



All Hazards Emergency Operations Management System

ALLHAZ

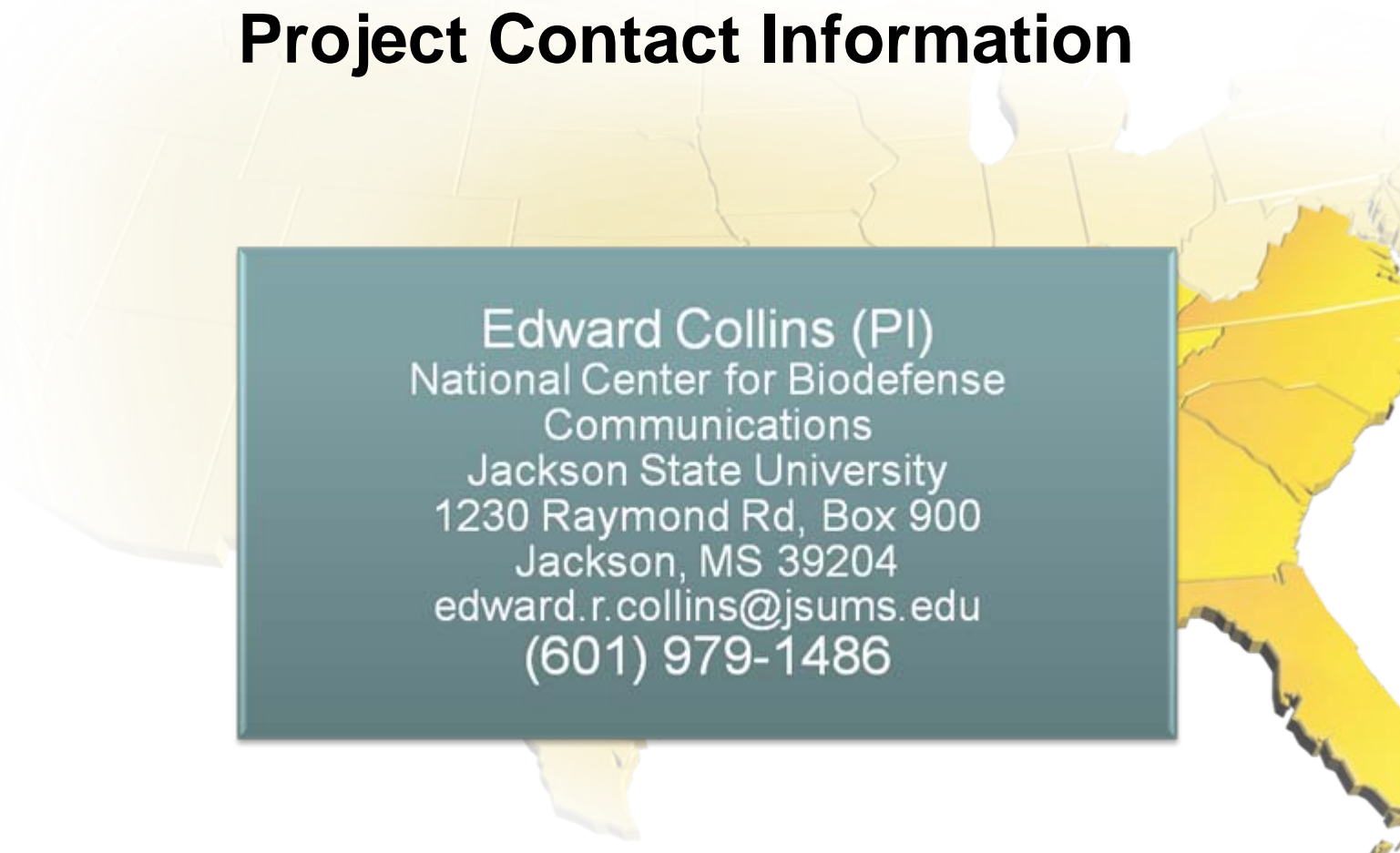
September 2008

Jackson State University





Project Contact Information

A map of the United States is shown in the background, with the Southeastern region highlighted in yellow. The highlighted area includes Florida, Georgia, South Carolina, North Carolina, Virginia, West Virginia, Kentucky, Tennessee, Mississippi, Alabama, and Louisiana.

