

Panel Presentation: Hurricane Impact:
Damage, Recovery and Rebuilding

Assessment

Session E
Robust Infrastructure

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Science Applications International Corporation (*NYSE: SAI*)

Who We Are...

SAIC is a leading systems, solutions and technical services company offering a broad range of Expertise in:

- Defense modernization efforts;
- Intelligence, homeland security;
- Logistics and product support;
- Health and life sciences;
- Space and earth sciences; and
- Global commercial services.

The Facts...

- ✓ Long-Term Relationship with Entergy (2010)
- ✓ \$7.8B in annual revenues for FY06 (8% Growth)
- ✓ Greater than \$2B in outsourcing
- ✓ More than 42,000 professionals worldwide
- ✓ More than 30,000 engaged in IT Delivery
- ✓ Over 5,000 engaged in Energy Industry

#2 Top 25 Systems Integrators

Federal Computer Week / September 2006

#4 America's Most Admired Companies – IT Services

FORTUNE / March 2007

#13 Defense News Top 100

Defense News / June 2006

#21 Top Environmental Firms

Engineering News Record / July 2006

#285 Fortune 500

FORTUNE / April 2006

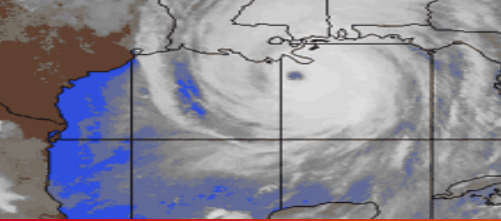




Assessment Timeline

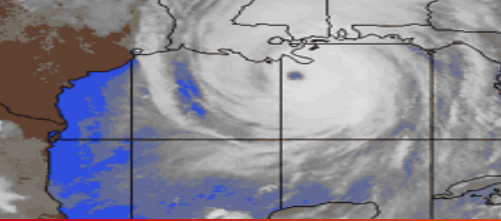
Weeks	Day	Date	Event
Week 9	57	25-Oct	Infrastructure Assessment Sponsorship Meeting
Week 10	64	1-Nov	Preliminary Submittal to Nuclear BU
Week 12	81	18-Nov	Telecommunication Lessons Learned (Retrospect) Published
Week 20	137	13-Jan	First Draft of Report
Week 24	162	7-Feb	Assessment Technical Tabletop Walk-through
Week 26	176	21-Feb	Entergy Sponsorship Briefing

- 
- *Assessment initiated less than 60 days after Katrina*
 - *Completes 6 months after Katrina*



The Process

- Identify Scope – Include all telecommunications; exclude Data Center
- Identify Approach – Comprehensive View to “Harden” infrastructure
 - *Need Requirements – include ALL Business Units and Grid Blackout*
 - *Corrective Actions – Weaknesses identified or perceived*
 - *New Initiatives – Gaps in current program*
- Not to be taken as criticism
 - *Restoration work was “exceptional and extraordinary”*
- Approach to Action – Alignment to justification and budget process

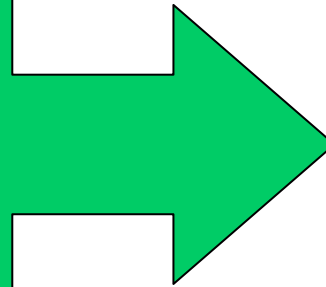


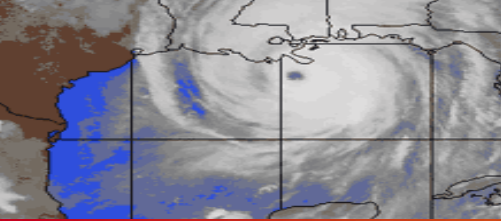
The Process

“Approach to Action” Systems Model

Inputs

- ☐ Need Requirements
ALL Business Units
- ☐ Corrective Actions
Weaknesses
- ☐ New Initiatives
- ☐ Gaps





The Process

"Approach to Action" Systems Model

Inputs

- ☐ Need Requirements
ALL Business Units
- ☐ Corrective Actions
Weaknesses
- ☐ New Initiatives
- ☐ Gaps

Process

1. Synergies among BUs
2. Identify Cost
3. Implementation Ease

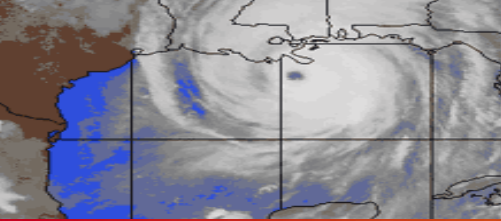
Outputs

24 Initiatives

2006 "Quick hits" before next storm season

2007 funding evaluation

2008 & future funding evaluation



The Process

"Approach to Action" Systems Model

Inputs

- ☐ Need Requirements
ALL Business Units
- ☐ Corrective Actions
Weaknesses
- ☐ New Initiatives
- ☐ Gaps

