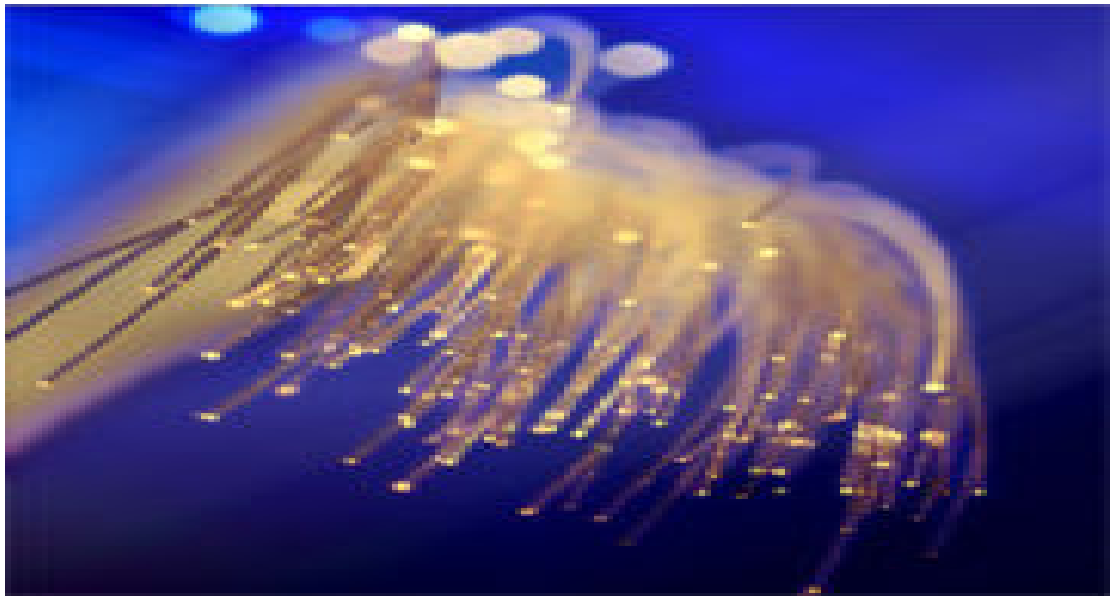
Disaster Information Reporting System (DIRS)



Public Safety & Homeland Security Bureau – *Communications Systems Analysis Division*

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January 09, 2008:

Outline

- Background
  - Why develop the Disaster Information Reporting System (DIRS)
  - Roles
  - Process
- The Good, The Bad, and The Ugly
- Information in DIRS
- Using DIRS

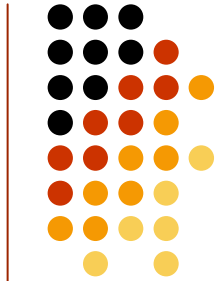
What Is DIRS?

- DIRS is a *voluntary*, *efficient*, *web-based* system that communications providers can use to report communications infrastructure status and situational awareness information during times of crisis.
  - Wireline
  - Wireless
  - Broadcast
  - CATV

Why Develop DIRS?

- Need information on communications infrastructure status
- Need daily updates
- Need process to be automated
- Need consistent data
- Need the “right” single-points-of-contact

What Information Does/Will DIRS Have?



- Contact Information (usually NOC staff)
  - Name
  - Company
  - Phone Number
  - Cell Phone Number
  - Blackberry Number
  - E-mail Address
- Detailed Information on Communications Infrastructure Status in a Disaster Area

When is DIRS Data Available?

- DIRS updates are collected daily from participating communications providers.
- The daily DIRS window for participating communications providers closes at 6:00 PM local time at disaster location.
- FCC report is produced that evening and delivered to recipients by midnight.

Who Sees DIRS Data?

- Federal Emergency Management Agency
- National Communications System
- Federal Communications Commission
- Other Federal agencies authorized to participate in ESF-2 activities

The Good

- DIRS has been operational since September 11, 2007
  - DIRS has been activated only four times
- Communications providers have shown diligent participation in the DIRS process when it has been activated
- The DIRS process has resulted in information that is widely regarded to be useful in a variety of contexts
  - Provides extremely good trending information
  - Will provide improved, but not complete, tactical information
  - Useful at the field level when combined with other sources of information
- DIRS generates information about the needs of communications providers (e.g., fuel for generators)
- DIRS data is geocoded

The Bad

- Current DIRS data acquisition and processing schedule is not well aligned with needs of field personnel
  - Commission staff have established a new reporting window that should correct this
- Participation by communications carriers and CATV companies has generally been better than broadcasters
  - Commission staff has reached out to the broadcast segment in the past year to close this gap.

