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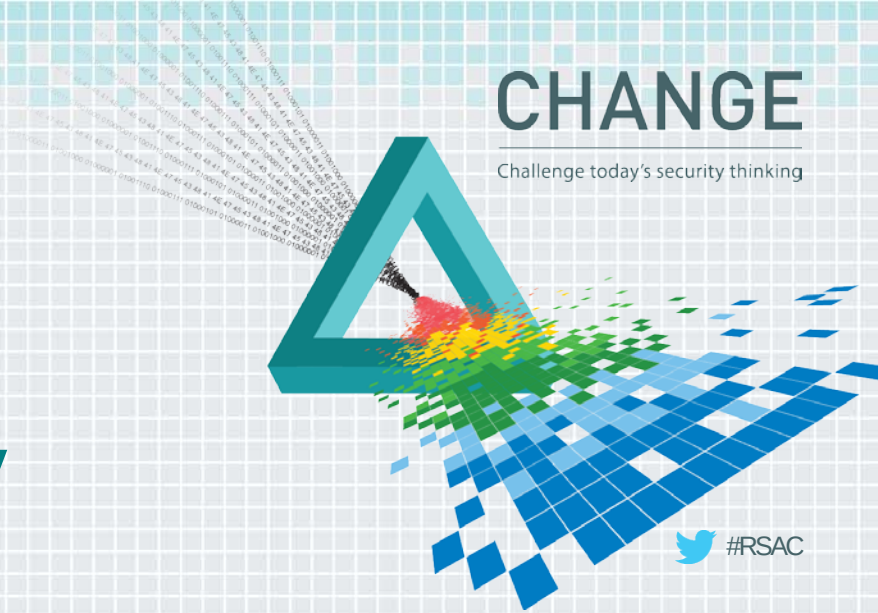

SESSION ID: CRYP-W03

Post-Snowden Cryptography

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Snowden Revelations

- NSA/GCHQ: “Collect it all, know it all, exploit it all”
  - most capabilities could have been extrapolated from open sources
- But still…
- massive scale and impact
  - redundancy: at least 3 methods to get to Google’s data
  - many other countries collaborated (beyond five eyes): economy of scale
  - industry collaboration through bribery, security letters, …

Surveillance is not passive but active

- **Active defense**
  - networks
    - Quantum insertion: answer before the legitimate website
    - FoxAcid: specific malware
  - devices
    - supply chain subversion
- Translation in human terms: **complete control** of networks and systems, including bridging the air gaps
- No longer deniable

Undermining Cryptography

- Undermining standards
- Going after keys (public and private)
- Weak implementations
- Cryptanalysis

- Increasing complexity of standards
- Export controls
- Hardware backdoors
- Work with law enforcement to promote backdoor access and data retention

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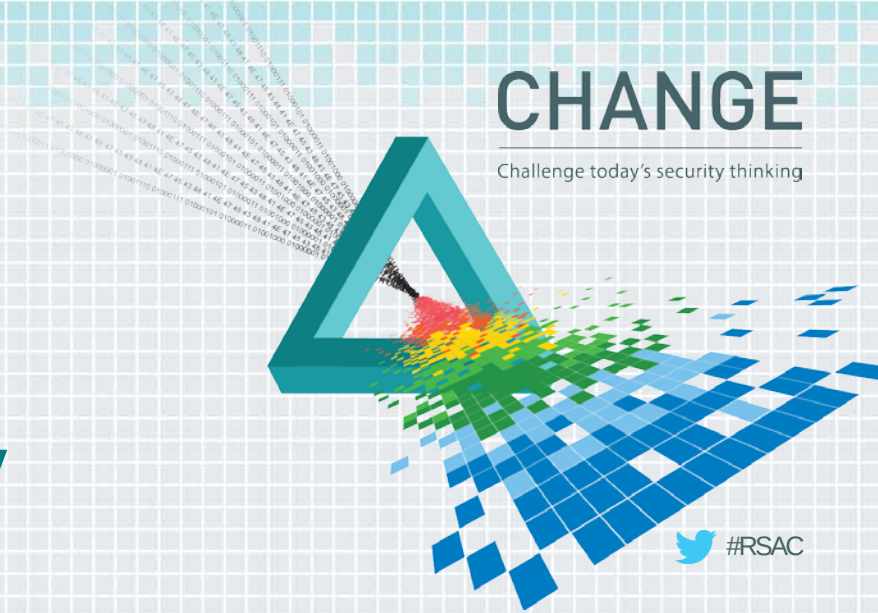

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Thank You