Approved Business Cases
Approved Funding

Project Lists

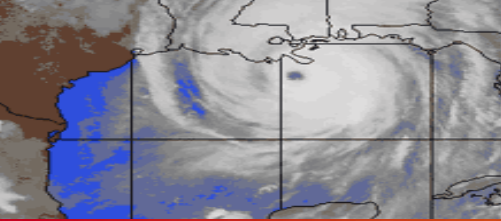
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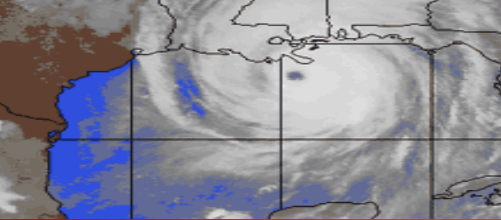
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The Systems

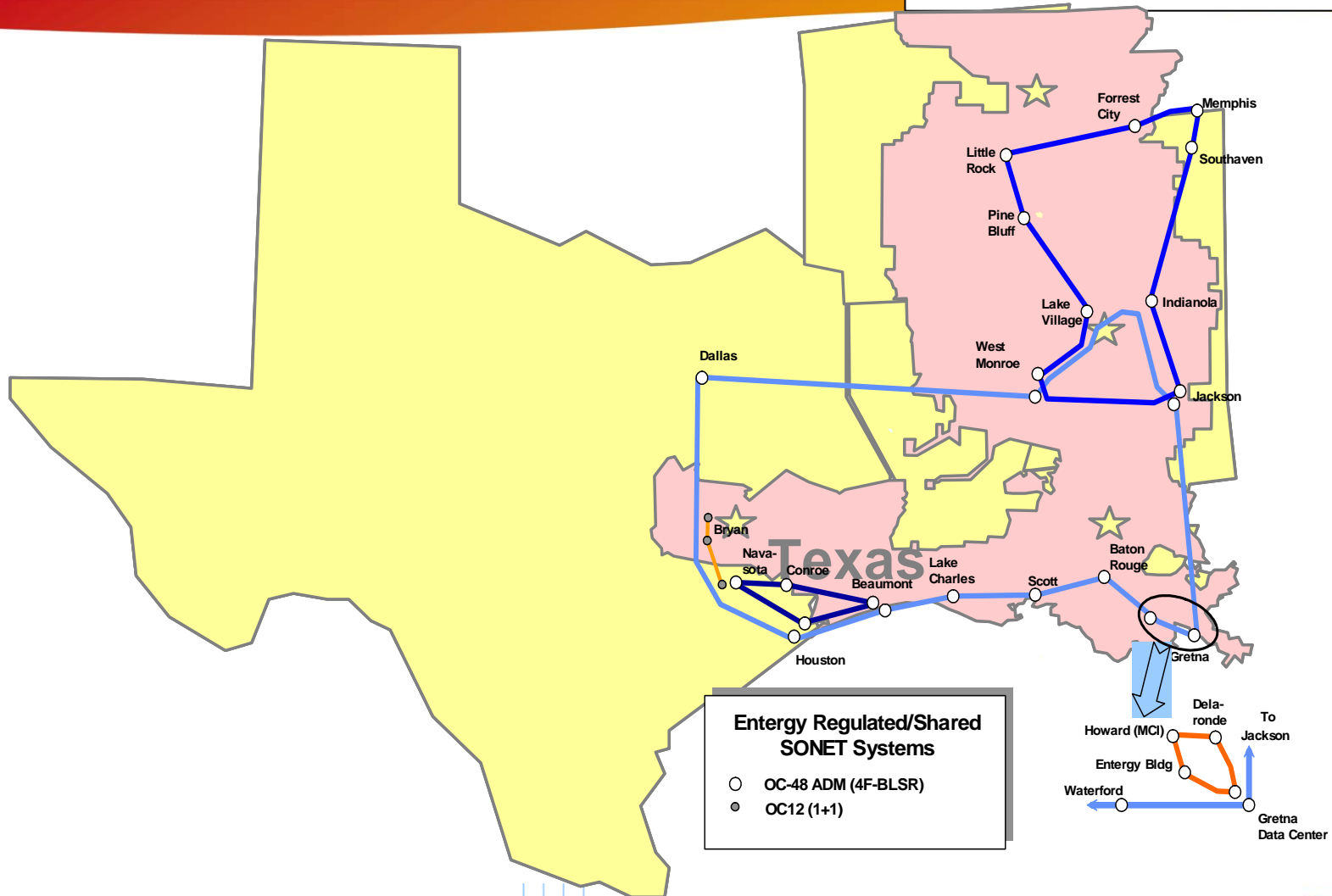
*Carrier/Vendor
Last-Mile and
Commercially Available*