The Ugly

- DIRS provides information at a point in time and must be applied carefully to avoid drawing the wrong conclusions.
  - DIRS information will continue to lag facts on the ground by hours
  - DIRS information should be supplemented by other information to draw a complete tactical picture of situational awareness
    - Communications provider Network Operations Centers
    - Project Roll Call
    - National Coordinating Center (NCC)

Using DIRS

DIRS contains data on the following communications assets:

- Wireline Switch
- Wireline Digital Loop Carrier (DLC)
- Interoffice Facilities – Point to Point
- Interoffice Facilities – Rings
- Wireline PSAP – ALI Provider
- IXC Blocking
- Wireless MSC/STP
- Wireless Cell Site by County
- Broadcast Facilities – AM, FM, TV Stations
- CATV Facilities

Using DIRS – Sample Table

New Wireline Switch Disaster Report

Disaster:	TEST DISASTER
Company:	TESTCO
Type of Equipment:	
CLLI:	
Status:	
Number of Access Lines:	
Number of Working Numbers:	
Number of Working Numbers Down:	
Power Status:	
Generator Available:	
Latitude (nnn.nnnnnn):	
Longitude (nnn.nnnnnn):	
Address:	
City:	
State:	
Notes:	

Host **Switch, Remote, Tandem, STP**

Up, Down, Part down, SS7 Isolated,
Switch up but outside plant down

On commercial, No power, On generator,
On battery, Unknown

Yes, No, Not applicable, Unknown

CLEAR SUBMIT

Using DIRS Tables

Network Status Information	Louisiana	Total
Consumers Out of Service	440,214 (-184,140)	440,214 (-184,140)
Public Safety Answering Points (PSAPs) Out of Service	0 (-1)	0 (-1)
Interoffice Facilities Out of Service DS-3		3,700 (-1,700)
Daily Blocked Calls		4,800,000 (-5,200,000)

Using DIRS Tables

Radio Station Outage Information	Louisiana	Total
Radio Stations on Air	13 (5)	13 (5)
Radio Stations Out of Service	17 (-5)	17 (-5)
Total Radio Stations in the Affected Area	30	30

Information	Louisiana	Total
TV Stations on Air	4 (2)	4 (2)
TV Stations Out of Service	5 (-2)	5 (-2)
Total TV Stations in the Affected Area	9	9

Using DIRS Tables

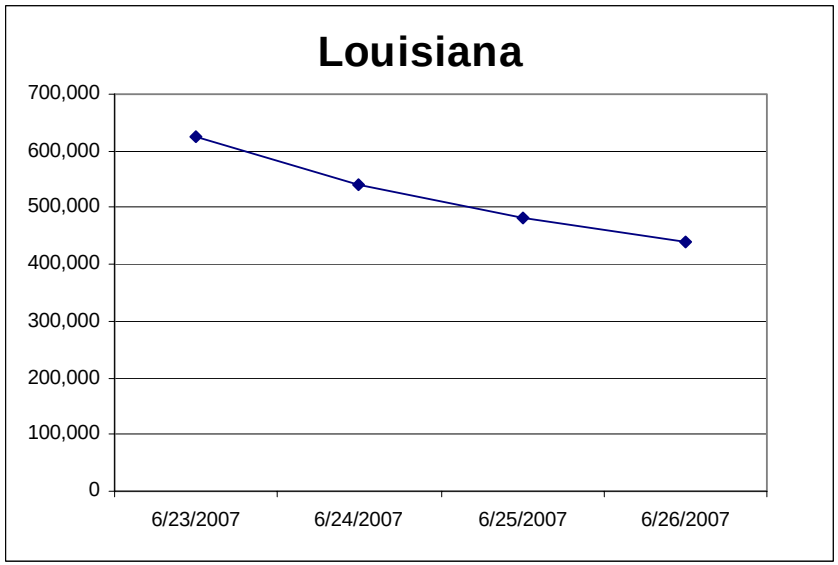
Wireless Network Status in the Affected Areas	Louisiana	Total
Switching Centers Out	6 (-4)	6 (-4)
Switching Centers on Back-up Power	11 (-5)	11 (-5)
Switching Centers Fully Operational	9 (9)	9 (9)
Cell Sites Out	421 (-323)	421 (-323)
Cell Sites on Back-up Power	179 (-152)	179 (-152)
Cell Sites Fully Operational	475 (475)	475 (475)

