



Smart grid secure communications method and apparatus

UND Technology 13-29
 Patent Number US 10,284,373
 Date of Issuance: 7 May 2019

Summary

The University of North Dakota has patented and developed systems and methods for performing secure communications in an energy delivery system. The system can include phasor measurement units (PMUs) and phasor data concentrators (PDCs) along with power generation, transmission, and consumption equipment. The PMU and PDC may communicate in a grid network over secured wired or wireless communication protocols. Spread spectrum communications can be further adopted to defend against a security breach.

Advantages

- Mitigates risk of cyber-attacks or other malicious activities in electrical grids
- Protects against a wide variety of attacks including Sybil attacks and denial-of-service attacks
- Cost-effective solution



Inventors

Dr. Saleh Faruque
 Dr. Prakash Ranganathan