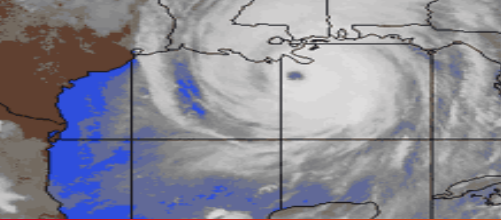
- **Circuits** AT&T, BellSouth, SBC
- **Cell Phones** Sprint, Nextel, Verizon, T-Mobil
- **PDA** Blackberry, Trio or Palm
- **Pagers** Teletouch, Metrocall



The Systems

Entergy's Fiber Network 2,200 miles





The Systems

Entergy 800MHz Radio

133,000 Square Miles

181 tower site

7,800 Subscribers

ENTERGY 800 MHz 2-way radio system

Service territory covers 133,000 square miles
with 2 ½ million customers.

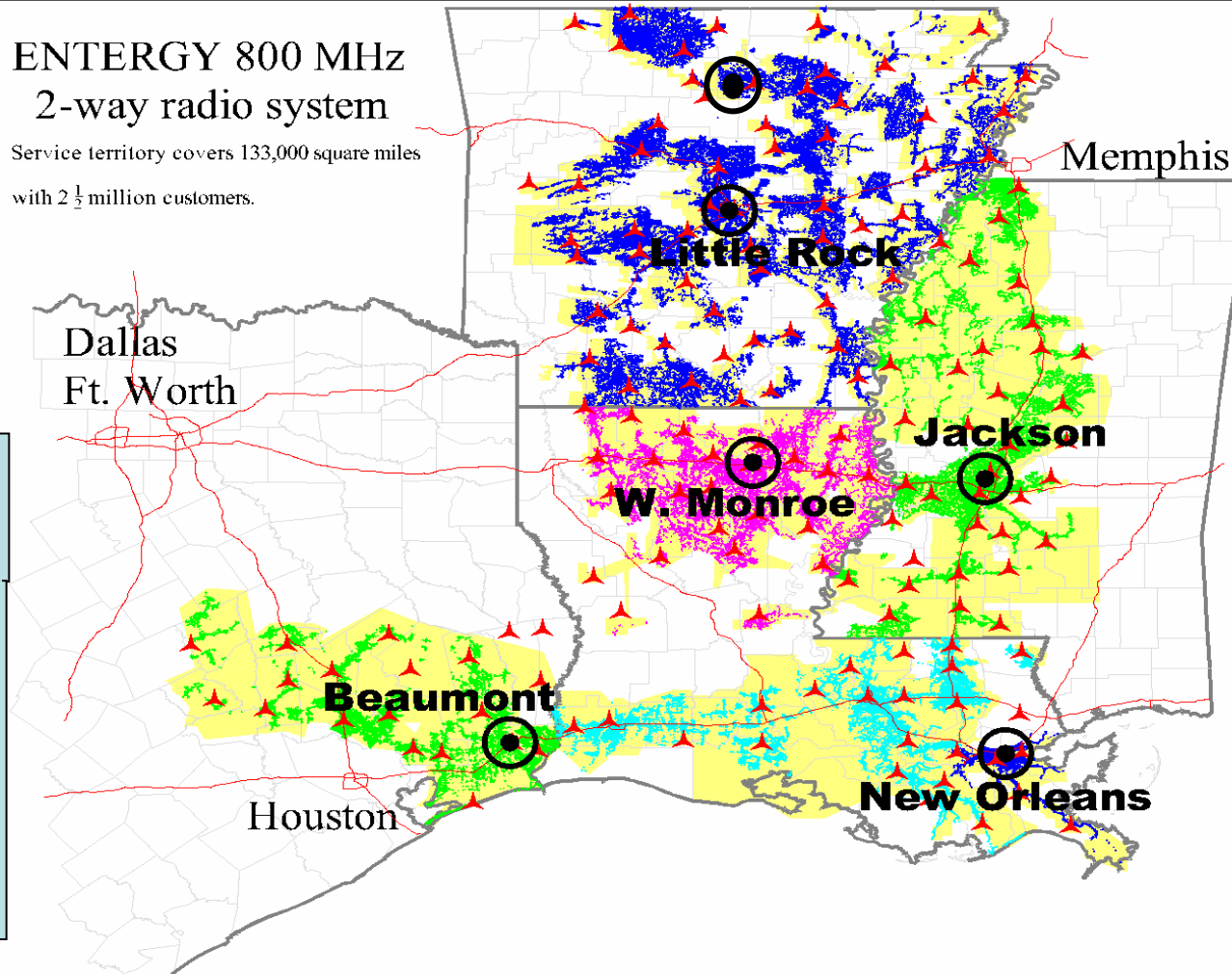
64 Dispatch
Positions
182 Sites
8,000 Devices

