

Cadastral Maps and Contents Dr. R. Nagarajan

what is the cadastry. so when we are talking about a village map we talk about it is a cadastral mapping what is a cadastry. Cadastry is a parcel and which consists of updated land information and it describes the geometry of the parcel and it is linked to records interest ownership and value of the parcel. this is what the FIG is given up. so cadastral service document the boundaries of the land ownership when you want to do the service, production of documents, diagrams, sketches plans and charts and maps.

They were all used for land valuation and taxation purposes in the past. now in the past when we were in a different mode of others activity what has happened was developed to collect only taxes now also people are doing the same thing nothing different. so that means the government wants only for the physical purpose. identify a plot or identify a Cadastry. Parcel on a cadastry, collect tax depending upon the usages and also for a person who is buying it or using it for him it is a legal purpose that means I own the land; this is my document so nobody else can do that no duplication is allowed and for a development what we look at it we look at it for a physical purpose I want to buy a land and on my name and I want to construct a house so this is the use which people are using. so now what is the cadastral map consists of?

property parcels which I have tried to show you; every parcel has got a unique parcel ID numbers like you have it may be the annotations followed may be different from one place to another place even though we are trying to bring out a uniform method of coding this then you have the register of interest that means responsibilities, restrictions and rights of the particular owner over that land and also. so that means if I own a land I have to own it and I have to use it according to whatever I'm supposed to use it. I should not use it for illegal activities. So that is the thing.

then what a computer; nowadays cadastry information on a computer system what it does whatever we have seen in the GIS mode is nothing but it's a maps and it attributes; it is all linked so that queries can be there from the table can attribute travel as well as from the spatial information will be able to get what do you want to do that. so they have cadastral identifier and it links locations. the locations now what we are trying to do is on geo-referencing is done that means East and North links or latitude and longitude are being added to that then for a purpose of boundary route that is between one administrative boundary to another administrative boundary as well as for the and use purposes.

so now another important thing is land as a city planet everybody knows this is; there are allocation of lands for a different purposes like schools, hospitals open areas playgrounds and some amount of greeneries. so this will be useful for a spatial development plan. so that the city doesn't get congested.

now distinct attributes of a real estate that we will tell you about what is the value? that value is depending upon where you are located; what is the adjoining activities in this area. What

are the basic man requirements which we were looking for? we were looking for now as I was telling about is there are Cadastral maps wherein at odd scales 1:8333 are different people have used a different time. now if it is there in multiples of thousands 1:1000 or 1:5000 or 1:10,000 scale; it will be easier for merging with other datasets for a regional approach or a area approach and projection of the thing which now people felt it should be Everest Spheroid.

now we were using it feet, miles and that type of inches. now we have come down to everything is meters, millimetre, centimetre, kilometre, meter of that kind of category. so if it is there in one unit it will be easier for a merging purpose. Then contents; contents depending upon the region, depending upon the requirements the contents they varied from one to another as well as a symbol as well as colorations. so if it is standardized; the map contents for a Cadastral map. It is coming up; so it will be having anybody from one part of the country he can understand what is going on in the other side. so if there is a variation his understanding is little weak. so now what are the cadastral map content is property parcel, control monuments. See here geodetic control monuments which we were talking about is control monuments are nothing but in the previous years they used to have some pool, they used to have some sort of boundary stones with the markings over there they are thereon all the four sides or six sides depending upon the type of parcels. They used to keep it up as a physical evidence to differentiate between one parcel to another parcel. So that is what the control monuments means then when we buy a house. so do I give you some way to the roads. if the road; if it comes which side I should do that. so for that, that is mentioned in the special information then building footprints what all that building footprints building size, building open areas around the buildings that can be given and it should be included in one of the administrative boundaries. we have a village administration. we have Tahsil administration. we have Panchayat administration; it should fall in one of them totally it should not be partly here or partly over there; there may be some few examples it could be but that is very rare in that type of category and people are trying to negotiate and then settle it out. now what are the textual information that means the language is written as name of the property identifier; how do we identify. Address, address, streets and that surveyor who has done it then datum coordinates and other activities.

this is what you expect from the cadastral map. so many of the cadastral maps are prepared from the ground survey. now aerial photogrammetry and the remote sensing as well as ground surveys techniques are being used photogramatically you prepare a map then verify it on the ground with ground service then you go back to that finalize the map. Now the ground surveys there are being used for more than 30 years or so. whereas the photogrammetric survey has come started coming up of late but acceptance is with the resistance it is being accepted.

now what is needed is when you do a land registration. so this cards for a conveyance; conveyances means then I am trying to give it to you and selling it to you and I am transferring my land rights towards you that is what the conveyance means. now GIS of cadastral maps are being done at a faster speed; almost we are likely to close down that is

conversion of the old cadastral maps into the GIS map cadastral maps. then the control points are the points where already the latitude longitude of those points already surveyed, tested and then reused for the traverse computation.