Real World Security at the School of IT

- Real World Security Research Group (RWS)
  - Ralph Holz, Bernhard Scholz, Uwe Roehm, Luke Anderson
  - We research *interesting security problems* from the *real world* and *investigate solutions for the root cause*
  - *Empirical data* is key

- We are embedded in
  - Sydney Cybersecurity Network (multi-disciplinary agenda)
  - Human-Centred Technologies cluster
    (Cybersecurity and Usable Security Node)

- Collaborations
  - Data61
  - UNSW
  - Technical University of Munich
  - ICSI (Berkeley, CA)
Current research

Empirical Security Analysis/Engineering

- Internet-scale security analysis (scans)
- Traffic analysis and correlation
- Practical and usable security

Blockchains

- Blockchain use patterns and use cases
- Cryptocurrency networks (e.g. Bitcoin)
- Security analysis of software/deployment
The fragility of Internet routing

What happened here?
Your TV may be watching you

If the victim uses a remote controller, ReVuln also found that they could get its configuration and thereby control the TV remotely.

ReVuln also found they could install malware remotely to gain complete root access to the TV, co-founder Luigi Auriemma told IDG News Service:

What happened here?
Aircraft Communication 2.0: ADS-B

ADS-B
Automatic Dependent Surveillance - Broadcast

GNSS

Ground Stations

COMM

Position Reporting

Communications

Aircraft to Aircraft

Ground Stations

ATC

Terminal Airport Radar

ARTCC

Real World Security | Ralph Holz
Free (poisoned) WiFi!

WiFi: PIRATES
Password: PIRATES!

Watch your Web turn upside down.