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Protecting satellite and remote sensing data: from a copyright scheme to a full-and-open access scheme. Setting up access data policies: actual scenario and future perspectives.

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Why protecting satellite and remote sensing data.

Remote sensing activities by European operators raises the question of how to protect data from Earth observation satellites. These are very costly programmes and **a legal tool is needed** to enable satellite operators to recover their investment and to commercialise Earth observation data. No private investor will engage in the creation of computer products derived from data **unless they are certain that the legal tools exist** to recover their investment if necessary.

The risks of a strict IP based approach in the protection of satellite and remote sensing data.

On the other hand, a strict IP based approach to the issue of the protection of satellite and remote sensing data **could prevent**, amongst the others:

- the development of EU information services (tailored to the needs of users), which give access to accurate data and information in the field of environment and security;
- a better exploitation of the industrial potential of policies of innovation, research and technological development in the field of Earth observation;
- the developments of key tools to support biodiversity, ecosystem management, and climate change mitigation and adaptation.

THE IP APPROACH: LEGAL TOOLS FOR THE PROTECTION OF SATELLITE AND REMOTE SENSING DATA

Which kind of legal protection?

A study carried out on behalf of the European Commission in the '90s **confirmed the confusion about which type of law should be applied**: copyright, trade secrets or ownership rights, and that existing European legislation did not cover remote sensing data.

In effect most operators in Europe used copyright protection for their data. However, **copyright law is not ideally suited for these activities** as the protection is insufficient for several reasons, notably because it is inapplicable to raw data. Furthermore, there was a risk that protection could differ between ESA Member States due to the interpretation of national copyright laws.

Copyright scheme and types of data

When examining the issue of remote sensing data protection a **distinction must be made** between different possible objects of protection:

- **raw data**
- **corrected data**
- **treated data, also called “analysed data”**

In general copyright protection may be obtained for an **original work of authorship fixed in a tangible medium**. One of the prime problems with raw, corrected and treated data is that collections of such data do not satisfy the originality criterion if there is no creative human intervention involved in producing such data.

In general, copyright protection is more easily available for treated data and data products.

From data to databases

The ideal solution for remote sensing was a *sui generis* protection to be adopted at a European Community level. A ***sui generis right*** means that the legislator can ‘borrow’ principles from comparable regulations to protect satellite remote sensing data.

To such an aim, the perspective was changed from protecting data as a such to protecting (under copyright law) the creative databases thereof, in order to grant a unique protection – the *sui generis right* - for databases that do not meet the requirement of originality but which require a **substantial investment**. In other words, the *sui generis right* extends protection to databases containing material **not protected by copyright**.

This is the ground of the **EU Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases**.

Key points of the EU Databases Directive: definition of database

The Directive concerns the legal protection of databases in any form.

"Database" is legally defined as "a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means" and does not include "computer programs used in the making or operation of databases accessible by electronic means".

Key points of the EU Databases Directive: object of protection

Databases which, **by reason of the selection or arrangement of their contents**, constitute the author's own intellectual creation shall be protected as such by copyright. **No other criteria** shall be applied to determine their eligibility for that protection.

The copyright protection of databases provided for by the Directive **shall not extend to their contents and shall be without prejudice to any rights subsisting in those contents themselves.**

Key points of the EU Databases Directive: author(s), copyright and economic rights

The author of a database can be the **natural person** or a **group of natural persons** who created the base or the **legal person** designated as the rightholder.

In case of a database which is **a collective work**, the economic rights are owned by the **person holding the copyright**. In respect of a database created by a group of natural persons jointly, the exclusive rights shall be owned jointly.

Key points of the EU Databases Directive: restricted acts

In respect of the expression of the database which is protectable by copyright, the author of a database **has the exclusive right to carry out or to authorize:**

(a) temporary or permanent reproduction by any means and in any form, in whole or in part;

(b) translation, adaptation, arrangement and any other alteration;

Key points of the EU Databases Directive: restricted acts

(c) any form of distribution to the public of the database or of copies thereof;

(d) any communication, display or performance to the public;

(e) any reproduction, distribution, communication, display or performance to the public of the results of the acts of translation, adaptation, arrangement and of any other alteration.

