

# A Military Planning Methodology for Conducting Cyber Attacks on Power Grid

Mehmet Saglam

Thesis submitted to the faculty of  
the Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of

Master of Science  
in  
Computer Science and Applications

Bruce M. Lawlor, Co-chair

Ing-Ray Chen, Co-chair

Wenjing Lou

May 5<sup>th</sup>, 2014

Falls Church, Virginia

Key words: Cyber Warfare, Power Grid, Cyber Attack, Kinetic Attack

Copyright 2014, Mehmet Saglam

**Draft 09/01/2009**

(Questions? Concerns? Contact Gail McMillan, Director of the Digital Library and Archives at Virginia Tech's University Libraries: [gailmac@vt.edu](mailto:gailmac@vt.edu))

(Please ensure that Javascript is enabled on your browser before using this tool.)

## **Virginia Tech ETD Fair Use Analysis Results**

***This is not a replacement for professional legal advice but an effort to assist you in making a sound decision.***

Name: Mehmet Saglam

Description of item under review for fair use: Figure 2: The Reasons of the Evolution. Source:European Smart Grid Technology Platform, "Vision and strategy for Europe's electricity networks of the future," European Commission Community Research Report [Online], EUR 22040, 2006. Available: [ftp://ftp.cordis.europa.eu/pub/fp7/energy/docs/smartgrids\\_en.pdf](ftp://ftp.cordis.europa.eu/pub/fp7/energy/docs/smartgrids_en.pdf) Figure 3: Conceptual Reference Diagram for Smart Grid Information Networks. Source:Office of the National Coordinator for Smart Grid Interoperability Engineering Laboratory Staff, "NIST framework and roadmap for smart grid interoperability standards," NIST Special Publication [Online], 1108R2, Release 2.0, Feb. 2012. Available: [http://www.nist.gov/smartgrid/upload/NIST\\_Framework\\_Release\\_2-0\\_corr.pdf](http://www.nist.gov/smartgrid/upload/NIST_Framework_Release_2-0_corr.pdf) Figure 4: Typical Control Center Configuration for Power Grid. Source:Control System Roadmap Steering Group, "Roadmap to secure control systems in the energy sector," Energetics Inc. Report [Online], Columbia, MD, Jan. 2006. Available: <http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/roadmap.pdf> Figure 6: Two Firewall Network Architecture. Source:U.S. Industrial Control Systems Cyber Emergency Response Team, "Overview of cyber vulnerabilities," ICS-CERT Documents [Online]. Available:<http://ics-cert.us-cert.gov/content/overview-cyber-vulnerabilities>

Report generated on: 05-07-2014 at : 18:57:07

### **Based on the information you provided:**

#### **Factor 1**

Your consideration of the purpose and character of your use of the copyright work weighs: *in favor of fair use*

#### **Factor 2**

Your consideration of the nature of the copyrighted work you used weighs: *in favor of fair use*

#### **Factor 3**

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: *in favor of fair use*

## Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: *in favor of fair use*

**Based on the information you provided, your use of the copyrighted work weighs: *in favor of fair use***

