IOT TRUSTWORTHINESS SCORE

FRANÇOIS-FRÉDÉRIC OZOG

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BACKGROUND

40 years ago, at 16, I was selling BIOS security patches to USA based Zenith Data Systems. Traces of my white hacker past.

In the pas three years I have been leading efforts in the Arm eco-system to standardize secure boot and OTA.

Now I do a big split between selling Software Defined Vehicle strategic positioning or OEMs/Tier1s and build a specialized hypervisor for silicon simulation for the automotive market with two silicon makers.

IOT TRUSTWORTHINESS SCORING

automotive safety:	safety claims	-->	safety score	ASIL-[A to D]
IoT trustworthiness:	trust claims	-->	trust score	ITIL-[A to G]

Scoring done once

Profile definitions per industry

Faster to completion
Wide application

Some IoT devices are more complex than servers.
I Led Arm processors coding and standardization of
firmware secure boot / OTA

Legitimate interest for
any object
surrounding customers

Not boiling the ocean

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BUILDING TRUST SCORE

Claims are made against criterias that can be collected from NIST and other parties (UN CE 155…)

Following Arm Platform Security Architecture label, a claim confidence can be attached (self assessment up to lab verified with white hacking). Consumer/Gov may want same claim but we different confidence requirement.

Product	Product building	Product lifecycle
Alarms – IETF MUD Hardware – Fault injection Behavior – Initial certs Behavior – Key duplicate	Supply chain Provisioning Traceability	Continuity with building Ownership changes Neutralization (trashing Things)

MANDATORY DISCLOSURES

Hardware and Software BOMs:

Disclose processing elements , functions, what they can affect.

- Google discovered micro-controller attack surface decades too late
- NSA was the only allowed to neutralize the attack vector

Reversing shall he allowed to verify the claims.

What is at stake on false disclosures?

SCALING SCORING PROCESS

Should scoring evolve per HW, SW revisions?

Hundred of thousands of combination of HW and Software

Who do what?

Hiring labs.

Claim confidence choice

THANK YOU

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