

Digitization of Graphical Data

Detailed presentations on the Digitization of graphical data were made by Madhya Pradesh, West Bengal, Gujarat etc. Consensus emerged on the following points:

1. Revenue Land records are made up of two sets of data: Alphanumeric as in a register and Chitta and graphical data as in the cadastral maps. The forum is of the firm belief that the success of the CLR programme would hinge to a large extent on addressing the issue of digitization of both sets of data in parallel. There is a lot of talk of the use of GIS for planning and a myriad other purposes at all levels of Governance. For any GIS it is essential that all land records including *accurate computerized* base maps be available on which all other information can be superimposed. All other graphical or spatial data like remote sensing data, contour maps etc. can be super-imposed on the *basic framework* or structure created using the cadastral maps. But without this frame these maps would lack accuracy and thereby lead to faulty planning. Having clearly established the need for computerization of all land records, the question that keeps cropping up is what methodology to follow. We have three options:
 - Simply scan all existing maps and create a computerized data base of these scanned maps;
 - Scan and then digitize the maps;
 - Generate the maps themselves on the computer using numeric data as input.

Options one would serve absolutely no purpose due to following reasons:

- Firstly, a scanned map presupposes the existence of a 'good' map that in our systems is a bit of a rarity. Even assuming that quality maps are available, a lot of 'noise' is picked up in the process of scanning.
- Secondly it is simply a raster image; so, we cannot use the lines and points for survey processes.
- Thirdly, no sub-divisions can be carried out on a scanned map.

Option Two is useful and can be applicable in those states where survey work has been completed and maps are in updated position like MP, but the state should be careful about the accuracy of the maps and errors in the digitization process. These maps can be mosaiced at the village level and onwards and can be used for MIS purposes.

Option Third, the ladder table approach is useful where the survey work is going on or has not been started so far. Accuracy of the maps prepared and digitized through this method can be judged only after the completion of the pilot projects in the respective states.

Forum was of the opinion that no single and uniform method can be applied in all the states. Respective State Government should take decisions at their level, but a time schedule should be there to complete the task. Indicative costs can be decided at the GOI level. GOI should also consider funding support for this. A massive programme for digitalization of Cadastral Maps should be launched in the Xth Plan.