

## **Legal Regime of Intellectual Property Rights of Spatial Data with Special Reference to India**

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### **Introduction:**

The satellites take the imageries of earth from outer space and send it again to the ground stations on earth for distribution of these imageries for the users having different purposes. These imageries or data of our mother planet are called Earth Observation (EO) Data or Spatial Data i.e., the data related with space. The whole process of acquisition and dissemination of EO data including the data itself is under the Intellectual Property Rights (IPRs) regime. The following discussions are on what is IPR, how IPR relates with spatial data, the existing provisions of IPR related with spatial data and the requirement for upcoming time.

### **What is IPR?**

Intellectual Property Rights (IPRs) are the rights related with Intellectual Property (IP). The meaning of IP is the property created by human minds or intellect. It is intangible in nature unlike other property. The human minds create many new innovative original ideas in the form of literature, music, paintings, scientific & technological methods & products etc. All these are under IP. IP law protects the right of its creator for his creation or invention. The purpose is to provide certain exclusive economic rights for a limited time. Also they can earn profit from their creations.

There are codified definitions of IP in various forms. Article 2 (vii) of the Convention establishing the World Intellectual Property Organisation (WIPO), the IP means –

- Literary, artistic and scientific works,
- performances of performing artists, phonograms and broadcasts
- inventions in all fields of human endeavor
- scientific discoveries
- industrial designs
- trademarks, service marks and commercial names and designations
- protection against unfair competition

and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

The intellectual properties are categorized into two types, one is Industrial Property related with commercial innovations and other is literary and artistic property related with cultural creations. Patents, Industrial Designs, Trademarks, Geographical Indications and Trade Secrets are in the Industrial Property category whereas copyright falls in the later category. There are some current technological developments which impose *sue generis* rights. These are IP protections related with Integrated Circuits Layout Design Protection and Database Protections, Plant Breeder's Rights etc.

There is a very brief description of major forms of IP rights:

**Copyright:** It is body of laws which protect the authors, performers, artists and other literary and artistic creators for their creations.

**Patent:** It is an exclusive right granted for an invention. The invention may be a product or a method or process which provides a new technological solution to a problem. The patent is granted for a limited period.

**Trade Mark:** It is a mark or sign which indicates that the goods or services are from specific enterprise or person.

**Industrial Design:** It is related with outlook of a product depending on which the article will be more attracted and appealing. So the industrial design adds commercial value to a product.

**Trade Secret:** The commercially valuable information such as business plans, production plans and formulations are protected by the related domestic laws which prevents any unlawful disclosure or any unlawful acquisition of the same.

**Geographical Indication:** It is a sign used on goods expressing that it comes from a specific geographic origin. Also it is assumed that the goods possess the same qualities as available in that place of origin.

Each of these regimes applies to different aspects of innovation or reputation, specific legislation protects each of these forms of IP.

### **Relations of IPR with Spatial Data:**

The spatial data are taken from earth through satellites orbiting in outer space. There are different satellites having different in-built sensors (electronic eye) for taking imageries

of earth. Basically every satellite takes the help of electromagnetic scattering. But the LANDSAT, SPOT, IRS which owned by USA, France and India respectively have different mechanism for acquisition of imagery from earth. All these remote sensing satellite system gather raw data which have no copyright value itself but the technological process to acquire the data is under patent regime because every satellite system uses its own technique. Even when the data are disseminated, it follows the different procedure for different satellite system. The role of trademark has small significance because the trademark is with the outer body of EO satellites. But when we are discussing about quality of imageries, we are using the words like 'SPOT imagery' or 'IRS imageries' etc. It is nothing but mentioning the trademarks. Trade Secrets are there but it is very difficult to pin point them from outside. Copyright comes with the processed data or value added data prepared from raw data. The following paragraph deals with the nexus of copyright with spatial data.

The spatial data contain information, question arises relating to its ownership, authorized use, future use and implied quality. 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 remote sensing data are of interest.

From the nature of IP, it is clear that protection of remote sensing 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 spatial data, another question is important: whether or not the data were created with public money. The rule is different from one country to another. In some European countries, the government claims the copyright of data made by public money but in USA the federal government has no such rights which they create.

### *Ownership of Data*

The copyright is related with ownership of data. Issues of ownership of data must be addressed, before, during and after the work. The data audit at the *before* stage would need to set out where the data are coming from and who owns the IPR in the data and what use rights might be available either as public domain data or as licensed data. One example is the use of remotely sensed images from SPOT (a commercial organization) to be integrated with U.S. public domain Landsat 7 (ENVISAT in future) imagery is illustrative of emerging complexities. At the *during* stage of using and amalgamating the data, invariably 'new' derivative data sets emerge and the management of the IPR for these have to be considered so that consortia members are clear as to ownership, use and later dissemination of the data. At the final *after* stage, when the project is completed, the question of who owns the information resulting from the investigation will arise. The data

so developed can prove economically valuable to farmers, the government as well as to the researchers and consultants. Having a clear policy as to who has the ownership of the data is thus very important. The policy would also spell out who has rights of release, on what conditions, and how costs are either to be recovered or shared.

