Hurricane Katrina slammed into the Mississippi Gulf Coast on August 29, 2005, obliterating buildings, coastal roads and street signs and emphasizing the need for county and local paper maps and records to be converted to Geographic Information Systems (GIS). Under direction of the Mississippi Emergency Management Agency, Mississippi State University GIS faculty and personnel went to emergency operations centers in the state’s hardest-hit counties immediately after landfall and remained to assist and direct GIS volunteers in the ongoing recovery effort. Without local landmarks to guide rescuers, state and local agencies became aware of how little georeferenced digital data was available to coordinate emergency management operations.

Geosystems Research Institute Extension Professor Scott A. Samson, who along with others directed GIS volunteers in the field, saw the need for statewide geospatial education to aid local governmental agencies in making the transition from paper maps to georeferenced digital databases. The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems, a consortium of GIS professionals from state agencies and educational institutions, adopted Dr. Samson’s proposal to create and administer an Outreach and Education arm of the Mississippi Digital Earth Model, an ongoing paper-to-digital conversion initiative. Dr. Samson identified GIS skills needed by local governments and organized a series of workshops. Commercial GIS software, available to local governments through a state contract with ESRI, Inc., is used in all workshops.

Impact:
- Counties: 64
- Participants: 1453
- Value: >$1.5 Million
A fully equipped mobile lab takes GIS to training sites and disaster locations. The MSU Extension Service bus features 12 desktop computers configured with GIS and GPS-support software. The bus has its own server and a pair of onboard generators. Satellite Internet access has recently been added via a 1.3 meter dish antenna.

At MSU, assistance with GIS does not end with workshops. GRI Research Associate Gunnar Olson assists municipal and county personnel in making the transition from paper cadastres and soil maps to a georeferenced digital database. All counties, cities and emergency responders who participate in the training program are eligible to receive assistance in designing and creating a GIS application needed in their community.

Qualifications of Instructors
Samson, Olson and Ruffin are authorized by ESRI to teach many of the courses taught by ESRI personnel. To become an Authorized Training Partner (ATP), a person must (1) have 200 hundred hours of experience with the ESRI software, (2) complete a pre-qualification review, (3) pass rigorous exams (85% is a passing grade) and (4) demonstrate teaching abilities before ESRI personnel. This process is repeated for each course taught by Samson, Olson and Ruffin. The team is authorized to teach 9 courses developed by ESRI, ranging from fundamentals of GIS to advanced database concepts.

Instructor Nel Ruffin travels the state with “laptop labs” configured with the latest ESRI software. Federal seed grants allow the team to take GIS training directly to Mississippi counties and municipalities, offering the trainings to local agencies and first responders free of charge. Community College Workforce Development Centers, the Mississippi State Tax Commission and Extension Service county offices are among the cooperating agencies working with the MSU team to contact participants and arrange logistics. Workshops are presented at Mississippi State University Extension Service county offices, Community Colleges, Emergency Operations Centers, police stations, and even courtrooms.

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