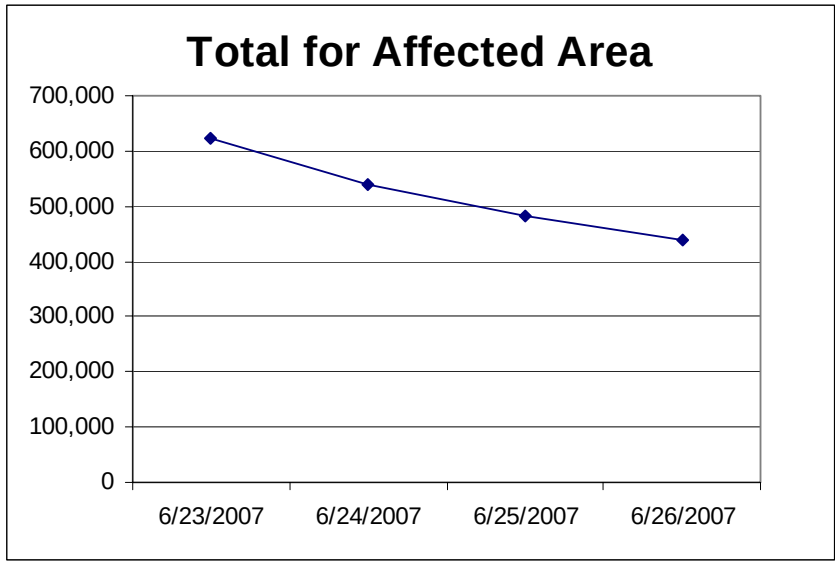
Using DIRS Charts

Total				
	6/23/2007	**6/24/2007**	**6/25/2007**	**6/26/2007**
Consumers Out of Service	624,354	540899	482726	440214
911 Call Centers Out	1	1	1	0
High Capacity Long Distance Links Out	5400	5200	4100	3700
Daily Failed Calls	10,000,000	8,500,000	4,500,000	4,800,000

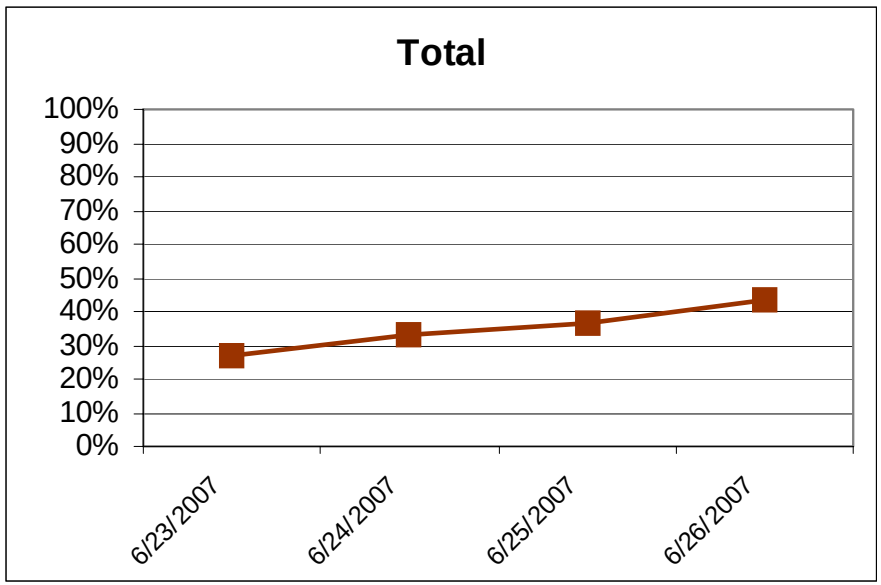
Louisiana				
	6/23/2007	**6/24/2007**	**6/25/2007**	**6/26/2007**
Customers Out	624,354	540,899	482,726	440,214
911 Call Centers Out	1	1	1	0
High Capacity Long Distance Links Out	5,400	5,200	4,100	3,700
Daily Failed Calls	10,000,000	8,500,000	4,500,000	4,800,000