### **Requirement of IPR Regime in India:**

This is a very important and serious concern in the present context. But the discussion will be confined for India only. The full potential of satellite based earth observation could not be utilized only from the Government support. Commercialisation is must for further development of the geospatial industry in India. Perhaps the Association of Geospatial Industry (AGI) established last year was the indication of this trend. So many private bodies are interested in this domain. Everybody would like to promote their business in their own way but purpose is to occupy the front position in the industry. This competition should be healthy as well as legal. So if IPR protects the enhanced data created by these private bodies individually, then more private bodies will be interested and finally the number of data enhancement firms will be increased. Indirectly it will increase the market of raw data. Hence the benefits are in two ways.

Competition from foreign remote sensing systems thrusts IPR regime because legal protection of enhanced data is necessary. The French SPOT system and European Space Agency's ERS-1 compete with USA's Landsat in international market and domestic market. In addition to this our own Indian Remote Sensing Satellite (IRS) system is gradually taking the international market. Now the demand of IRS data is high in foreign countries. The international intellectual property rights feature the protection of competition among all entities producing enhanced data worldwide. Such copyright protection will benefit producers of enhanced data worldwide due to existence of multilateral copyright agreements.

The private bodies from India being a developing nation may have a conception that the legal protection of processed data is not so much beneficial in India. But this conception will change when the benefits of copyright will outweigh the disadvantages. The effect will be easy availability of processed data with widespread availability and low prices. Another view is that as there is not so much consciousness of IPR in India, there may be thefts and misappropriation of processed data but a strong copyright regime will safeguard India from the hands of entities of industrialised nations which might use the information to exploit the developing nation's resources.

### **International Agreements for protection of IPR of Spatial Data:**

There are a number of international agreements like Outer Space Treaty (1967), the Principles Relating to Remote Sensing of Earth from Outer Space (1986), the Berne

Convention (1971), the Universal Copyright Convention (1971) which have some direct or indirect guidelines to protect the IPR of spatial data but finally failed to implement or control the IPR of data.

The final concept of the Outer Space Treaty, 1967 is international cooperation and mutual assistance in space exploration and development. Articles IX, X and XI provide the requirements of cooperation and mutual assistance.

The Principles Relating to Remote Sensing of Earth from Outer Space, 1986 was a remedy of the conflicts between the developing nations and the developed one specially USA. These Principles are nothing but a modest safeguard to control the remote sensing activity.

The Berne Convention, 1971 consists of two principal components. The main body of the agreement defines the functions and operation of international copyright protection for protected works. The second component is the appendix of the Convention which provides special mechanism for developing nations to gain access to copyrighted material. This section is more relevant for India. It provides that works must be “fixed in some material form” for effective protection of copyright. But the 38 articles and the appendix of the Convention are mostly geared towards works of everyday life: remote sensing imagery cannot be protected on the basis of the provisions of this Convention.

The Universal Copyright Convention, 1971 (UCC) has some complimentary points. This Convention itself provides that if a nation is a member of both the Conventions, the terms of Berne Convention will govern. And if a nation is a member of Berne Convention, it cannot withdraw its name to be a member of UCC. So the Berne Convention is the superior one.

There is no such adequate and efficient protection of spatial data in international law. But there are conventions like the Phonogram Convention (1971), the Satellite Convention (1974) which is exclusively for the protection of the radio and satellite broadcasting of literary and artistic works. So one may think for a specific convention when commercialisation and privatisation take place in spatial data sector.

### **IPR Regime of Spatial Data in India:**

India being a developing country is not well aware of the intellectual property rights previously but as the time passes on, the country feels the need and requirement of IPR. The Copyright Act, 1957, the Patent Act, 1970 etc came in the due course of time. All of us are more conscious about IPR than our predecessors in India. To know the IPR regime of spatial data, we have copyright and trade secrecy.

## **Copyright**

There are two possibilities for copyrights of spatial data. Under the Copyright Act, 1957, it was difficult to establish who the author was as the data collected by a machine did not involve human intervention like the creation of other literary works. The second possibility is in the case of public undertakings – the provision to section 17 states that in the case of a work made or first published by or under the direction or control of any public undertaking in the absence of an agreement to the contrary, the first owner of the copyright therein would be the public undertaking. As the satellites in India are all government owned and controlled i.e., it is fully dominated by Indian Space Research Organisation (ISRO), the spatial data are owned by ISRO.

## **Trade Secrets**

As the space research is fully under government controlled in India, so the trade secrets of spatial data would come under the Indian Official Secrets Act, 1923. The Right to Information Act, 2005 takes entry into this domain and creates sometimes a conflict against the public queries.

## **Indian Practice**

The National Remote Sensing Centre (NRSC) has Remote Sensing Data Policy which has no reference to IPR but IPR includes in the agreements with buyers/partners. Basically the government monopoly exists in the spatial data industry and this is the only reason for not implementing or even considering a separate legal regime for IPR. But the day will come very soon when Indian space activities does not necessarily mean ISRO. Already there are many private and corporate organizations who are working with ISRO simultaneously. So who knows that there will be private satellite as data providers in future India?

## **Conclusion:**

The satellite imageries or data are very vital now-a-days. And the demand is quality and cost-effective data. But the technology of India is so much progressed that it is easily available. Hence the government should look after the interest of the sectors creating spatial data for the economic development of India. In this journey, the first initiative should be to take steps to create a separate provision for spatial data in the existing IPR laws or to make a separate law for spatial data.

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