

AlphaACT GRID

Decision Support System for Electric Utility Emergencies



The Problem

- Natural and manmade emergencies can cause cascading impacts on electric power infrastructure
 - Generation
 - Transmission
 - Distribution



The Problem

- Rapid repair and restoration depend on decision-makers' ability to “get ahead” of developing event
- Experience / lessons learned are not fully applied
- A generation of experience is about to be lost!



The Need

- Need for capability that helps decision-makers find patterns in chaos:
 - Understand the event and likely progression
 - Understand related impacts on electric utilities
 - Develop effective, practical, compliant plan of action
 - Quickly implement the plan



The Solution – AlphaACT GRID

- BNL / AlphaTRAC partnership to extend successful federal R&D program
- Decision-support system that coaches and assists decision-makers in:
 - Gaining situational awareness
 - Predicting damage
 - Considering real-life experiences and lessons-learned
 - Developing utility-focused but NIMS / ICS compliant action plans

The Technology

- Platform-based software system
- Recognizes and applies patterns
- Based on advanced DARPA capability
- Key features:
 - Interactive user interface
 - Relational database system
 - Pattern Recognition Engine
 - Interactive decision support interface



The Applications

- Experience gathering / After Action Reviews
- Lessons learned / knowledge sharing
- Pattern recognition / analytics
- Operational response support
- Training