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Project Description

- **Goal** – Implement key components of the Department of Homeland Security’s National Preparedness Goal at the local level

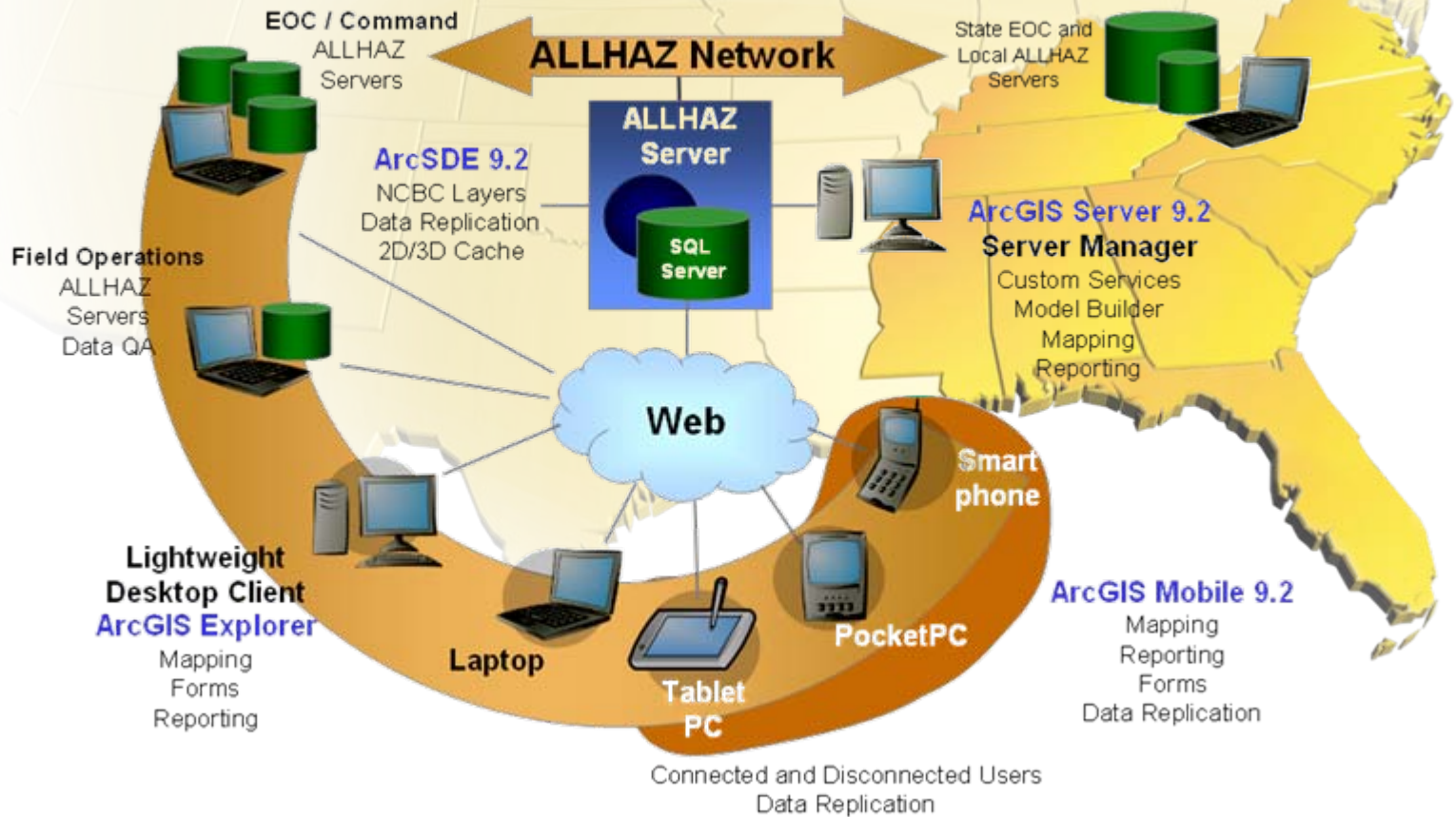
Specific Objectives

- Establish a common operating picture (COP) guided by the need to improve situational awareness within a broad disaster response and management framework
- Build a shared data environment leveraging current projects, existing data and resources, providing for the integration of data from a variety of sources and targeting working teams of first responders
- Establish working teams of responders and other interesting personnel who will use geospatial information system technology to collect data supporting first responder day-to-day operations and effectiveness during a catastrophic event.

Project Description

Conceptual Model

All Hazards Emergency Operations Management System (ALLHAZ)



Landscape Assessment

What Others Are Doing



Nvision Solutions Realtime Emergency Action Coordination Tool

REACT is a web-based, geographic analysis tool which assists with rapid planning, response, and recovery during a disaster by providing on demand maps and reports which quantify the effects of an event.

REACT provides three methods for delineating a disaster zone:

1. Flood Inundation Tool (Manual and Automated)
2. Disaster Polygon Tool
3. Disaster Point Radius Tool



Landscape Assessment

What Others Are Doing



EmerGeo Mapping Software

An Open Emergency Mapping Tool that Integrates with Customer's Existing GIS Systems and Google Earth®

EmerGeo Solutions provides fully integrated situational awareness technology and services to help manage risk in emergency management, environment, health and safety, security and business resilience for enterprises and all levels of government.

