



International and European Legal Framework for Geospatial Data and Services

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Introduction

- Legal and policy issues need to be addressed in order to **maximise the benefits** of geospatial data and services and to provide a **clear and stable framework** for industry
- Legal and Policy issues **become more complex** as new geospatial data and services develop and **convergence with other sectors and technologies** rapidly increases (Cloud Computing, UAS/UAV, Big Data, Location Based Services ...)
- **Exponential growth** in geospatial markets (Geospatial World, 17 September 2013)
 - size of global geospatial industry is very close to **\$100 billion**
 - growing at an annual growth rate of **10-15%**
- Policy and legal communities have largely **failed to keep up** with developments:
 - Policy development faced with high complexity, even on national level
 - Legal always running behind technology and innovation
 - Lawyers and policy-makers struggle to understand the specificities of the sector

Legal & Policy Challenges

- The main legal and policy challenges in relation to geospatial data and services include:
 - **Open Data Policies**
 - linked to E-Government initiatives
 - **Licensing**
 - including license fees and IPR
 - **Data Quality and Services Performance**
 - standards, certification, warranty, and liability
 - **Personal data protection**
 - correlating geospatial data with personal information

Status of International Law

- Relatively developed legal framework on **remote sensing activities** from outer space, as laid down in the
 - UN Outer Space Treaty (1967)
 - UN Remote Sensing Principles (1986)
 - International Disaster Charter (2000)
 - UN Spider (UN GA Res 61/110 of 14 December 2006)
- However, these instruments
 - mainly apply to the **relation of States** and the exchange of data among them
 - **do not apply to all types of geospatial data and services** (only where remote sensing is concerned)
 - **do not specifically address** the legal challenges in relation to geospatial data and services and do not intend to foster the markets

Status of International Law

- No **binding international law** instruments that specifically address geospatial data and services
- However, a number of initiatives on the international level to develop **non-binding recommendations and best practices** on geospatial services such as
 - United Nations Initiative on Global Geospatial Information Management (UN-GGIM)
 - Group on Earth Observation (GEO)
- Initiative by the **International Bar Association** (IBA) on a **Convention on Geoinformation** aims at allowing the geospatial industry to develop by
 - rationalising the many conflicting and overlapping existing rules and regulations
 - addressing the reliability of geospatial information
 - granting producers a property right in the fruits of their work
 - setting limits on the collection, use, storage and transfer of geospatial information

European Legal Framework

- **INSPIRE Directive (2007/2/EC) and implementing measures**
 - establishes an infrastructure for spatial information in Europe to support the EU's environmental policies
- **Public Sector Information Directive (2013/37/EU)**
 - provides a common legal framework for a European market for government-held data (public sector information)
- **Environmental Information Directive (2003/4/EC)**
 - aims to ensure that environmental information is systematically available and distributed to the public
- **Database Directive (96/9/EC)**
 - creates a new exclusive *sui generis* right for database producers to protect their investment of time, money and effort

European Legal Framework - Copernicus

- Regulation (911/2010) on GMES and its initial operations (2011 to 2013)
 - established the European Earth monitoring programme called GMES (now Copernicus)
 - lays down the rules for the implementation of its initial operations during the period 2011-2013
- Regulation (377/2014) establishing the Copernicus Programme
 - repeals Regulation (911/2010)
 - lays down the rules for the implementation of the Copernicus programme
- Delegated Regulation (1159/2013) on access to data and information
 - establishes registration and licensing conditions and
 - defines criteria for restricting access to GMES data and services

Open Data Policies and Geospatial Industry

- The **logic of full, free, and open access** to public (geospatial) data is that:
 - revenues to a public sector body from sales of these data are generally small
 - the **benefits to society** of open access are potentially very large
 - generation of public data and information has already been paid from public funds
- A number of legal and policy documents reflect a **clear international trend towards free, full, and open access** to public (geospatial) data, including

<ul style="list-style-type: none"> ■ GEOSS data sharing principles ■ International Disaster Charter ■ US Earth Observations Strategy ■ NOAA NESDIS data policy ■ Landsat data policy ■ Copernicus data policy 	<ul style="list-style-type: none"> ■ ESA data policy ■ EUMETSAT data policy ■ G8 Open Data Charter ■ WMO Resolution 40 ■ Panton Principles ■ OECD Guidelines on Research Data ...
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Open Data Policies and Geospatial Industry

- The terms full, free and open are not always used in a consistent manner:
 - **Full** – access to all the data, unless restrictions are explicitly stated
 - **Free** – free of charge
 - **Open** – freely available
- Many policies or legal instruments allow for **exceptions** to the general principle of open data. The reasons cited for the exceptions include (among others):

