



Legal Regimes on Defining Geospatial Vision for India

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Introduction:

Geospatial industry is the next big sunrise industry in India after IT industry. Its requirement to the economic development of India is no doubt unquestionable. The shape of this industry is gradually growing day by day in India. The geospatial data as well as its value-added usages are inevitable to the different type of users in the modern India. A very pertinent issue comes up is that when an industry is built-up for the future development of mankind; in general, it requires some policy as well as legal framework which are also the backbone of any industrial development. At this point, there may be another question comes into the mind of many users of geospatial community that whether simply policy is required or both policy as well as law is welcomed simultaneously. This paper provides an introductory view of all such type of questions in the broad area titled legal regimes of geospatial vision of India.

Importance of Policy & Law for Geospatial Vision:

Any vision requires outlook and policy. When outlook is established, policy comes automatically. So geospatial vision follows the same cardinal rule in India. There is no doubt up to this point. But the next stage comes when the concerned authority wants to take decision of its implementation. Implementation is always done through an instrument. This powerful instrument is called law. So law is nothing but an instrumental tool to implement the policy in the society. Hence simply policy does not bring the vision successful. Law is must to complete the vision successful. It is true if we look back any industrial development in India. It is not the place to discuss this issue particularly in details. But just for an example, when Late Prime Minister Mrs. Gandhi took the policy of nationalization of different private sectors, Parliament of India enacted different laws in India to implement this policy of nationalization. Later on it was proved that the nationalized sectors are very big industries. Hence a vision requires policy and law. It is also meaningless to raise the question which is more important or whether any framework could be operative directly with law on by-passing policy. Because a single cannot be effective too much. The geospatial vision of India requires good policy following implementation of geospatial law.

Legal Framework of Geospatial Vision:



This paper is basically dealing with law. So in the straight way the next topic is legal framework to define the geospatial vision in India. Before going into the framework, a short description of legal issues are necessary which are very much pertinent to geospatial vision in India as well as backbone of NSDI or SDI when one goes into the legal analysis on these initiatives. But, in India, whether it is NSDI or SDI, these issues have special attention. Because our traditional laws which are prevailing in Indian societies as well as courts are not partly or fully aware with this geospatial technology development. The legal issues are *sovereignty and sensed states, privacy, quality & pricing, intellectual property rights, national security, public-private partnerships, applicability of data in Indian court, human rights, liability, and insurance of data*. This list is not all inclusive. There may be new issues which will come up in future years. Because law follows technology. These issues show the importance of legal framework. There are brief descriptions of these issues in the following:

1. ***Sovereignty & Sensed State:*** The plain meaning of sovereignty is power to control. The State developed in remote sensing technique wants to control the States underdeveloped in this technique and very easily gets the data related to the latter's natural resources. So the sensing state, which is taking the imageries of another state, known as sensed state, has to follow the basic rule of international law. But as per this technology concerned, *sensors are not respecters of national boundaries*. Following this statement, the tendency of the superpower nations in space technology is to violate the base rule because on collecting the spatial data with their high-developed technology, these sensing state wants to control the data as per their whims and to transfer the data to the other states to whom diplomatic relation is good as well as high-paying customers.
2. ***Privacy:*** Privacy is the ability of an individual or group to seclude them or information about themselves and thereby reveal them selectively. The boundaries and content of what is considered private differ among cultures and individuals, but share basic common themes. If the above definition is analyzed, there is no absolute privacy. The extent of privacy depends on various factors. When earth is viewed from outer space, the term 'privacy' is more open than close. The earth resource data can be private to the global customers who can afford the technology with its unexpected price, irrespective of the country of their origin.
3. ***Quality & Pricing:*** Data quality is a persistent theme in GI services and data can be grounds for liability if 'bad' data causes personal injury and death. The recent trend in geospatial industry is consumer-centric. A consumer can challenge the quality and pricing of data at any time. Some value is added always to the raw data. Now the question comes how a customer can get assurance that the final product has the standard quality? Next question comes that in the era of privatization and global trade under the regime of WTO, how international quality standard as well as price is fixed? If there is no standard in quality as well



as price, the present and upcoming private players have an opportunity to follow the unfair trade practice. Shall this scenario be welcomed? Another point is to check monopoly in the market of data business through some regulation in pricing when private organizations are coming to this industry.