EmerGeo provides more than just a GIS system – our unique managed Common Operating Picture (*mCOP*[™]) technology, based on open standards, provides reliable world-class risk management technology and professional services that are proven effective in helping government and industry to mitigate, prepare for, respond to and recover from emergencies, natural disasters, acts of terrorism, and planned events.

Landscape Assessment

What Others Are Doing



Collaborative Emergency Management for Government using the Microsoft Office System

Local, state, and federal agencies can realize improved communication and collaboration with a collaborative emergency management solution:

- Support for both offline and online information access
- Easy access to contact information
- Single point of integration for important Information
- Ability to see a “scorecard” of emergency situation status
- Rapidly collect, filter, and distribute information as it is obtained to all levels of government

This solution scenario is a great opportunity for government agencies to realize more value from their existing software investments, and for Microsoft technology partners to extend their current service offerings.

Landscape Assessment

What Others Are Doing



NAVTEQ™

HAZNET

HazNet is a Web-based software application linked to portable field units, which provides a realtime common operating picture (COP) for emergency management situations. HazNet has been jointly developed using existing technologies provided by The Boeing Company, Nvision Solutions, Inc., and NAVTEQ.



Landscape Assessment

ALLHAZ provides a scalable, functional, common operating picture available without extensive investment in hardware beyond what already exists. Through careful coordination between JSU, MEMA, and MS Fusion Center, we will provide the same level capability or better to emergency managers and decision makers throughout the state; and will serve as the model for the Southeast and beyond.

Continued development and promotion of this dynamic, encompassing, and scalable situational awareness tool, ALLHAZ, is critical to advancing proper planning and mitigation strategies through training and infusion of useful technology.

