THE DATA BASE DILEMMA

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From October 3-5, 1988, the Ministry of Natural Resources hosted a Geographic Information System Seminar entitled "Data Sharing - Myth or Reality". One thing became apparent during the various presentations and that was that data from many different sources including data bases were used in order to build a G.I.S. This data included not only the facts related to parcels of land, but the location and size of the parcels. There is a lot of sharing going on amongst various Government Ministries and Municipal organizations in order to make the Geographic Information Systems as valuable and useful as they are.

For example, the Polaris Program uses information from the Ministry of Natural Resources, MTO, Ontario Hydro, as well as the Registry Office and Land Titles files. OBM mapping at a scale of 1:10,000 is digitized in order to provide basic planemetry for rural areas. Highway plans from the Ministry of Transportation as well as easement surveys from Ontario Hydro are also used as a basis of control in rural areas. In urban and suburban areas the parcel fabric is controlled by Registered Plans of Subdivision obtained from M.C.C.R.'s own files as well as some field work to tie these into the Provincial control network.

When a Municipality such as Woodstock develops a Geographic Information System, then not only is information from the Ministry of Natural Resources used for the base mapping, but data from the Ministry of Consumer & Commercial Relations is used for Title information and underlying planemetry and assessment information, obtained through OASYS, the Ontario Assessment data base, is also integrated. Information is also obtained from the Engineering Department in order to locate roads, utilities and other services.

It is interesting to note how all of these organizations use information from each other in order to develop their own comprehensive data bases. But who is responsible for the integrity of the data? Who keeps it up to date? When one organization gets information out of a data base maintained by a second organization, how much reliance can be placed on that information and what is the liability of the supplying organization? When one organization compiles information from a number of other organizations and uses this information in a presentation or in order to complete a study, where does the responsibility lie for inaccurate or out-of-date information? What liability does the supplier have when it provides information to another party without knowing the purpose for which it will be used? The opinion expressed by various speakers was that the user was obligated to ensure that the information he had obtained was valid for his purposes.

Another question which was addressed at this seminar was, should information be copied from one data base to another so that two or more similar data bases exist, or should the information be available on-line to a second user? If data bases are duplicated and copies are provided to a second user, then the problems of keeping this information up-to-date arise. If the second user is allowed to tap into a data base, then security problems arise. The creator of the data base may not want all of the information in his data base available to another user.

It seemed to be a consensus of the speakers that each organization should maintain its own data base. This solution addresses the concern about keeping the data bases up-to-date and maintaining them so that the data does not have to be duplicated by each organization. It also addresses the storage requirement. In other words, the tendency is not to duplicate data bases but to access each other's data bases as required.

It was encouraging to see the amount of co-operation between various Government organizations as they shared information from their data bases. It was amazing to see what could be done when information was compiled from a number of different data bases, linked by their geographic location and presented graphically on a map.

It was alarming to consider how information from different data bases could be extracted and then combined through linking them to a discreet parcel in order to give an unscrupulous user access to previously unavailable relationships. For example, it would be theoretically possible to plot, on a computer generated map, the locations of lands owned by people over a certain age with poor health records whose property value was greater than a specified amount.

As long as appropriate security measures are implemented in order to eliminate the possibility of the type of scenario just described, it is obvious that Geographic Information Systems provide a powerful tool for Municipalities as well as higher levels of Government for use in planning and resource allocations.

Those surveyors who are computerized have files of co-ordinates defining parcels of land; they have the knowledge and skills to define boundaries of parcels as well as the ability to assess the Title records. They represent the key resource people to be used when implementing a GIS. A powerful and flexible Geographic Information System is based on well defined parcels and who is better qualified to define these parcels than a surveyor? •

The Second Land Information Course is being held in June at Erindale. Have you registered? Contact the AOLS.