

# PE&RS

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**U.S. National Report**

- Status of Photogrammetry, Remote Sensing, and Geographic Information Systems in the United States  
*Stanley A. Morain* .....1073

**Technical Division and Committee Reports**

- Primary Data Acquisition—State of the Art Review  
*Arthur A. Andraitis, Walter E. Boge, Alfred C. Crane, Jr., and Ronald J. Ondrejka* .....1077
- Photogrammetric Applications Division  
*Alan W. Voss and Raymond J. Hintz* .....1078
- Transportation Surveys Committee  
*Marlee Walton, T. Dwane Moore, and Frank Howard* .....1079
- GPS Applications to Photogrammetry (GPSAP) Committee  
*Dean C. Merchant* .....1081
- Softcopy Photogrammetry Committee  
*Dewey Houck* .....1082
- Remote Sensing Applications Division  
*T. H. Lee Williams* .....1082
- Geographic Information Systems Division  
*Kass Green, Russell Congalton, Ann McLean, Duane Dippon, and James Smith* .....1084
- Professional Practice Division  
*Michael Renslow* .....1085

**National Committee Reports**

- Publications Committee  
*James B. Campbell* .....1086

- Perspective on Earth Resources Mapping Education in the United States  
*Daniel L. Civco, Ralph W. Kiefer, and Ann Maclean* .....1087
- GIS Applications: A Wide Spectrum not without Problems  
*Phillip J. Craul and Lee P. Herrington* .....1092
- Student Affairs Committee  
*Timothy A. Warner* .....1095
- The Evaluation for Certification Committee  
*Roger R. "Sky" Chamard* .....1095

**Region Reports**

- Mapping Sciences in the Mid-South Region  
*John Rehder* .....1097
- Columbia River Region Aspirations and Goals  
*Jerome Eyestone* .....1101
- Northern California Region  
*Colleen Maurer, Alan Mikuni, David Roberts, Vicki Chmill, and Michael Hardy* .....1102
- St. Louis Region  
*Kathleen F. Strebeck* .....1105
- Rolla Region  
*William Harris* .....1109
- Puget Sound Region  
*Terry A. Curtis* .....1110

**Government Agency Reports**

- U.S. Geological Survey**  
 U.S. Geological Survey National Mapping Program: Digital Mapmaking Procedures for the 1990s  
*Benjamin S. Ramey* .....1113

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Cover Image—This natural color digital orthophoto of Washington, D.C. shows the Capitol and surrounding area. The orthophoto data set was produced from Kodak Aerocolor Negative Film Type 2445 exposed at a scale of 1:30,000 using a Wild RC20 camera during August 1989 and the final map scale is 1:24,000. Scanning of the unrectified aerial photograph was performed on a high resolution transmissive scanning system using a pixel size of 25 microns resulting in a ground resolution of 2.5 feet. Orthophoto rectification was carried out on a high performance digital orthophoto work station developed by International Imaging Systems, Inc. The hard copy filmwriting was developed using a Cirrus Technology, Inc. L.C. 3000 film writing device.

All phases of the production, including image acquisition, film processing, Digital Elevation Model development, digital orthophoto rectification and hard copy reproduction were undertaken by Photo Science, Inc. at its Gaithersburg, Maryland headquarters.

### About the Disk

A 5.25-inch floppy disk containing a portion of the digital file used to make the cover of this issue is inserted near the middle of the magazine.

The data in the file "CAPITOL.GIF" (640x480 pixels and 256 colors) have been resampled to increase the pixel size from 2.5 feet to 5 feet; thus the screen image covers an area 3200 feet (about 1 km) wide. Using your own software, this image format can be viewed directly on or can be converted for viewing on a large variety of computing platforms. Also read the ASCII "READ.ME" text file.

For MS/PC-DOS platforms, viewing software (with detailed documentation) has been included. A super VGA display of 640x480 pixels and 256 colors is the minimum resolution recommended; however, a standard VGA display of 320x200 pixels (256 colors) is accommodated. For easy access to the imagery, type "DO" at the DOS prompt for the disk drive in which you have placed the disk.

The original scanning produced 24-bit data (8 bits or 256 colors in each of the red, green, and blue spectral bands) which was composited for this floppy to an 8-bit image using a selected color palette of 256 colors. The smaller composited file was developed to simplify distribution and, because most PC users now do not have 24-bit display adaptors, to allow display on a larger installed base of PC equipment.

The Digital Orthophoto floppy is intended to demonstrate to the cartographic, geographic, and remote sensing communities the concept of producing digital imagery from conventional aerial photography. It is hoped that this sample will also encourage further improvements in the technology, stimulate ideas for applications by potential users of digital orthophotographs, and encourage industry to prepare for producing similar products.

Production of the floppy disk has been a collaborative effort of the American Society for Photogrammetry and Remote Sensing, Photo Science, Inc., the U.S. Department of Agriculture Soil Conservation Service, and the U.S. Geological Survey.

### Defense Mapping Agency

Digital Production System

*Lee R. Warren* .....1117

MC&G Standardization Activities within the Department of Defense

*David S. Scopp and Paul E. Frey* .....1121

The Digital Chart of the World Project

*David M. Danko* .....1125

### U.S. Forest Service

USDA Forest Service—Remote Sensing and Related Technologies Help Care for the Land and Serve the People

*Charles W. Dull, Frederick W. Weber, Roberta Carroll, Billy J. Reed, and Stan Bain* .....1129

### National Aeronautics and Space Administration

Mission to Planet Earth

*Gregory S. Wilson and Peter W. Backlund* .....1133

Transferring Earth Observing Technology

*Elizabeth Owens and Stanley A. Morain* .....1137

### Academic Programs

#### Multi-Institutional or Cross-Disciplinary

The National Center for Geographic Information and Analysis

*Michael F. Goodchild* .....1141

Remote Sensing and the National Council for Geographic Education

*M. Duane Nellis and Ray Lougeay* .....1145

Remote Sensing and the Association of American Geographers

*M. Duane Nellis and Kamlesh Lulla* .....1147

#### Institutional

Remote Sensing at the University of Arizona

*Benjamin M. Herman, Charles F. Hutchinson, John A. Reagan, Robert B. Singer, and Philip N. Slater* .....1151

The Role of Auburn University's Department of Geography in Remote Sensing/GIS for International Programs

*David R. Hicks* .....1155

Integrating Geographic Information Systems Education into the Curriculum at Humboldt State University

*Lawrence Fox III, Steven A. Carlson, and Harold Campbell* .....1158

Growth and Transition: Remote Sensing and Geographic Information Systems at Kansas State University

*M. Duane Nellis, John M. Briggs, and H. L. Seyler* .....1159

continued on page 998