Relevance to DHS

- The ALLHAZ program is relevant to several Homeland Security Presidential Directives
 - It will be the tool first responders and decision makers can use to prevent and respond to threatened or actual domestic terrorist attacks, major disasters, and other emergencies
 - It will support the domestic all-hazards preparedness goal
 - It is a mechanisms for improved delivery of Federal preparedness assistance to State and local governments, and outlining actions to strengthen preparedness capabilities of Federal, State, and local entities
- When fully integrated and subsequently incorporated in an HSEEP approved training plan, ALLHAZ will raise fidelity of training by the ability to can data in the environment in which actual data will be experienced

Progress

- The ALLHAZ project is quickly coming to a close. We've made some significant progress in terms of field testing and mobile installation. Newton County Mobile Communications Command has been outfitted with an Arc Enterprise server, network accessible storage, SDE controlled geo-database, and the ALLHAZ software. A TRL level 6 test was conducted, with success, at the 2008 Wings Over Meridian Air Show.
- Another TRL 6/7 test was conducted at the 2008 4H Tech Conference held at Mississippi State University. A mock terrorist incident was setup and ALLHAZ was used primarily as a familiarity tool, incorporating the latest intelligence for the first responders. This use is more static than dynamic and proved a valuable learning experience.
- All portions of the photogrammetric data collection and delivery activities are completed.

Progress

- Use Cases – complete
- Logical database design – complete
- Document review – complete
- Logical design document – complete
- Software design document – complete
- Geo-database – complete
- Testing and evaluation – ongoing
- Application requirements – complete
- Functional specifications – complete
- ALLHAZ application – functional
- User's Guide – Complete

