CRITICAL ACCESS
INFORMATION IN A DISASTER

PRESENTED BY:
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About Alabama Power

• Alabama Power provides the valuable combination of competitive prices, reliable electricity supply and unparalleled service to 1.4 million homes, businesses and industries in the southern two-thirds of Alabama. It is one of four U.S. utilities operated by Southern Company and is one of the nation's largest producers of electricity.

• Alabama Power is the second largest subsidiary of Southern Company, serving homes, businesses and industries in Alabama.

• 44,500 square miles of service territory

• Generation mix of Coal, Nuclear, Oil and Gas, and Hydro
  – 12,222 megawatt capacity

• Over 10,000 miles of Transmission Lines
  – More than 120,000 poles and towers
About Pictometry

• A Leader in Innovative Imaging & 3D Modelling Solutions since 1999
• US based company operating in US & Canada and Internationally
• Hosts one of the worlds largest secure repositories for image based content
• Manages a fleet of over 86 aircraft with unique capture capability
• Working with many large Utilities across both US & Canada
History of responding in a time of need!
Tornadoes of 2011

April 27, 2011: Alabama was impacted by 60+ tornadoes, impacting 2/3 of state

Pictometry:

- Flew > 3,000 miles of corridors
- Debris and threat assessment
- Objective record of the event
- Record of as-built state and assets added as part of recovery
- Implemented Critical Access in 2012

Source: NWS BHM http://www.srh.noaa.gov/bmx/?n=event_04272011
Pictometry Response
Lessons Learned

Imagery Collected from the Damaged areas was incredibly useful

Access to this information immediately would have sped up recovery efforts!

Development of a near real time solution – Critical Access
Critical Access

Wow Factor vs Value Factor

[Diagram showing response times for Critical Access, Rapid Access, and Conventional Access with associated timescales and solutions]
Critical Access: Pre-Planning

All Transmission lines are “pre-planned” and labelled in such a way that Pictometry Flight Operations and APC can communicate.

Units are placed in strategic regions with access to secure intranet service and near a local airport.
Storm responses are triggered, initial damage assessment teams are sent out and lines are reviewed.

Storm center creates a priority list of lines that need review.
### Coordination & Prioritization

<table>
<thead>
<tr>
<th>Priority</th>
<th>Line</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>Edison- Tesla</td>
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<tr>
<td>2</td>
<td>16</td>
<td>Morgan- Westinghouse</td>
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<td>3</td>
<td>581</td>
<td>AC- DC</td>
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<tr>
<td>4</td>
<td>337</td>
<td>Faraday- Field</td>
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<tr>
<td>5</td>
<td>349</td>
<td>Watt- Joule</td>
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Sent to Pictometry
## Coordination & Prioritization

<table>
<thead>
<tr>
<th>Line No.</th>
<th>Priority</th>
<th>Ferry Time</th>
<th>Capture Time</th>
<th>Ferry to next</th>
<th>Return to Base</th>
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<td>7</td>
<td>15</td>
<td>60</td>
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</tbody>
</table>

**Notes:** Re-order could save 45mins

**Sent to Alabama**
APC Team is in constant communication with Pictometry Flight Operations to update or change priority as required.

Flight Plans are packaged up based on assignment.

Flight Plans are uploaded in real-time to the planes.
Pictometry coordinates sortie between Pilot & Utility

Plane flies predefined sortie

Damage Extents - Imaged, Located & Recorded

Drives are swapped out and taken to the Ground Receiving Unit / Remote Location (Near Airport & Network Line)

Ground Receiving Unit

Storm Center
Imagery available to analysts to assess damage and coordinate field crews
Ground Response Unit (GRU)
Web Access for Organization
Web Access for Organization
Web Access for Organization
New Feature: Add Mosaic Image to Map
Successfully Deployed

• Currently have 4 units that will be used in conjunction with existing incident response teams

• Will be used in parallel with existing response operations to supplement post storm activities.

Groups who can use it:
  • Design
  • Maintenance
  • Vegetation
  • Construction
  • Encroachment
  • Environmental
  • Many more!
Continued Learning

• KISS – Continual improvements to make the system plug & play within in a complex environment
• Improve real-time imagery access via the Esri Server
• Improving communications between Emergency Personnel and Pictometry flight operations to ensure the collections are being prioritized correctly
Questions?