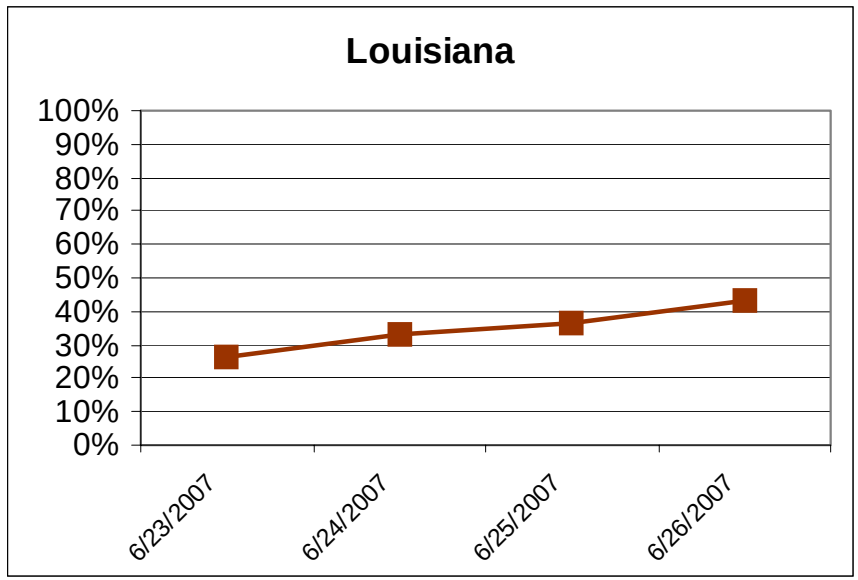
Using DIRS Charts



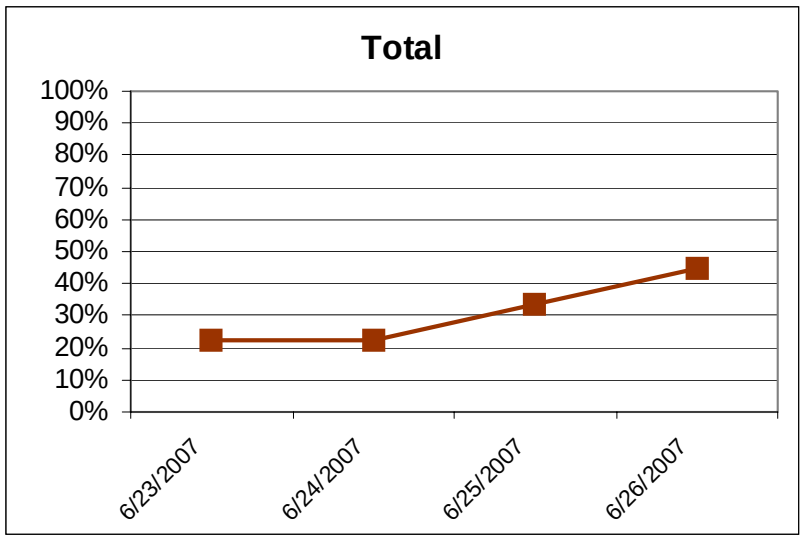


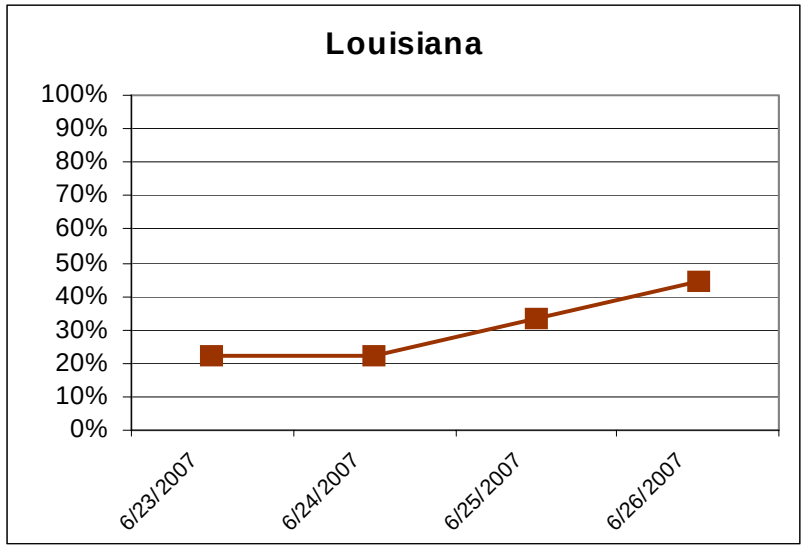
Using DIRS Charts
Percent Radio Stations On Air