<ul style="list-style-type: none"> ■ International law ■ International relations and foreign policy ■ National security ■ Defence ■ National legislation ■ Intellectual Property Rights 	<ul style="list-style-type: none"> ■ Personal data protection ■ Commercial confidentiality ■ The Course of Justice ■ Contractual obligations ■ Protection of sites, species etc. ■ Availability of resources
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Licensing and Licence Fees

- Basically, two different approaches on licensing of public (geospatial) data:
 - the US position is to have **no licences** for federally produced data
 - the European position is to have **some form of licence**
- Licenses seem to **become more popular** as a means of defining the conditions of access to and use of geospatial data
- Many widely recognized licenses are, however, **not intended for**, and are not appropriate for **data or collections of data** (namely Creative Commons)
- Licensing conditions on both the national and international level **vary widely**
 - differences may cause legal uncertainty and may discourage commercial use
- Need to develop **simplified and unified conditions**
 - German authorities recently initiated a model project with the aim to provide a simplified and standardized procedure in licensing public geospatial data

Data Quality and Services Performance

- Many public data policies or licensing conditions **exclude any warranty or liability** of the data owner (cf. Section 9 Digital Globe End User License Agreement; Art. 9 Copernicus Data Policy) regarding:
 - quality
 - accuracy
 - fitness for purpose
- Such general exclusion is **apparently still widely accepted** by all stakeholders
- It will, however, **become under increasing pressure** the more commercial services are developed and offered on the basis of open public data, namely
 - for mass consumer markets (e.g. location based services) or
 - for safety-critical applications.
- Provision of services **free of charge is not per se a justification** for broad warranty and liability exclusions under several jurisdictions

Data Quality and Services Performance

- Industry raises **concerns in relation to the exclusion** of any warranty or liability of public data owners, namely that
 - Public data **may not be used** by commercial industry, unless they are of assured and appropriate quality
 - Commercial EO industry has to deliver its service to clients at competitive conditions, and has to commit for **services quality and performance**
 - Geospatial services should have clear **product specifications** and **transparent information** on data quality etc. should be provided
- **Service Level Agreements (SLA)** are already employed in the commercial EO sector defining guaranteed levels of data and services performance
- Lack of commitment towards data quality **may hamper the wider use** of the data by commercial industry and may **reduce their potential benefits**.

Personal Data Protection

- Geospatial data and services have until recently not been perceived as raising specific concerns regarding the protection of personal data
- During the last 2-5 years, however, geospatial data and services have come on the **screen of data protection authorities** and meet **increasing concerns of the general public**
- **Google Street View and Google Earth** were the key drivers, numerous national authorities restricted or even denied the collection of data and imposed fines on Google
- **Reasons for increasing awareness** are
 - advances in technology (digitalization, internet distribution, higher resolution etc.)
 - Convergence (Location Based Services, tracking technologies etc.)
 - Commercialization and new services (geo-marketing, geo-scoring, geo-profiling etc.)
 - Other recent developments (NSA, Facebook etc.)

Personal Data Protection – Legal Framework

- No global approach or instrument addressing personal data protection in relation to geospatial data and services
- On the European level:
 - EU Data Protection Directive (95/46/EC) – currently under review
 - Directive does not contain specific provisions on geospatial data and services, Art. 29 Working Party has provided some relevant opinions
- On the national level:
 - some national authorities have issued guidelines, namely on Google Street View
 - commercial actors develop Codes of Conduct in order to prevent binding rules
- Jurisprudence
 - in the context of Google Street View, the Federal Supreme Court of Switzerland held that Google is under the obligation to render personal data unrecognizable (1C_230/2012)

Qualification of Geospatial Data as Personal Data

- Most geospatial data are mere **factual data** which as such not include direct information about persons
- However, they can provide information about persons **indirectly**, namely when combined with other types of data and information
- Under the criterion of “indirectly identifiable”, **more or less all geospatial data could become personal data**
- Difficult to determine when the interests in the publication and use of the data overrule the **legitimate interests of person** in data protection
- **Technical criteria** (e.g. resolution, scale, number of households etc.) are subject to rapid changes and tend to be arbitrary
- This, together with unspecific legal framework, results in a **high degree of uncertainty for industry** whether or not data protection laws apply and how they should be observed

Conclusion

- No comprehensive international legal framework for Geospatial data and services
- Evolving legal framework on European level, but not consistent
- International cooperation mainly limited to events of disasters
- General global trend of open data policies, however many access limitations in practice
- Chaotic situation with regard to public licenses, more than 5.000 different types only in Germany
- Broad warranty and liability exclusions for data quality and availability still the rule, however increasingly put in question
- Personal Data Protection is the hot topic, no clear legal framework in view
- Convergence and rapid market developments further complicate the situation

Geospatial Law is yet to come!!

A decorative background image showing a close-up of a clock face with Roman numerals and a sunburst ornament, rendered in a light, metallic color against a dark background.

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