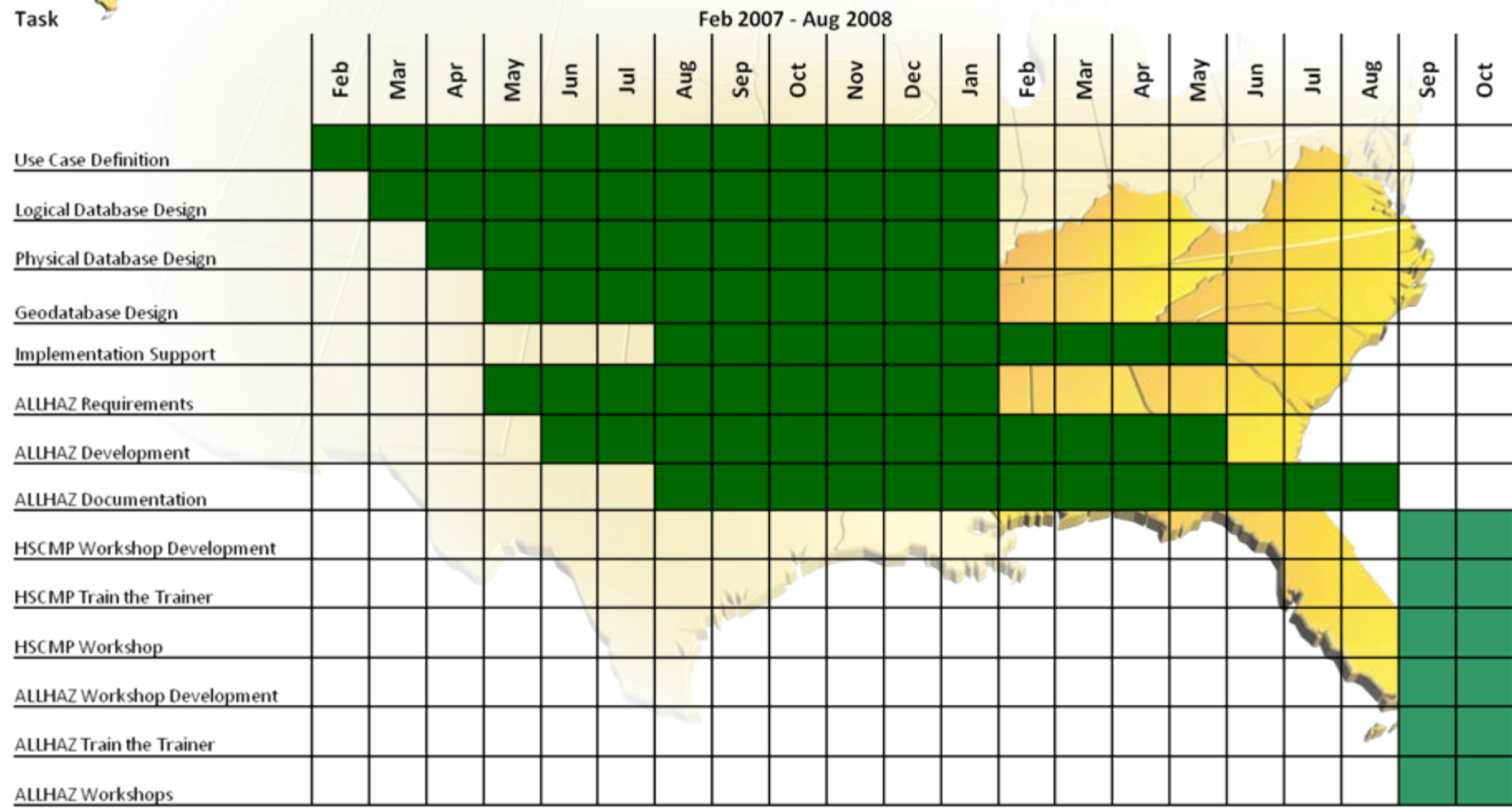


Collaborative Opportunities and Activities

- Collaborative opportunities exist between NCBC and Northrop Grumman, whose interests lay in using ALLHAZ as a higher fidelity training tool and potentially integrating ALLHAZ dynamic capabilities into Kansas State University systems currently chartered by the Kansas Eisenhower Center.
- Negotiations are underway to bring photogrammetric data and ALLHAZ to the 4-H technology and GIS track. Our desire is to hold first responder, GIS, and photogrammetric data workshops throughout the fall and spring, culminating into summer data collection workshops with emergency management centered data as the foci.
- Recent collaborations and continued relations with the Fusion Center, MEMA, and Project Homeland have strengthened our cause to get a common operating picture into active use. More work to be done, more success to come.



