



Cambridge
Conference

www.cambridgeconference2003.com

Ordnance Survey
Romsey Road
SOUTHAMPTON
SO16 4GU
United Kingdom

Spatial information in the Information Society

L Aslesen
Head of Legal Department
Norwegian Mapping Authority

Paper 4D.1

Spatial information in the Information Society

L Aslesen
Head of Legal Department
Norwegian Mapping Authority

Spatial information has always had political and economical importance; almost all serious mapping has started with governments needing it for warfare or taxation. The ease with which digital tools can combine all types of information with spatial information, making it spatial as well, and the enormous value this combination gives for private sector as well as for essential public activities, gives accurate and up to date spatial data a new and even more significant importance in the information society. The increased economic value results in increased importance for the legal framework protecting those values. Intellectual property law is becoming important in all legal fields rather than being something for specialised intellectual property lawyers. For public sector map producers it is important to work for having the governments and EU creating a legal and financial framework for production and maintenance of a spatial data infrastructure.

The importance of information in the so-called information age are that new industry is developed from it and it lends support and enhancement to traditional industries. Spatial information is especially important in this double role, and it is in many cases the framework that makes other types of information more valuable.

Information about addresses, shops and services is more valuable when it can be spatially determined and used in services provided on the Internet and mobile phones. Information about roads and their vicinity are more valuable when it can be spatially determined and used in a navigation system. Information about a company's customers and market are more valuable when it can be spatially determined, and therefore provide more efficient guidelines to the running of the company, not to mention elicited information that one could not find before.

It is required to have a geodetic network to support the production of spatial information and a basic spatial information coverage for each country. This basic spatial information is infrastructure like roads and railways, ports and telecommunication cables.

Fortunately, the importance given to environmental issues by politicians has managed to give some focus and funding to the issue of spatial information from the EU. The old initiative on European Spatial Data Infrastructure (ESDI) has resulted in the INSPIRE project¹. Unfortunately, it is still difficult to get the same amount of focus on the national level.

When you define something as infrastructure, the government will feel a responsibility to make certain it is provided. One common reason for this is that it is too expensive for the private sector to invest in, and it is also usually considered too important to society to be left to commercial initiative, as it may mean that it would be too expensive for those needing it the most. That is the most important goal today for the National Mapping Authorities (NMA) as well as the private sector - to ensure that the governments of Europe see their responsibility in these matters.

¹ <http://www.ec-gis.org/e-esdi>

There are various ways for the government to provide infrastructure, usually requiring some kind of legal framework as well as financial decisions. They can make it with government funds and make it available for free. That has usually been the case with roads, though toll roads are getting to be an increasingly popular way to finance new roads. An alternative is paying the costs and then have some user payment. This has been the most common way to deal with spatial information produced by governments in Europe.

The third way is the one chosen for telecommunication; the government regulates what is to be provided and the private sector provides it. An important prerequisite for this is that the private sector can find commercial interest in providing the whole infrastructure. This is a difficult issue to decide, as developments in technology and social structure easily will remove the original basis for the decision and one will end up with a system that can not take care of society's needs. That has happened to some extent in the telecommunication sector, especially in large rural areas.

For geographical information, this would be even worse. There are no private companies who have found building a full coverage for a country profitable, unless they have been able to utilise already surveyed information from the public sector. Some form of government funding is necessary.

An infrastructure should be freely accessible to everyone. Free does not necessarily mean free of payment. Most important infrastructures like the postal system, roads, railroads and telecommunications, apply user payments. The important thing from a legal point of view is that laws are in place to make the infrastructure accessible on equal terms for everybody, and that the markets are regulated to ensure the best possible result for the consumers. What would be good for some big service providers are not necessarily what will serve the consumer interests in the long run.

Most NMAs would say that the public sector is the main user of their products, making the needs of the private sector somewhat secondary. But over the last few years, many NMAs has also discovered that developing products for the private sector will benefit the public sector and vice versa. One example is road databases. It gives increased efficiency and saves cost for vital public services like the emergency services and the police. It also creates a new and interesting market for commercial services. However, left to the private sector it would only be developed for areas with dense enough population to give commercial income to sustain it, leaving out the public savings which are particularly important in more rural areas, and of course the commercial value of a full coverage, which is there even if it cannot necessarily justify the expenses.

Use of large-scale information and property information will often cross into areas where personal information protection are important factors. The balance between all the types of exciting new uses and personal protection is an important issue. The value, and potential damage, of such information is even greater when it can be made spatial.

Whether you pay or not is important also for the responsibility you can give the service provider. What you guarantee depends on what you can guarantee, which for spatial information depends on how good and up to date you can afford to make it. A lot of the value of the spatial data infrastructure lies in how reliable it is, and that will depend on who is guaranteeing it and what they can guarantee.

Overall, many issues will form a data policy for a government mapping producer. Unfortunately, there is often a pronounced lack of government policy and even legal precedence in areas like government IP, government liability for services, and how to deal with personal information.

The financing of a spatial data infrastructure is of course the most important issue. Legal issues are usually only the tool to get the desired financial results. It has to be a sustainable solution, as has also been put clearly forward by the Data Policy Workgroup of the INSPIRE project.

