look at user needs?

Technology Transfer

Integration
Coordination
Data Base
Computer Capacity

IMPLEMENTING GEOGRAPHIC REFERENCING IN UTAH

by

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PROBLEM: As the population and economy of the State have become more diversified, the complexities of meeting the responsibilities of State government have increased. Interdependencies of decisions have become more complex, and the decisions have implications which affect many areas of concern. Very often the information needed for a comprehensive approach to problem solving and decision making is not available in a timely and cost effective mode. The major policy and planning issues, which cut across a range of agency responsibilities and data sources, are often those addressed through data "bits and pieces" or by the seat-of-the-pants method because of the absence of data and an integrated system of retrieval and analysis.

These complex policy-level problems cannot be addressed with information systems that support only a funcional orientation. Data must be shared and coordinated across functional and political boundaries.

Vast amounts of data are gathered by units of state government as a part of performing their specific function. This data is gathered at great expense and is totally cost justified within the specific function or agency. Additional data would be cost beneficial and existing data less costly to specific agencies if the costs and efforts were coordinated between agencies.

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However, enhanced utilization does not occur for several reasons:

- Individual agencies are not aware of sepcific common needs for data.
- Agencies are not aware of the existence of data that may be available from other agencies.
- Technical difference in the way the data is maintained may be a deterrent to sharing.
- No clearly defined standards of ownership and responsibility make agencies protective of their data to insure reliability in its primary use.
- Much data does not have adequate definition to make it useable outside the primary use agency.
- No common thread exists between types of data. Therefore, there is no way of correlating dissimilar data types that originate from a variety of primary uses.
- No policy exists to facilitate the capture of data of statewide need, but of secondary need to primary users.

OBJECTIVE: In order to significantly enhance data utilization in the State, four basic activities must be pursued:

- There must be a Statewide catalogue of data elements which must contain both existing data and desired data. This catalogue should contain information about the data (Meta-data) that exists in the State--information like definition, ownership, accessiblity, and usage.
- Secondly, there must be automated support for this catalogue. The task of correlating and maintaining this catalogue would be unquestionably too expensive to deal with manually.

- There must also be the capability of capturing statewide data. This capture and maintenance costs of this data can't be justified by individual agencies, but has statewide value.
- And finally, the most common thread which can relate dissimilar data is its physical location. The majority of data in the State is a representation of characteristics, people, or events located somewhere with the State. Therefore, a geographical reference can be attached to the vast majority of data within the State and provide a common thread for correlation.

METHOD: The State is in the process of establishing within a statewide agency an organizational focal point to facilitate the enhanced utilization of data. This organization would provide some up-front investment in automated catalogue support, remote sensing, and geo-referencing capabilities. It would also assist agencies in the integration and use of these capabilities in their line functions. The level of agency support would be determined by individual agency line management. The organization could also provide for the acquisition of statewide data.

This organizational focal point would make individual agencies aware of the resources and benefits available under a cooperative effort. The up-front investment would be minimal, and the ownership and control of data by the primary user would be insured. However, the approach would have to be a slower process involving education and piece-by-piece implementation of components. This

will provide the maximum benefits to the State in both the short term and long term.

This implementation will be initiated by a cooperative effort between the Department of Natural Resources, the State Planning Coordinator's Office, and the Department of Systems Planning. This effort will take its direction from a sub-committee of the State Planning Advisory Committee (SPAC).

This initial effort will be divided into four base projects:

1. Census Data Service:

   The overall goal of the Census Data Service Project is to make census data more accessible to both public and private users by:

   A. Providing an institutional structure for the dissemination and maintenance of census data and statistical products within the State; and

   B. Provide increased, strengthened, and more comprehensive utilization of census data for planning.

2. Automated Geographical Referencing System:

   The overall goal of the AGR System is to provide State agencies with the capability of attaching a true geographic reference to their data. This will be accomplished by:

   A. Installing specialized data entry and output hardware;

   B. Implementing polygon, point, and line manipulation software;

   C. Establish a grid base standard for the State; and

   D. Implement interfaces to utilize remote sensing capabilities.

3. Information Locator Service:

   The primary goal of the locator service will be to provide a catalog of data within the State. It will also provide for intergovernmental coordination.

4. Uinta Basin Pilot Project:

   Some of the most dramatic population growth within the State in the next decade will take place in the Uinta Basin. This high growth rate will occur through development of the Basin's energy resource, namely oil shale. Oil shale is receiving continued emphasis as the nation strives for energy independence and self-sufficiency. This project will facilitate the coordination of data in order that oil shale site facilitation can be managed for maximum social and economic benefits.