. 1). The protection extends also to the seizure of

illegal imported broadcasts from countries where no protection exists (Art.4)²⁶.

One year later, in 1961, the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (Rome Convention)²⁷ introduced two important aspects in respect to the producers of phonograms and broadcasting organizations, that are similar to the remote sensing satellite systems owners.

First, the protection granted to producers of phonograms and broadcasting organizations "does not involve the embodiment of communication of a work in a creative manner"²⁸. Although specialized human resources intervene in the preparation and transmission of signals, it is accepted that they "do not imprint their personal stamp upon presentation"²⁹.

Secondly, the protection is granted in "recognition of the highly technical and organizational achievement that the production of phonograms and broadcasting of radio and tv programs require"³⁰.

These arguments match exactly the characteristics of raw and processed remote sensing data gathered by satellites.

The protection granted is the "Producer right", symbolized by ©. The broadcasting organizations have rights that extend after the transmission took place. Thus, the broadcasting organization has the right to prohibit direct retransmission, fixation, reproduction of broadcasting, reproduction of fixations of original broadcast and indirect acts of exploitation after rebroadcasting of

original transmission by other broadcasting organizations (Art. 13)³¹.

It has been claimed that remote sensing data can not be considered subject of a new protocol of such type of neighboring rights. Nevertheless, the Rome Convention has combined three different aspects to form a new, heterogeneous regime³².

Although these two international instruments may not be applicable to protect remote sensing data, the same rationale and protection can be used for a similar treaty protecting satellite remote sensing data.

6. TRIPS

In April 1994, through a Ministerial Conference of the General Agreement on Tariffs and Trade (GATT) in Marrakesh, 117 States adopted 16 new multilateral agreements with binding force among all members States. Among these agreements the "Agreement on Trade-Related Aspects of Intellectual Property Rights" (TRIPS) recognizes the applicability of relevant copyright and neighboring treaties for all the GATT Member States³³. The 1971 Paris Act of the Berne Convention for the Protection of Literary and Artistic Works, and the Rome Convention are included among others. Furthermore, in TRIPS the rights of the Broadcasting Organizations are acknowledged (Art.14)³⁴.

Although TRIPS does not mention databases, it is considered that the "compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such". But very clearly,

Article 10 of TRIPS does not recognize the protection of data or material itself.

7. Conclusions

The lack of cases on unauthorized copying of remote sensing data, may suggest that so far direct agreements among distributors and purchasers, are sufficient to protect the satellite system owner against unauthorized copying of raw and processed data. Yet, a relative protection established by obligations cannot fully replace a protection under absolute rights.

Although national institutions like the CNES of France and international organizations like ESA and EUMETSAT have already attempted to use the copyright regime for the distribution of remote sensing data, no international legal precedents for the copyrightability of raw and processed data have emerged. These attempts are questionable, because the most prominent requirement for copyright protection, human originality, does not seem to be fulfilled.

If the European Draft Directive on Databases Protection were amended to protect remote sensing raw and processed data under the copyright chapter, and thereby originality be recognized, a contradiction would arise, that may endanger the whole structure. Consequently, the EU Commission asserted to set the essentials that can be used to grant protection for raw and processed data contained in databases, under the right to prevent unfair extraction for 15 years. This approach by the Commission is in full compliance with the internationally recognized prerequisite of originality for copyright protection.

For systematic reasons it is necessary to accept that the copyright regime cannot be used to protect remote sensing raw and processed satellite data. Otherwise, the copyrightability of raw and processed data will be challenged again by the introduction of new automated technologies.

Another alternative for the protection are neighboring rights. There is no doubt that the development and operation of remote sensing systems require high financial investments and technical and organizational achievements, that legitimize the legal protection of raw and processed data under the "production rights" formula.

Anyway, the European Directive on Databases will clear the way to prevent the misuse of the copyright label for the protection of raw and processed remote sensing satellite data .

Footnotes

1. Industry sources estimate that 80-90% of software, videos and recorded music of Western companies are copied illegally. Ritu K., Pirates under pressure, Business Eastern Europe, Oct.24, 1994.
2. Prof. Marov M., Head of the Department of Planetary Physics and Aeronomy, Keldysh Institute of Applied Mathematics, Moscu. Information submitted in the ISU Summer session, August 1989, Strasbough, France.
3. Raw or primary data "...the data that are acquired by remote sensors borne by space object and that are transmitted or delivered to the ground from space by telemetry in the form of electromagnetic signals, by photographic film, magnetic tape or any other means". Principle I (b). United Nations General Assembly Resolution: U.N.G.A. Res. 41/65 (Dec. 3, 1986).

