

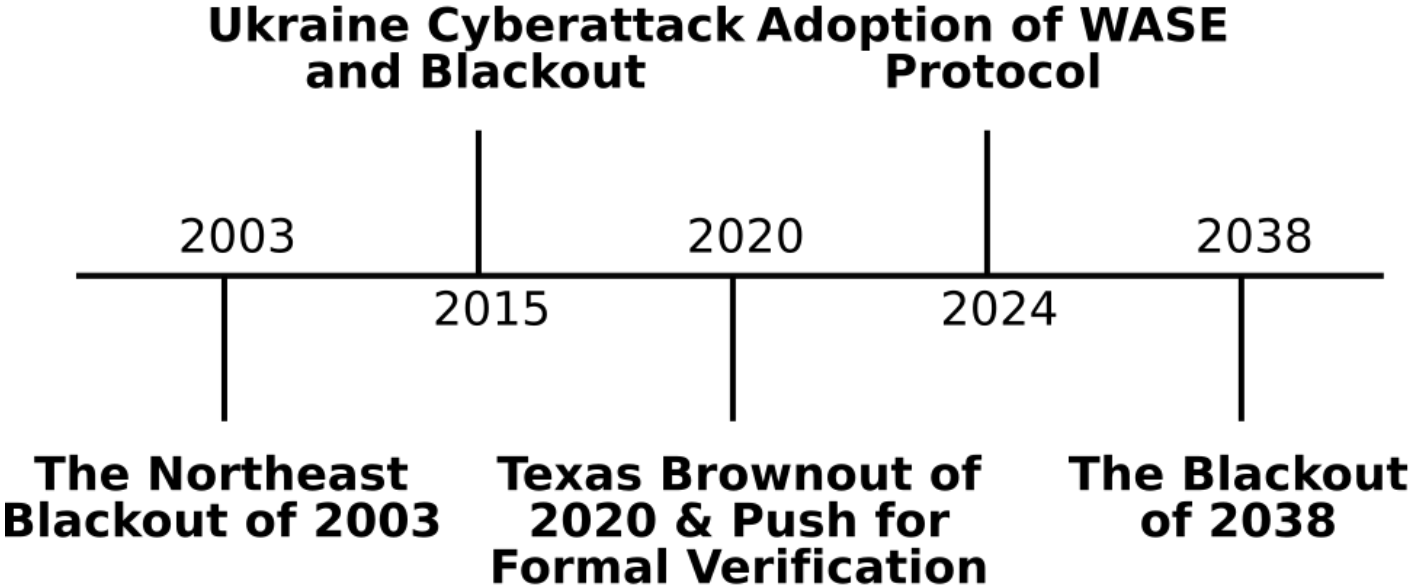
Going Dark: A Retrospective on the North American Blackout of 2038

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Overview

- Overview of the Dystopian Scenario
- Introduction to LangSec and challenges
- Fallback mechanisms and NERC policies
- Discussion points

Evolution of the Grid



First Takedown
(Bug in WASE)