4. **Intellectual Property Rights:** With regard to geospatial data, one of the most important questions concerns whether or not those data can be protected by intellectual property rights? Closely related to this question is whether these rights can exist in data generated with public money? In this respect rules and regulations regarding access to and licensing of public geospatial data are of interest. A final question to be addressed in this section concerns ownership of geospatial data.

From the nature of IP, it is clear that protection of geospatial data as such, must be sought in copyright protection. In this respect, it must be noted that copyright does not extend to raw data, but only to enriched data. In the same sense, copyright does not extend to ideas, but only to the form of expression of ideas. In relation to IP and geospatial data, another question is important: whether or not the data were created with public money. Attention needs to be given in the question: Who owns geospatial data? This question closely relates to the theme of public private partnerships. Closely related with the ownership of the data, is the access to those data by third parties. In this respect there might be friction between rights from different parties involved, such as IP rights of private parties versus legal obligations.

5. **National Security:** Securing the GIS data is as important as other information system and in some cases it is more important. Data security is an issue that has highest priority. The proper data security requires vigilance on two fronts: (1) protecting the data from unintentional loss or corruption through mishandling or system failure, and (2) protecting the data from the possibility of intentional loss or corruption through unauthorized access.

In the era of high-resolution imageries and privatization, any type of data can be marketed by private parties to the high-paying global consumers. So the national security is at stake. In India, this issue is very vital after Mumbai attack. Two aspects are: legal restrictions for high-resolution geospatial data much needed in present time, and, forming some suitable legal framework for using high-imagery data in case of terror attack or any other emergency.

6. **GIS in Court:** The solution of litigation related with GIS data requires evidence in court. The judges in court would want to know about the veracity of the spatial analysis, the acquisition and interpretation of the data, the credibility of the data



along with that of the professional and expert witness. The burden of proof is to be discharged on replying the following questions before any court of law as per Nancy Obermeyer:

- “Who will verify the examination of data?”
- How will the examination approach the diverse applications of GIS?
- What are the core skills and knowledge tested by the certification examination?
- How these certification examinations assure high standards among GIS professionals?
- What test format would best suit certification?”

After some period, the judges will get precedent to deliver the judgments related with these issues. But for the time being, there are no such precedents, which is another legal hindrance.

7. **Public-Private Partnership (PPP):** This issue is another important one which directly deals with the reasons why legal framework is necessary for geospatial data. Everyone agrees that the Geospatial industry is on an upswing. A number of new companies are emerging. The government’s mindset is changing. Data which was so closely guarded is slowly but steadily become accessible. It is very important for commercial development of data industry. The private bodies are interested to take the lead from government organization. But is there any proper legislation to facilitate them? Some legal policy must be adopted such that private partners can easily take the deliverables of government.

8. **Insurance of geospatial data:** When we can treat information coming through geospatial data as valuable items in our society, so what is wrong to treat it as an ‘asset’. In consequence, it can be thought that this technology-gifted asset would be insured for its proper safeguard. So law of insurance must have some provision for this.

When geospatial data are playing a role in planning and decision making, people should be treated as an asset in their respective industry. So is it not like the case that for any unprecedented damage to the archive of data which is not intentional in nature, the user can file his claim of insurance to the proper body. Specially, there must be legal provision for private bodies.

9. **Liability :**

Liability regarding information and licenses:

Anyone who creates uses or disseminates spatial information or tools or services based on the data and tools, faces certain legal responsibilities. Cho (1998) highlighted the following legal risks related to geodata and GIS:



- Failure to secure IP right
- Liability for infringement of IP rights, whether intended or not, including failure to control to access to geodata or tools, resulting in illegal use of the data or tools by others
- Failure to secure accountability for defective data or GIS tools (which can also mean models, methods and services based on the data and tools)
- Liability for breaching confidentiality or privacy obligations
- Legal uncertainties in contracting out tasks (outsourcing) related to geodata collection, processing and dissemination, whether by a government agency or for such an agency or private enterprise

If the data provides wrong information, who is liable? Is it State? Or the agency who sales the data finally? A final issue is that information providers have to be fair and honest in communicating the limitations of the data, information, and GI services delivered to customers.