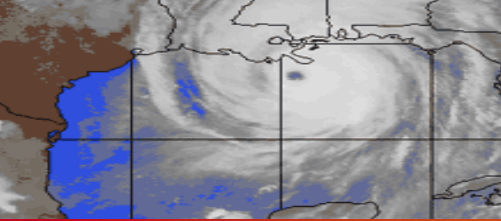
Customer
locations
(distribution
transformers)

Service Area

Zone Controller
site

Antenna site





The Systems

Entergy's Satellite Communications

- Satellite Portable Phones
 - GlobalStar, Mobile Satellite Ventures carriers
- No data services

The Systems

Government
“GETS”



Government Emergency
Telecommunications Service

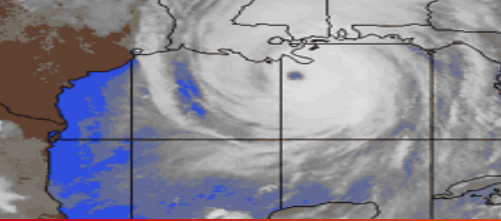


GETS provides emergency access and priority processing in the local and long distance segments of the Public Switched Telephone Network (PSTN). It is intended to be used in an emergency or crisis situation when the PSTN is congested and the probability of completing a call over normal or other alternate telecommunication means has significantly decreased.

Public Health, Safety, and Maintenance of Law and Order

➤ *Critical logistics functions and public utility services*

<http://gets.ncs.gov/>



The Lessons

Failure Modes:

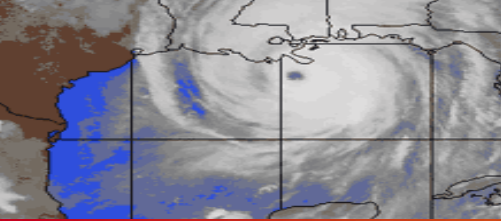
- Flooding
- Hurricane Force Winds

Secondary:

- Heat

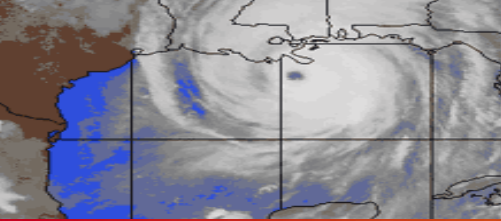
Results:

- Power loss longer than designed in telecommunications systems
- Lack of connecting infrastructure creates single point of failure for telephone communications
- Power loss is single point of failure for HVAC systems required to cool electronics
- Wind damage/extended power loss and flooding of commercial carrier offices, towers and communications relaying hubs shut down communications capabilities



The Lessons ... Elements for Change

1. Additional system integration
2. More technology layering
3. Alternate access for critical systems
4. New designs need stand-alone sustainability
5. Infuse new commercial technology
6. Consider elevation when possible
7. Always take into account water and heat



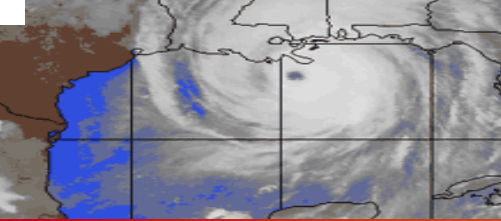
The Recommendations

Enterprise

Tech Areas

- 1) Carriers/Vendors
- 2) Assets of Entergy
- 3) Wireless
- 4) Satellite-enabled
- 5) Government

- Leverage cell phone “push-to-talk” feature
- Broaden use of text messaging
- Continue use and central support of Blackberry
- Continue control and use of standards when upgrades or repairs are made
- Include water intrusion assessment
- Include back-up power requirements
- Update voice infrastructure plan to include command and control centers as priority sites for expanding IP-enabled capabilities;
- Some fiber rings currently exist to provide a diverse path for traffic
 - Review "Important" command and control locations
- Design satellite trunking/telephone plan as a “system” plan to reduce cost and leverage vendor/contracts; and
- Use of GETS



The Improvements

Telecommunications Assessment

- ✓ All 24 initiatives have been addressed
- ✓ 11 “Quick Hits” identified

SAIC Support of Projects Due to Assessment and DR

- 74 projects have been identified
 - ✓ 22 Complete
 - 41 Active
 - 2 Pending
 - 9 Others being Planned