

NSTB

National SCADA Test Bed



CYBER ATTACKS
 CONTROL SYSTEMS EFFECTS
 CYBER-TO-PHYSICAL BRIDGE
 POWER GRID IMPACTS

Impact Analysis of Cyber Attacks on Control Systems

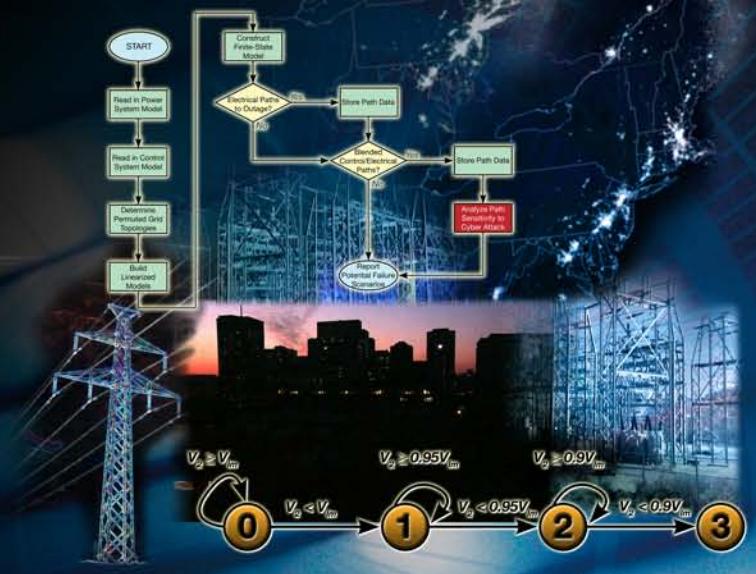
Understanding the impact of electric supply interruptions caused by cyber attacks helps to prioritize mitigation efforts and aids in vulnerability analysis and threat discovery

CHALLENGE / APPROACH

- Develop ability to map impacts from cyber Attack to grid effects
- Incorporate outages caused by cyber attack to conventional reliability analysis approaches
- Convert hybrid grid / control system to finite state approximation for analysis

ANALYSIS

- Models degraded grid reliability from vulnerabilities
- Reveals high-impact risk scenarios
- Determines mitigation tradeoffs
- Displays dynamic grid effects from cyber attack



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