10. **Human Rights:** There are two parts – (i) *Freedom of Information* (ii) *Right to Privacy*. The second part is already touched by *privacy* issue. With the commercial high-resolution remote sensing systems, new legal problems come up to safeguard the human rights law from the clutches of technology. The media understood the relevance of remote sensing data with Chernobyl accident in 1986 when press agencies, unable to obtain images, requested LANDSAT and SPOT to supply them with data. Since then the use of remote sensing data by the press or by television has been common especially for the coverage of catastrophes such as the earthquake in Turkey in 1999 or the terrorist attack against the World Trade Centre in 2001. Today, with the development of high-resolution commercial systems, the press will make more use of remote sensing. Human rights law can reinforce or limit the development of remote sensing activities, especially in the areas of law relating to freedom of information and respect of private life.

Legal Issues in National Map Policy:

The preamble of National Map policy, 2005 highlighted the issue of national security and Survey of India (SOI) has top listed this issue amongst other issues. So the policy of SOI regarding dissemination of maps is based on this parameter.

If the second objective of this policy is taken, it is clearly stated that the promotion of geospatial domain is always welcomed through partnerships. So the above Public-Private Partnership model is referred here. It is also stated in the same objective that a knowledge-based society is the target. Now knowledge whatever is its content and



quality, it is under the domain of IPR. So it can be assumed that knowledge-based society is an indication of IPR issues.

The Defence Series Maps (DSM) is fully controlled by Ministry of Defence. Obviously the national security of a country is very vital and must be a top most concern of any Government. But there are other security issues of India. Specially, the hot is climate security. This is as important as defence security now-a-days. So sometimes it may be the case that some more information which is available in DSM is required. So where is the infrastructure to go beyond in the present day context?

Another issue is related with the usages of value-added maps by the users. The SOI provides the users to add value to the maps, through agreement and users can share the information to others through Map Transaction Registry. But lots of legal issues are involved when IPR issues are considered during value-addition. Another concern is the liability issue which the users of the map or value-added maps have to face if there is any deficiency in standard. Though the IPR issues are touched but not the liability regime.

Legal Issues in NSDI:

India has a National Spatial Data Infrastructure (NSDI) strategy and the *NSDI Strategy and Action Plan* report has been adopted in 2001. The National Spatial Data Infrastructure (NSDI) has faced some of the legal issues highlighted above. The unprecedented amount of map information about India through the geospatial technology has tremendous effect on the user community. It is reflected in NSDI also. The end products of GIS applications are not always dealt by Government agencies but the main thrust comes from them as a result of “a cocktail of laws, policies, conventions and precedents which determine the availability and price of spatial data.” So it is very clear from this statement that how strong legal framework is necessary in formation of NSDI. The purpose of NSDI is to public access of data, access data in real or proper time and in a cost-effective manner. But most government departments have no public access system though after implementation of Right to Information Act (RTA), the scenario is changing. There is another issue in making NSDI legally effective which is coordination between different government and non-government sectors. The proposed NSDI Act also indicates the above.

Conclusion:

There are some legal suggestions to develop the fruitful geospatial vision in India. The steps are:

- There must be a true consciousness about geospatial developments among the legal fraternity in India or those who are indirectly attached with legal developments and implementation. In the foreign countries, legal attorneys are



fully aware of what are happening in the geospatial industry there but it is rarely available in India.

- The industry-academia partnership to develop and insist to implement laws for providing this vision into a reality. Also NGOs can take part in this initiative.
- Formation of an independent committee by legislation taking the members from all governmental bodies.
- Last but not the least is that all the legal problems coming up, the problems must be viewed through and analyzed in the context of India only and solutions are also applicable to India.

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