Project Timeline

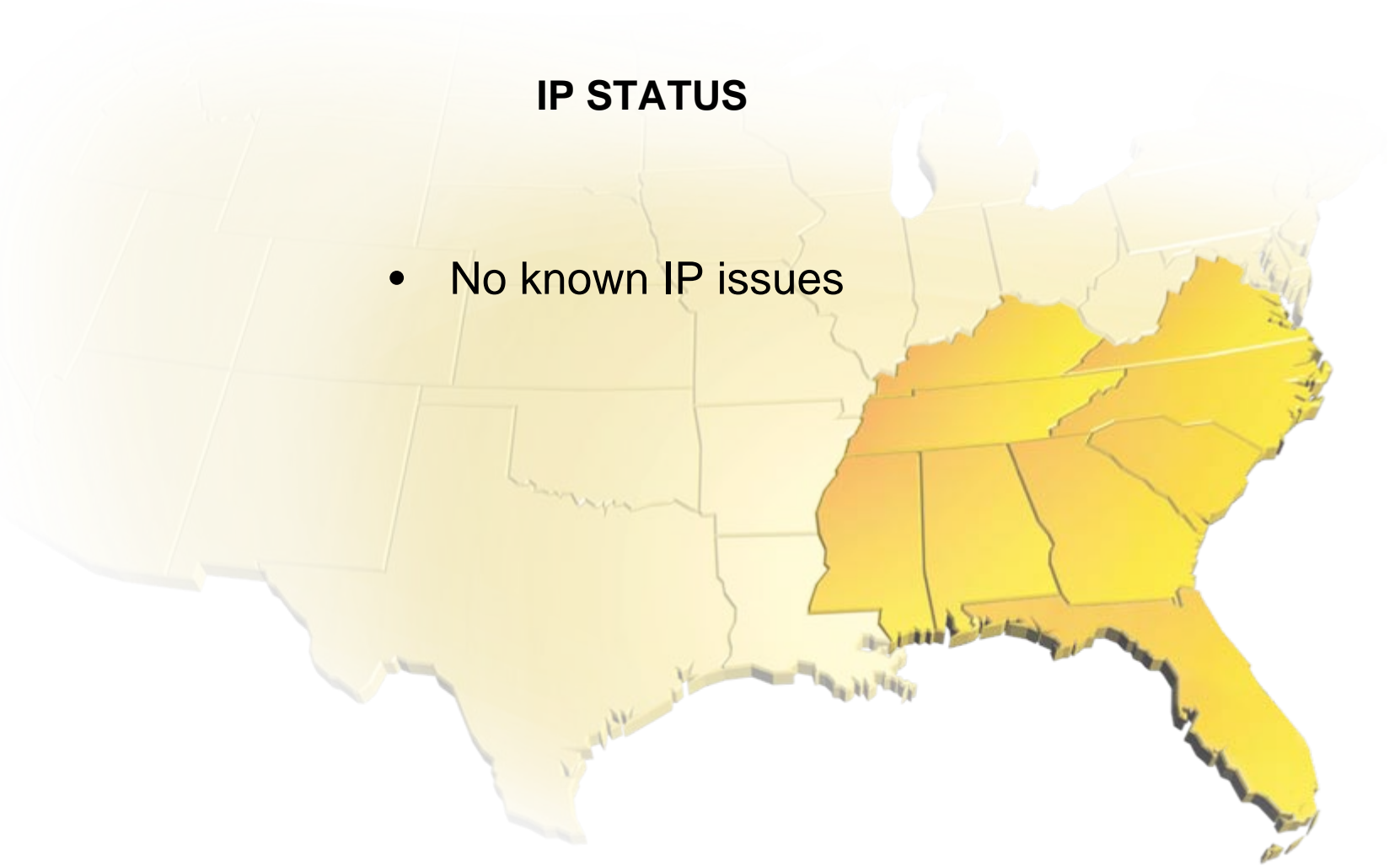


Commercialization Progress

- **Promotion of ALLHAZ as an effective training tool through the Planning and Mitigation phases of a disaster cycle, in addition to its use in Response and Recovery, is drawing interest in and out of the Southeast Region. ALLHAZ, as an operational tool, is available for testing, to first responders through NCBC and through an ESRI established web portal.**
- **JSU/NCBC intends to continue the development of ALLHAZ to advance the software from TRL-6 to TRL-7 and beyond. Additionally, we aim to remove the current need to have a GIS technician extract data for use in ALLHAZ by making the entire product web serviceable, but not web dependent. We are interested in including this type of product in a future “Virtual Mississippi” modeled after the current Virtual Alabama project.**
- **Future projects, including work with Mississippi 4-H and MS State Extension Service personnel, will certainly include a deployable version of ALLHAZ for data collection and first responder appreciation and technology training to our youth and other interested parties.**

IP STATUS

- No known IP issues



Project Summary

- The development of a dynamic, scalable, all-hazards data collection and sharing product has been accomplished. There is much that can be, and will be improved upon. Suffice it to say, the tools that individually support ALLHAZ, and that have been in use in some form or another, by ESRI are adequate; but, the delivery method, the shell in which the software operates, will grow with the changing face of computer technology and the internet.
- First responders still indicate a need for dynamic GIS technologies in emergency management, but not at the expense of essential life saving and necessary equipment. This drives the need to make this technology web serviceable to maximize the county's existing hardware, software, and skill sets. A continuation funding request has been submitted to pursue just that.
- We are interested in combining the dynamic aspects of ALLHAZ with the GUI and usability of Dr. Gordon Skelton's work over the course of the next 12 months.