Key points of the EU Databases Directive: exceptions to restricted acts

The performance by the lawful user of a database or of a copy thereof of any of the acts listed in the previous slides and which is necessary for the purposes of access to the contents of the databases and normal use of the contents **by the lawful user does not require the authorization of the author of the database**. Where the lawful user is authorized to use only part of the database, the above shall apply only to that part.

Any contractual provision **contrary** to the above shall be **null and void**.

Key points of the EU Databases Directive: exceptions to restricted acts

Restricted acts are further **limited**:

- (a) in the case of **reproduction for private purposes** of a non-electronic database;
- (b) where there is **use for the sole purpose of illustration for teaching or scientific research**, as long as the source is indicated and to the extent justified by the **non-commercial purpose** to be achieved;
- (c) where there is use for the purposes of **public security** or for the purposes of an administrative or judicial procedure;
- (d) where other **exceptions to copyright** which are traditionally authorized under national law are involved.

Key points of the EU Databases Directive: the *sui generis right*

The **sui generis right** is defined as the right for the maker of a database which shows that there has been **qualitatively and/or quantitatively a substantial investment** in either the obtaining, verification or presentation of the contents to prevent **extraction** and/or **re-utilization** of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, **of the contents** of that database.

Key points of the EU Databases Directive: the *sui generis right*

“extraction” : permanent or temporary transfer of all or a substantial part of the contents of a database to another medium by any means or in any form (**public lending is not** an act of extraction or re-utilization);

“re-utilization” : any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission.

Key points of the EU Databases Directive: the *sui generis* right

The sui generis right:

- > **may be transferred**, assigned or granted under contractual licence;
- > shall apply irrespective of the eligibility of that **database** for protection by copyright or by other rights;
- > shall apply irrespective of eligibility of the **contents** of that database for protection by copyright or by other rights;
- > shall be without prejudice to rights existing in respect of the **database contents**.

Key points of the EU Databases Directive: the *sui generis* right

The **repeated and systematic extraction and/or re-utilization** of insubstantial parts of the contents of the database implying acts **which conflict** with a **normal exploitation** of that database or which **unreasonably prejudice** the legitimate interests of the maker of the database are not be permitted.

Key points of the EU Databases Directive: term of protection of the *sui generis right*

The *sui generis right* runs from the date of completion of the making of the database and expires fifteen years from the first of January of the year following the date of completion.

In the case of a database which is made available to the public in whatever manner before expiry of the period above, the term shall expire fifteen years from the first of January of the year following the date when the database was first made available to the public.

Key points of the EU Databases Directive: term of protection of the *sui generis right*

Any **substantial change**, evaluated qualitatively or quantitatively, to the contents of a database, including any substantial change resulting from the accumulation of successive additions, deletions or alterations, which would **result** in the database being considered to be **a substantial new investment**, evaluated qualitatively or quantitatively, shall qualify the database resulting from that investment for **its own term** of protection.

Key points of the EU Databases Directive: final remark

The Directive shall be without prejudice to provisions concerning in particular copyright, rights related to copyright or any other rights or obligations subsisting in the data, works or other materials incorporated into a database, patent rights, trade marks, design rights, the protection of national treasures, laws on restrictive practices and unfair competition, trade secrets, security, confidentiality, data protection and privacy, access to public documents, and the law of contract.

EU Databases Directive and satellite databases

As a result, remote sensing and satellite data **assembled in an original database** are protected under the European Directive.

A **sui generis right is granted** if the database is individually accessible and requires substantial investment.

Basically it consists of two sets of rights: the **extraction right and the re-utilisation right.**

**THE FREE AND OPEN ACCESS
APPROACH: THE EU
PARLIAMENT RESOLUTION OF
JUNE 16, 2010 WITHIN THE
EUROPEAN EARTH MONITORING
PROGRAMME (GMES 2011-2013)**

A new approach to the access to satellite data

The European Space Agency and the European Parliament **have endorsed the idea of free and open access to data** from Europe's future generation of Sentinel Earth observation satellites, with the possible exception of imagery with a ground resolution sharper than 10 meters.

