Creation of Cadastral Information Base
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What are all the cadastral maps; what are all the contents and why do we need this type of cadastral map accurate and updated cadastral information. so that we will be able to use it and plan it these cadastral land parcels for a method views.

now how these information are done in a flow chart in the land information. so GIS database which we have seen in the last lecture is how to convert the existing maps, existing information they can be created specially geo-spatially referenced and it can be there in the form of a geo-database now in that is the thing which you have to do that the existing data is nothing but the existing maps needs to be scanned and it may be in a CAD format convert it into a geo-referenced that means add on to the lat lon and create a geospatial database. mutation information that is the information related to the ROR that is added and it is indexed and created as an attribute. this is the normal GIS which we have already seen that is spatial data and attribute data.

now when you come back to that for a correction purpose or some accuracy improvement we try to use the new field survey methods. may be total stations with GPS one and these instruments they have got a system directly it can be connected to the GIS database.

now what we have got is we have got a GIS database on cadastral maps and related information for our activities which are geo-referenced. now the process whatever I was telling further is hardcopy maps and sheets existing maps then you index it uncode it; index means you join it together so that you will get an overall picture abut area then you scan the maps and you grid correction on a cadastral information there are two ways one thing is geo-referencing another thing is the grid-based added onto the system and then being used then digitization of this village map sheets like what we do in the previous pages now edge matching and mosaicking of villages religion maps what is happening is each village they have got a different shape different land parcels. so that has to be joined together, mosaic together not only in one side. It has to be my site and all the four directions; there may be multiple possible joining is also possible that is how these villages have been demarcated then clean up the topology, clean up the topology means then if there are some errors digitisation errors and the recording arrest those recording errors needs to be done quality check is nothing but you rectify who will do this job is the person who is there in the department land record departments are the man who is there who knows more about this type of cadastral service.

he is the person who is going to do the check up any errors then translation of entire thing into the GIS activities then geo-referencing of individual mosaicking and things like that; so that means once you do it for an individual map, individual villages then you can add on or you can just to mosaic it in such a way the entire Tahsil can be mosaicked with village maps.

okay so that it will be useful as you move up in the pyramid and towards district as well as towards the state level. the Quality Assurance need to be done; what I am going to deliverables to the person so these are all the things which we may have to eat up.

Edge matching; it is a very difficult job in doing that is previously you can use with road maps or you can automatic to avoid multiple mismatches our boundary line is adjusted automatically adjustment by searching conflicted cadastral lines; see there are so many issues and unless we see them it will be difficult because N number of problems have cropped up whether it could be a problem, a line problem are because of the long-time usages there could be some sort of a folding or some sort of a dot which has come up so that is also comes under that collecting.

Then related cadastral lines need to be adjusted. so these are all the different type of edge matching techniques which we have to apply in the village maps. The attribute data sets which we are talking about is the record of rights who is owning it and how much he owns it and when did he buy it all those details then the crop details and which we said about the 7/12 type of forms, so about crops grown, area and cultivator name and yield details. this is where the agriculture processes comes into picture as well as the food security aspects comes into picture suppose if this village grows some 10 acres of maize. So that means you can depend on this area we will give 10 acres, this much of tons of maize will be available for the national contribution. now then pedigree table or sheet that gives about who are all therein the family history or how it has been transferred from the previous generations so it is the father, grandfather, grand grandfather. how this land parcel has been given into the next generation that type of degree is also added as a attributed data. so having seen what all the information which is required and what is available; there should be always a problem in this type of mapping.

constraints there could be multiple redundancy that is you have the land record on your name and somebody will come and tell you that it is mine also. so this type of things happens in a big way mainly when it is; when the land parcels have been converted from the rural records to the urban records. so the redundancy are the multiple ownership records that need to be understood there could be some data, mandated data that is like who is owning it and how much he has paid. so that type of fields may not be filled-up are not available or it is not done.

So this type of data inconsistency. so what we have to do is we have to identify each data what is missing it and if it is collected separately for that then we can fill up the gaps and it will be complete. now geometry problem of the parcels they don't match with each other adjoining parcels so that is a major headache in this type of activity. the basic question is when you try to do is what is it at a particular place, you can give the name of the place address or a geodetic references. now as you might have seen the addresses, the name of the place is being changed over the years by some name or other. so it was called in some X and after 10 years it is called as Y. so depending upon the time of information researches may fame but whereas geodetic references they won't fail. then previously the crystal maps they were used only for the agriculture related activity now the modern cadastral system that can

be used for a multi-task cadastral activities now the beginning with start a computer system using the GIS how do we do that is; it's not from the top to bottom approach it is always from the bottom to top approach so you have the wards in a particular administrative unit then you have the village then you have the tassel then your district, state and further up and all these system they should be self-sustained, they should be able to give more information about that area and it pass it down to the upper systems whereas while loading the systems the physical information is there at the bottom grassroot level which can be updated at a regular time.

so this does not congest the coordinating units like a Tahsil systems in mess; now this is what we may have to do it in a cadastral map from the traditional cadastral map when you want to make it as a computer-based cadastral system; the issues because of the aging of those records and we may have to do; bear with some of the issues right? The next is cadastral system is the…