User payments can take many forms, from merely paying the cost of dissemination to paying a good part of what it costs to make the infrastructure available. Some kind of user payment is usual everywhere, even if it is just the cost of copying.

For the European NMA's it is particularly important to focus on the dangers on being dependant on public budgets.

In the US, the policy of free access in the sense of paying only copying costs, has demonstrated many advantages and some great disadvantages; the most important being that the dependency on public budgets means that the establishing of new information and map maintenance will suffer from fluctuating budgets. As more and more European countries are looking to reduce public spending, it is easy to see them reducing funding on spatial information, where it will take years before the damages become obvious.

When all citizens have access to the information on the same conditions, regardless of what use they want to make of it, those who want to use the information commercially will have the added benefit of not having to share any of the profits. When it is time to update the information it is often difficult to find appropriate resources because of the reliance on public funds, while those who have the necessary capital can update it themselves, and sell it back to the public sector. This means that such a system will benefit larger companies, who (possibly) are willing and able to perform/fund the necessary updates themselves. This will be at the expense of public bodies and SMEs, as well as consumers who will suffer from the lack of competition in a market dominated by a few big service providers.

The European NMAs charge royalties to businesses that make profitable use of their products. This cost overhead to European industry, which may be considered a disadvantage compared to the US model, can be offset against the advantage of having access to accurate, consistent, standardised databases that provide national coverage. However, to ensure that this advantage will continue, the governments must carefully consider the funds required for these activities or, at least, make better use of the resources already available to ensure that the infrastructure is being maintained and updated.

One important aspect to user payment is that the charge must be designed to benefit the market as well as the information producer. An important problem has been the lack of a consolidated licensing policy for many NMA's, and resulting prices that do not necessarily reflect the actual use of the product. The direction to move in is probably to make the products easily and cheaply available, and then charge as profit is made from the use of the product, when the will and ability to pay is greater. Widespread use should be in everyone's interest.

What about the legal issues of intellectual property? It has always had the goal to make it easier for those who produce intellectual efforts which are important to everyone. But there is no doubt that it can be a hindrance to important developments. To find the balance between public interest and the interest of the creators have always been a difficult task. Today, technology has long since crushed the old monopolies for transporting intellectual property to the customers, but the owners of the old transport equipment are unfortunately financially and politically strong enough to influence politicians to let these old-fashioned ways decide what is legal. The result does not benefit either the creative people nor the consumers.

The recent EU Directive² is a clear example of this. Implementing it may result in making illegal practices that one has no real chance to stop, and which does not really jeopardise the creators of intellectual property, as it mainly threatens the traditional structures of distribution. This will only result in people having less respect for intellectual property.

It is important to ensure that the owners of spatial information see the importance of adjusting to the new technologies, legally as well as financially, instead of clinging to what is old and well-known.

Used in a sensible manner, intellectual property law is a useful tool for mapping producers. It allows them to regulate user payments in a manner that favours the activities one wants to stimulate, especially value added services. Not having user payments may of course stimulate the use more, but so far I have not seen any actual documentation that this is the case, or that this will have more than a short term effect. The experience is that the people seriously interested in the products are more than willing and able to pay for it, and pay for the security of knowing it will be kept updated and that someone is actually responsible for the quality of it.

Mapping products are often combined with other types of intellectual property. Using similar terminology and licensing terms will make the combining of products easier.

A major problem is that most governments do not have an intellectual property policy, despite the large amount of intellectual property they have, and are charging for. It tends to be an evil circle. One tries to get the issue on the agenda, politicians will maintain that this is not really needed because public information should be free, the minister responsible for financial matters say no way, and the government continues to charge without a policy.

An interesting example in Norway was the implementation of the Århus convention and EU legislation on environmental information. It exposed very clearly how reluctant they are to deal with this problem. They made a wholesale decision on making all rules of access to the environmental information secondary to intellectual property law. Researching the actual problems was "too time-consuming" for the scope of the White Paper that the law is based on. For the private sector it makes sense that intellectual property law should have priority, but for the public sector this could have been an excellent opportunity to look into the issues of exploiting information versus taking care of public needs.

The upcoming EU Directive on public sector information is important, as it in particular try to ensure a common standard to accessibility³. It does however not deal with the more detailed problems of how to balance use of intellectual property issues against public and private needs.

It is therefore up to the mapping business, private and public sector, to try and deal with this problem themselves. Adopting a still old-fashioned legal framework to reality is a challenge, involving more than simply making licensing and pricing policies.

² Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society http://europa.eu.int/comm/internal_market/en/intprop/docs/index.htm

³ <http://www.cordis.lu/econtent/psi/pubsec.htm> Proposal adopted on June 5, 2002, in co-decision process.

The upcoming EU Directive – and the directive that hopefully will be the result of the INSPIRE project – is an excellent opportunity to introduce the national governments to the idea of having a consistent and comprehensive policy framework for exploitation of public information. This must include how to use government IP and which financial requirements meet the needs of government and users alike.

This, together with the regulations on transparency and equal treatment that are suggested in the Directive, will open up a wealth of spatial information that the private sector and consumers can benefit from. This is not just products from national mapping agencies, but from all public institutions producing spatial information or information that can be used in combination with it. However, seeking a short-term advantage by getting the information free of payment, will because in the current budgetary climate, undermine the long term financing of the very information the users will become dependent on.