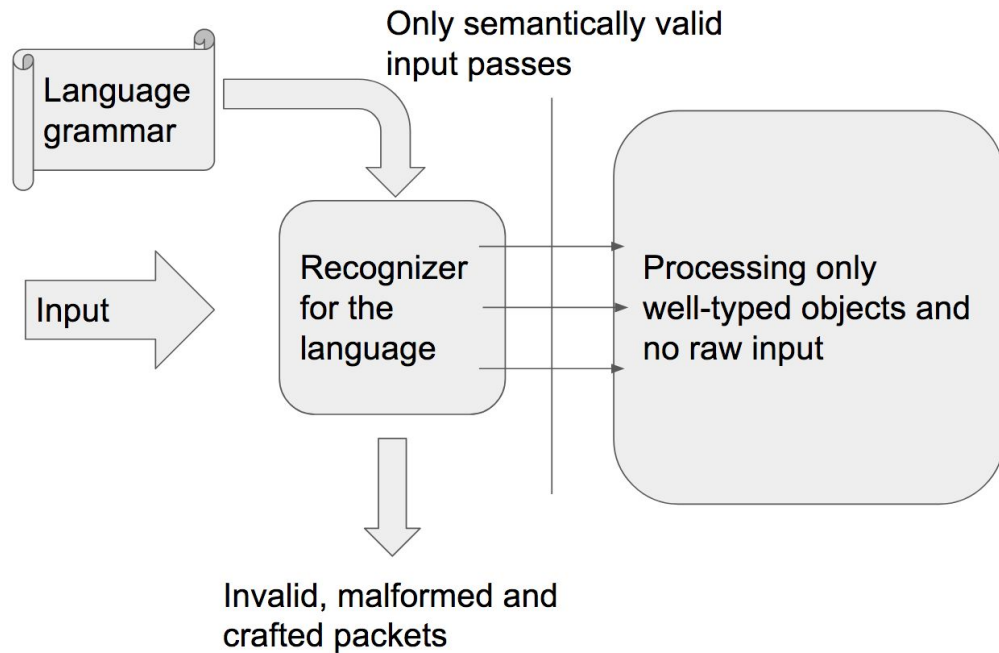
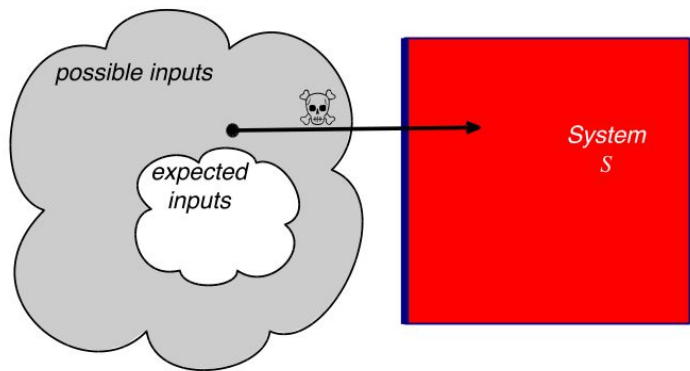
Fallback to
Legacy Systems

Second Takedown
(Bug in DNP3)

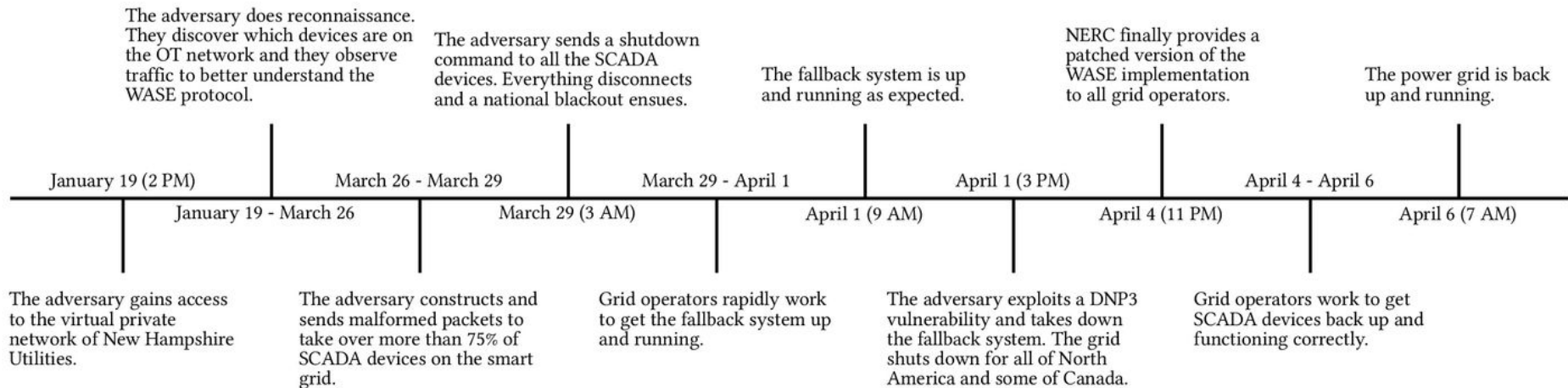
Recovery



LangSec



Discussion



Conclusions

- “Formal verification” isn’t enough
 - What properties are we trying to prove?
 - How do they improve “Security”?
- Use formally-verified, LangSec-compliant parsers
- Securing and regulating fallback mechanisms
 - Active adversaries must be considered in recovery mode.
- LangSec must be used in the design and implementation

Feedback

- How to get a LangSec mindset (plus tools) in mainstream (Check out Sergey's DARPA program -- <https://www.darpa.mil/news-events/2018-08-09>)