The Global Monitoring for Environment and Security (GMES) project will be owned by the 27-nation European Union, with **its data policy to be set by European Union governments and the European Commission.**

The free-and-open scheme: actual scenario

With ESA already adopting the policy for the satellites it controls and **the recent European Parliament endorsement of the free-and-open scheme**, one may be confident that most GMES data **would be open to just about anyone in the world** with access to a broadband Internet connection.

ESA Earth Observation Direction **has already thrown open access** to its Earth observation satellites, **eliminating the need to wait for an announcement of opportunity**, or AO, before submitting a request for data and awaiting approval.



The EU Parliament Resolution of June 16, 2010

In its June 16 resolution **on GMES**, the European Parliament endorsed this view, concluding:

“There should be a full and open-access data policy for the Sentinels through a free-of-charge licensing and online access scheme, subject to security aspects.”

Global Monitoring for Environment and Security (GMES)

The **GMES programme** is:

- (a) a service component ensuring access to information in support of the following areas:
 - atmosphere monitoring;
 - climate change monitoring in support of adaptation and mitigation policies ;
 - emergency management;
 - land monitoring;
 - marine environment monitoring;
 - security;
- (b) a space component ensuring sustainable spaceborne observations for the service areas referred to in point (a);
- (c) an in situ component ensuring observations through airborne, seaborne and ground-based installations for the service areas referred to in point (a).



IP vs. Full free and open access

Satellite data access has been a hotly debated topic for years.

IP: some argue that the private sector will not fully develop the sector if the imagery cannot be put behind a firewall and prepared for sale.

Full free access: others, pointing to the U.S. GPS navigation system (Landsat), say offering the data free of charge at the source, and having the **private sector focus on value-added services**, is the best way to stimulate the use of the data.

A quick overview of the U.S. scenario

Access to U.S. Landsat data used to be subject to fees.

Since it has been available free of charge, downloads of Landsat data have increased exponentially. The August 2008 decision to make the archives of Landsat data available on the web without charge has resulted in a 60-fold increase in the number of scenes downloaded per day, with U.S. and Chinese users being the most frequent of the 186 nations that have taken advantage of the service.

In addition, more users are now asking for multiyear images of the same area for land-use and environmental-change studies.

A quick overview of the U.S. scenario: data and numbers

Satellite Landsat data **sold on 2001**: an average of **53 scenes per day**. The average has been increasing steadily and is around **3,125 scenes per day of web-enabled data**.

Satellite Landsat data **free of charge since 2008**:

- > **one million-scene** mark in August 2009;
- > **two million scenes** as of March 2010

The EU Parliament Resolution of June 16, 2010:GMES Data and Information Policy

The data and information policy shall have the following objectives:

- (a) **promoting the use and sharing** of GMES information and data;

- (b) **full and open access** to information produced by GMES services and data collected through GMES infrastructure, subject to relevant **international agreements, security restrictions and licensing conditions**, including registration and acceptance of user licences;

The EU Parliament Resolution of June 16, 2010:GMES Data and Information Policy

- (c) **strengthening Earth observation markets in Europe**, in particular the downstream sector, with a view to enabling growth and job creation;
- (d) contributing to the **sustainability** and **continuity** of the provision of GMES data and information;
- (e) **supporting** the European research, technology and innovation communities.

The EU Parliament Resolution of June 16, 2010:GMES Data and Information Policy

Ensuring the attainment of the GMES information and data policy objective

VS.

Providing for the necessary protection of the information produced by the GMES services and of data collected through the GMES dedicated infrastructure

The EU Parliament Resolution of June 16, 2010:GMES Data and Information Policy

To such an aim the Commission may adopt the following measures, taking into account the data and information policies of providers of data needed for GMES, and without prejudice to national rules and procedures applicable to space and in situ infrastructures under national control:

- (a) measures establishing **registration and licensing conditions** for GMES users;
- (b) measures defining **criteria for restricting access** to the information produced by the GMES services and to data collected through the GMES dedicated infrastructure.

Thank you for your
attention

