

## PANEL DISCUSSION ON EXPERIENCES IN FEDERAL AUTOMATED CARTOGRAPHY

Representatives of major Federal agencies involved in computerized cartography discussed their experiences in the field and described the broad spectrum of Federal activity in this area. The panelists included representatives of the U.S. Geological Survey, the Soil Conservation Service of the Department of Agriculture, the National Ocean Survey of the National Oceanic and Atmospheric Administration, the Defense Mapping Agency and the Bureau of the Census.

BERNARD SCHECHTER, chairman of the Cartography Division of the American Congress on Surveying and Mapping, presided over the session and introduced the various speakers. His introductory remarks pointed out the increasingly widespread use of computer-assisted cartography and stressed the need for standardization.

WARREN SCHMIDT, chief of the Cartographic Research Team in the Topographic Division of the U.S. Geological Survey, drew upon his cartographic experiences, which include service with the Army and the Central Intelligence Agency. In a paper entitled "Decision Day for Automating," he gave eight reasons for automating: economy, speed, original data in machine form, volume, accuracy, graphic precision, computation and data manipulability. He examined the rationale of four selected mapping agencies that had decided to automate. The emphasis in most cases was on manipulability and speed and the paper suggested that these can be combined into a single significant term -- "responsiveness."

FRED BROOME is chief of the Computer Graphics Staff, Geography Division, U.S. Bureau of the Census. He discussed automated cartography at Census as it pertains to two basic needs -- operational requirements and data presentation. The GBF/DIME Project is an example of the first; the Urban Atlas Series an example of the second. Quality control of existing data, speed and costs are reasons for automating cartography at the Bureau of the Census. A summary of his remarks is included in this section.

C. GENE JOHNSON is chief of the Map Construction Branch in the Cartographic Unit of the Soil Conservation Service, U.S. Department of Agriculture. He discussed the Advanced Mapping System (AMS) which was developed for the Soil Conservation Service. AMS was designed to meet the need for a fast and efficient way of converting soil information into computer readable form. The AMS uses both automatic and semiautomatic methods to produce a data base for soils information.

DONALD H. HUNT is director of Chart Automation Projects, National Ocean Survey, National Oceanic and Atmospheric Administration (NOAA). In his presentation he discussed the use of automated cartography in several areas at NOAA -- the National Environmental Satellite Service, the National Weather Service, the Environmental Data System and the National Ocean Survey. Automated cartographic systems being developed at the National Ocean Survey include the U.S. Nautical Charts, the U.S. Aeronautical Charts, and the U.S. Horizontal and Vertical Geodetic Control Maps. A synopsis of Mr. Hunt's remarks are included in this section.

DAVID HOLLAND, chief of the Systems Engineering Branch of the Defense Mapping Agency's Topographic Center, discussed the semi-automated cartographic system at the agency and described the hardware used in the system.