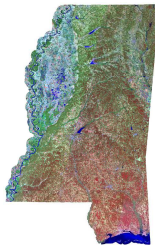


R&D Opportunity

The University of Mississippi Geoinformatics Center (UMGC) is currently seeking a development partner to assist with commercialization of Geospatial Information Science and Technology (GIS&T) applications. GIS&T integrates spatial information with information extracted from remotely sensed imagery to become solutions for a wide variety of users. These applications are primarily focused on natural resources, emergency planning and response, engineering analysis, homeland security, and humanitarian response. We envision that the partner would work with UMGC researchers to evaluate the needs of a user or group of users and design GIS&T solutions and then deliver the solutions to the market sector.



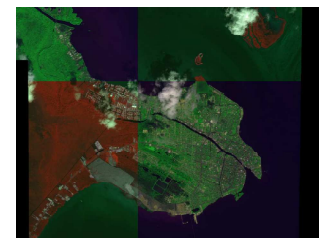
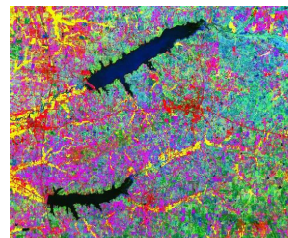
Introduction

The University of Mississippi Geoinformatics Center is dedicated to improving the understanding, usage and access to Geospatial Information Science and Technology (GIS&T). GIS&T is the integration of the science of geospatial information with the technology for its implementation in a user community. GIS&T includes all aspects of Geographic Information Systems (GIS), remote sensing and imagery analysis, and Global Positioning Satellite (GPS) systems. Geospatial information is any data about the earth or earth processes that can be obtained directly from or by using a form of remote sensing. The potential users of GIS&T are all government agencies and private companies that need to manage and use information with a locational component.

Through access to a complete suite of GIS and remote sensing software and development tools as well as an extensive archive of imagery and access to new sensor information, the UMGC is well positioned to research and develop new and novel uses of GIS&T. The market for GIS&T is expanding rapidly and this growth is projected to continue in the foreseeable future.

Development Capabilities

As an inter-disciplinary center, the researchers at the UMGC have the knowledge, skills and ability to design and develop GIS&T solutions for many different applications. Through collaborative relationships with other researchers at the University of Mississippi, researchers at other universities throughout the world, and federal laboratories, the UMGC can put together research teams that are capable of solving problems and designing robust solutions. The UMGC researchers have collaborated with scientists in a wide variety of disciplines including: biology, natural products, computer science, anthropology, agriculture, civil engineering, physics, international relations, and others.



Landcover Mapping and Analyses

Research Interest Areas

The primary research interests of scientists with the UMGC include:

- New techniques for extraction of information from remotely sensed imagery
- Mobile GIS applications for data gathering and dissemination
- Engineering analysis using remote sensing
- Internet delivery of geospatial information

Funding

UMGC was created in May 2000 with funding from the United States National Aeronautics and Space Administration (NASA). UMGC has strong financial and project support from a number of other federal, state and local agencies, as well as private companies and non-profits. These partners have worked with the UMGC to advance the use of GIS&T in their business sector. In these partnerships, the UMGC has been both the recipient of funding and the distributor of funding.

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Facilities and Resources

Researchers at the UMGC have access to the software, hardware, and data needed to conduct GIS&T research. Hardware includes both desktop and portable computing, with access to network storage and data archives. In addition, all researchers have access to large format input and output hardware for preparation of hardcopy output. Listed below are shared resources available to all UMGC researchers.

Hardware

- Server Resources
 - 5+ Windows 2003 Application and Web Servers
 - 2+ Unix Servers
 - ~10 Terabytes of centralized data storage
- Printing Resources
 - 42" HP 800 PS Plotter
 - 11"x17" Laser Printer
 - 40" Laminator
 - 40" Wide-Format Scanner



42" HP 800 PS Plotter



Web Server Racks

Software

Geographic Information Systems (GIS)

- ESRI ArcGIS™ 9.2
 - Full Statewide License
 - Includes Server Packages (ArcSDE, ArcIMS, and ArcGIS Server)
- ESRI ArcView GIS™ 3.3

Remote Sensing and Image Processing

- ERDAS Imagine® 9.0
 - Full Statewide License
 - All modules (including)
 - Radar
 - Virtual GIS
 - Orthobase
 - Subpixel Classifier
- IDL® 6.3 ENVI™ 4.3
 - Full Statewide License
- ER Mapper™ 9.1

The Geoinformatics Learning Laboratory (GLL) is the centerpiece facility for the UMGC. The Laboratory is used to demonstrate, promote and instruct techniques and applications of Geospatial Information Science and Technology (GIS&T). The Laboratory utilizes the state of the art in the technology in its equipment and software. These include:

- Classroom Control System
 - Enables remote workstation control and display by Instructor
- Polycom Video Conferencing/Distance Learning Equipped
- 27 Workstations - Windows® XP SP2
 - Pentium 4 3.2 GHz Processors, with 1GB RAM



The Geoinformatics Learning Laboratory

Business Development

UM Geoinformatics Center is a cluster partner in the Enterprise for Innovative Geospatial Solutions (EIGS) which seeks to further develop the geospatial industry in Mississippi. With more than 36 high technology companies and six research programs, EIGS encompasses both geospatial science and business. By supporting both entrepreneurs and researchers from universities throughout the state, EIGS strives to make Mississippi the home of the U.S. geospatial and remote sensing industry.

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