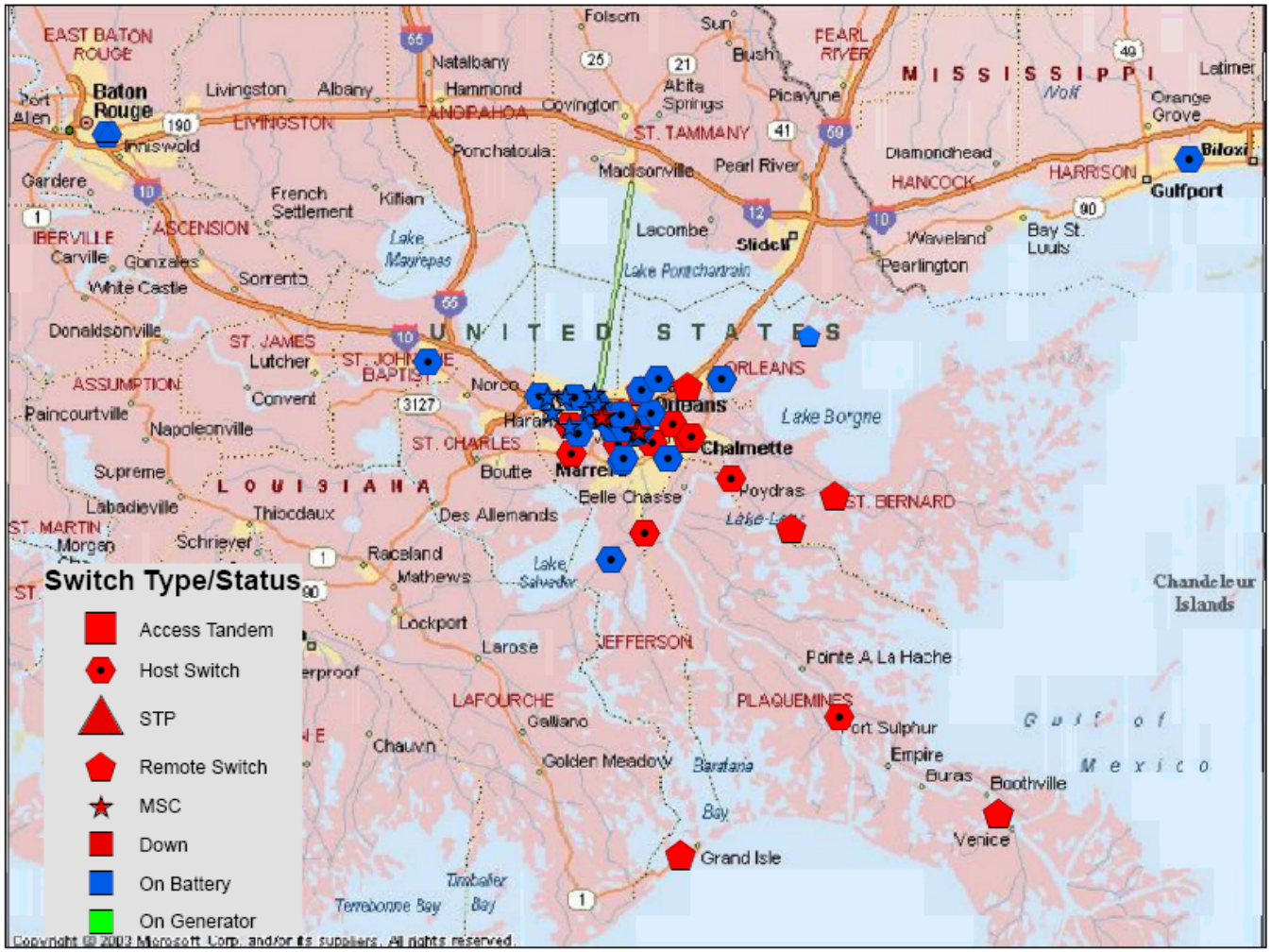


Using DIRS Charts
Percent TV Stations On Air

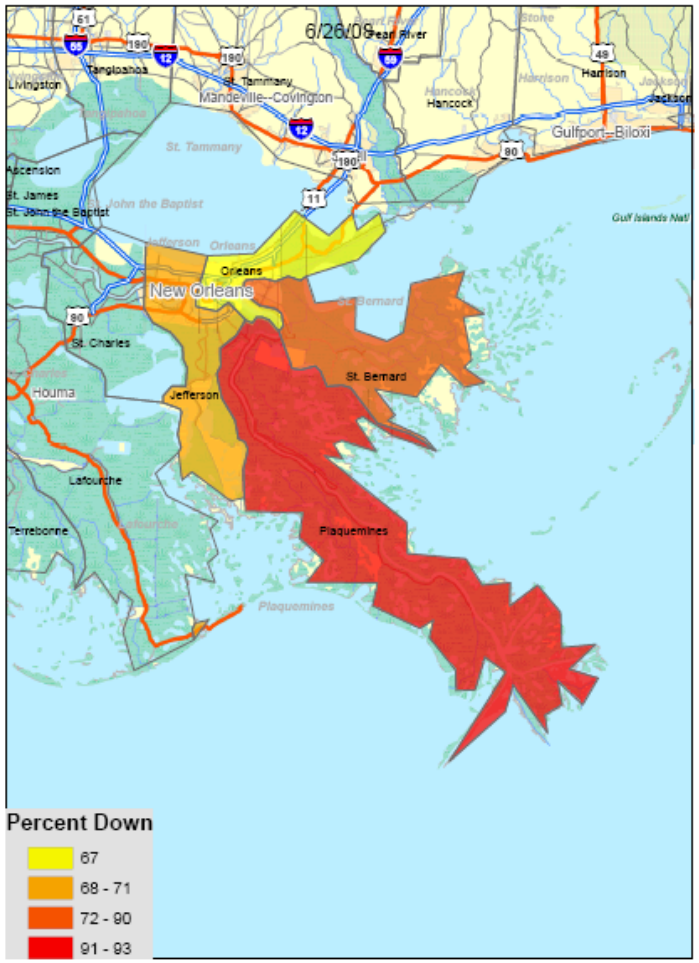


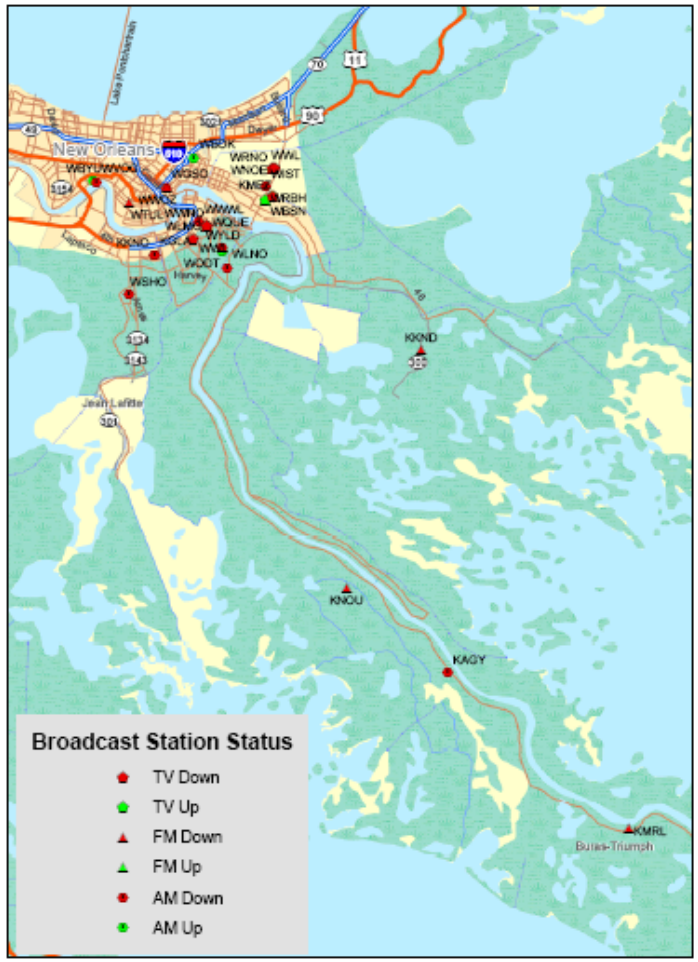


Using DIRS Maps
Switches Down or On-Backup Power



Using DIRS Maps
Cell Sites Down and Broadcast Status





Closing

- DIRS substantially improves communications situational awareness in a disaster
  - Time lag makes it necessary to supplement DIRS with other sources in the field
- DIRS provides quantitative information in multiple formats
- DIRS is voluntary and activated only in the event of severe emergencies