4. Processed data means "the products resulting from the processing of the primary data, needed to make such data unusable, Principle 1 (c). Id.
5. Landgericht Berlin, 16. Zivilkammer, Urteil Geschäftsnummer 16.O.33-89, verkündet am 30 Mai 1989.
6. Le CNES est "propriétaire du satellite et détenteur des droits d'autor sur les données SPOT". Dufresne, L., Le Système de Distribution des Données et Produits SPOT, Colloque Le Droit face aux techniques de télédétection", Strasbourg France, Mai 1993, p. 2. "Copyright restrictions apply to all Spot data...Spot data is defined as any signal transmitted and recorded on any suitable medium and processed by any method, which does not significantly modify the form of such data by the use of data external to the acquisition system". O'Connor L. and Collins W., Effects of Commercialization on International Remote Sensing Activities, Proceedings of IGARSS'88 Symposium, Edinburgh, 13-16 Sep. (ESA publication).
7. Ferrazzani M., Remote Sensing: General Legal Principles and ESA Policy, Proceedings of the Third ECSL/Dutch NPOC Workshop, Noordwijk, April 1994, p. 10.
8. Thiem V., Copyright For Meteorological Satellite Data; Workshop Legal Aspects of Protection of Satellite Data, Frascati, 1991, p. 8.
9. Convention for the Establishment of a European Organization for the Exploitation of Meteorological Satellites "EUMETSAT". May 24, 1983. Last version: April 1995.
10. Commission of the European Communities, Initial Proposal: COM (92) 24 final-SYN 393, Brussels, 13 May 1992, JO number C 156, 23 June 1992, p. 4. The Initial Proposal contains a 57 pages Explanatory Memorandum.
11. Modified Proposal: COM (93) 464 final, 4 Oct. 1993, JO number C 308, 15 Nov. 1993, p. 1.
12. Database definition shall not apply to any computer programmes used in the making or operation of the database, Art.1.1. Id.
13. "in Fällen, in denen die Datenbank nicht für einen urheberrechtlichen Schutz in Betracht kommt, der Ersteller der Datenbank", Art.1.1.(c), Supra note 11.
14. Already in 1991 a possible protocol to the Berne Convention to include databases under the copyright regime was discussed in the World Intellectual Property Organization was discussed in the World Intellectual Property Organization (Initial Proposal, Part I, 6.1.1), supra 10. Then, it was already questioned if such protection should be granted to databases that did not meet the criterion of originality (Initial Proposal, Part I, 6.1.4.), id.
15. Modified Proposal, p. 3. Supra 11.
16. Initial Proposal, Part. I, 3.2.2. Supra 10.
17. Initial Proposal, Part I, 3.2.3. Id.
18. Initial Proposal, Part II, Par.8.1. Id.
19. Initial Proposal, Part II, 1.2. Id.
20. Initial Proposal, Part. II, 2.5. Id.
21. "gilt unabhängig davon, ob die Datenbank für einen urheberrechtlichen Schutz in Betracht kommt" Art.10.2. Modified Proposal, supra 11.
22. ESA/AF (93) 13, p. 3.
23. Commission des Communautés Européennes. Bruxelles, 19.07.1995, COM (95) 382 final "Libre Vert, Le Droit d'auteur et les droits voisins dans la Société de L'Information" p. 31.
24. Nordemann W. et al, International Copyright and Neighboring Rights Law; p. 340, VCH Verlagsgesellschaft, 1990, p. 463.
25. Open for signature in Strasbourg in June 22, 1960.
26. Nordemann: supra note 24 at p. 465.
27. Id. at p. 337.
28. Id. at p. 340.
29. Id. at p. 356.
30. Id. at p. 341.
31. It is not required to fix the transmitted broadcast in order to get legal protection. Id at p. 366. The protection period is 20 years counting from the end of the year when a broadcast took place, Rome Convention, Art.14.
32. The Rome Convention is in force since 1964.
33. Barth D., Die Handelsregeln der neuen Welthandelsorganisation, NJW 1994, 2811, 2812.
34. The TRIPS agreement came into force the 1st. of January of 1995.