The Internet of Things That Break

IoT and Future Network Architecture

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Asia Internet Symposium Hong Kong 2016

2016-11-11

INTERNET
PERFORMANCE.
DELIVERED.

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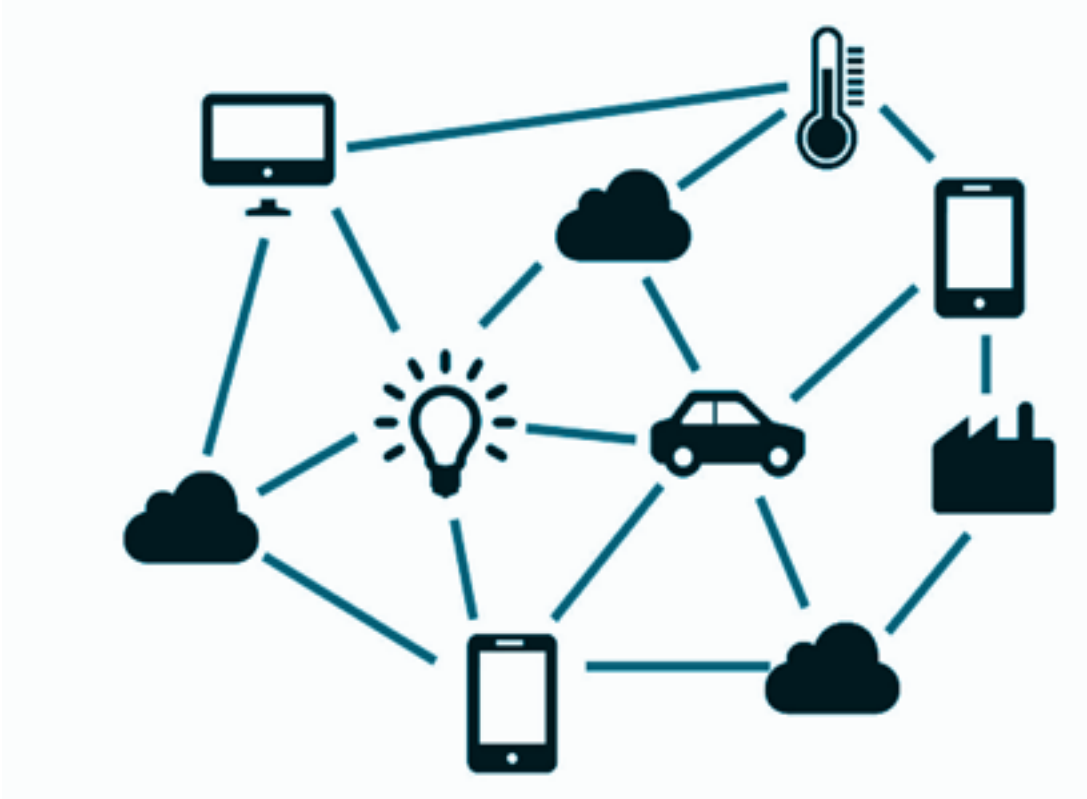
The Internet of What?



LEWIS & SON
FISHING
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CUTLERY
RICE LEWIS & SON

Values for architecture

Propriety: fits with nature or well-established rules or practices

Economy: proper management of materials and the site, *but also* suiting the building to its function

Internet [of] Things

Internet
[of]
Things

Things are just two

Actuators: change state in the world (cause action)

Sensors: detect state in the world (state-detectors)

Combine these and connect them to the Internet, and you have IoT.

Internet
[of]
Things

Bad incentives

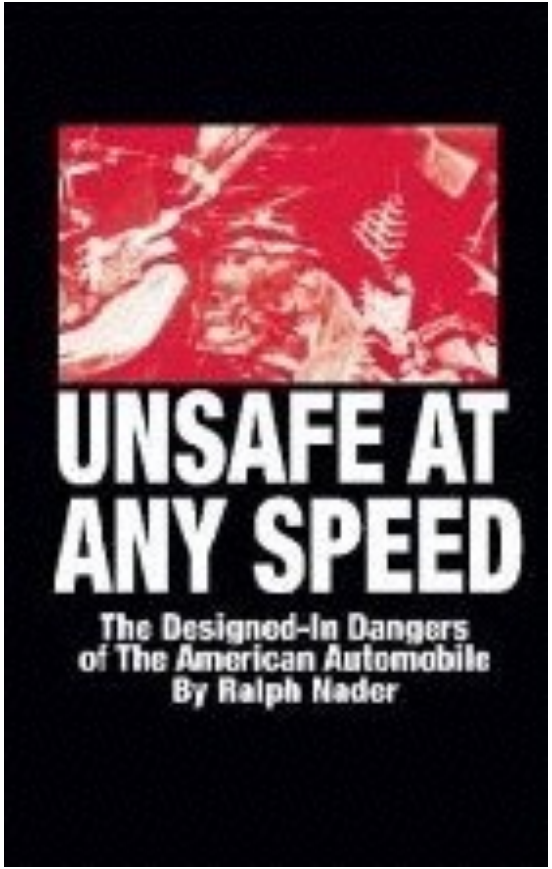
1. Incentives for security are backwards

   Usability is harder
2. Pressure to ship == ship soon, secure later
3. More devices than people

Machine to machine
is not
human to service

The roots of the unsafe vehicle problem are so entrenched that the situation can be improved only by the forging of new instruments of citizen action.

—Ralph Nader in the Preface



Two principles to start

P1: Innovation will always build atop already-deployed systems

P2: The success of the web makes things deploy web-like (which means servers and some centralization)

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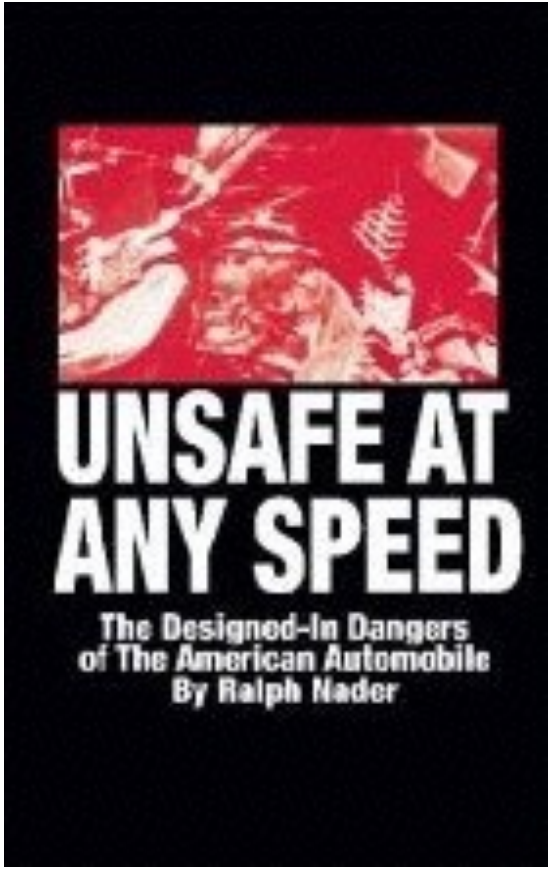
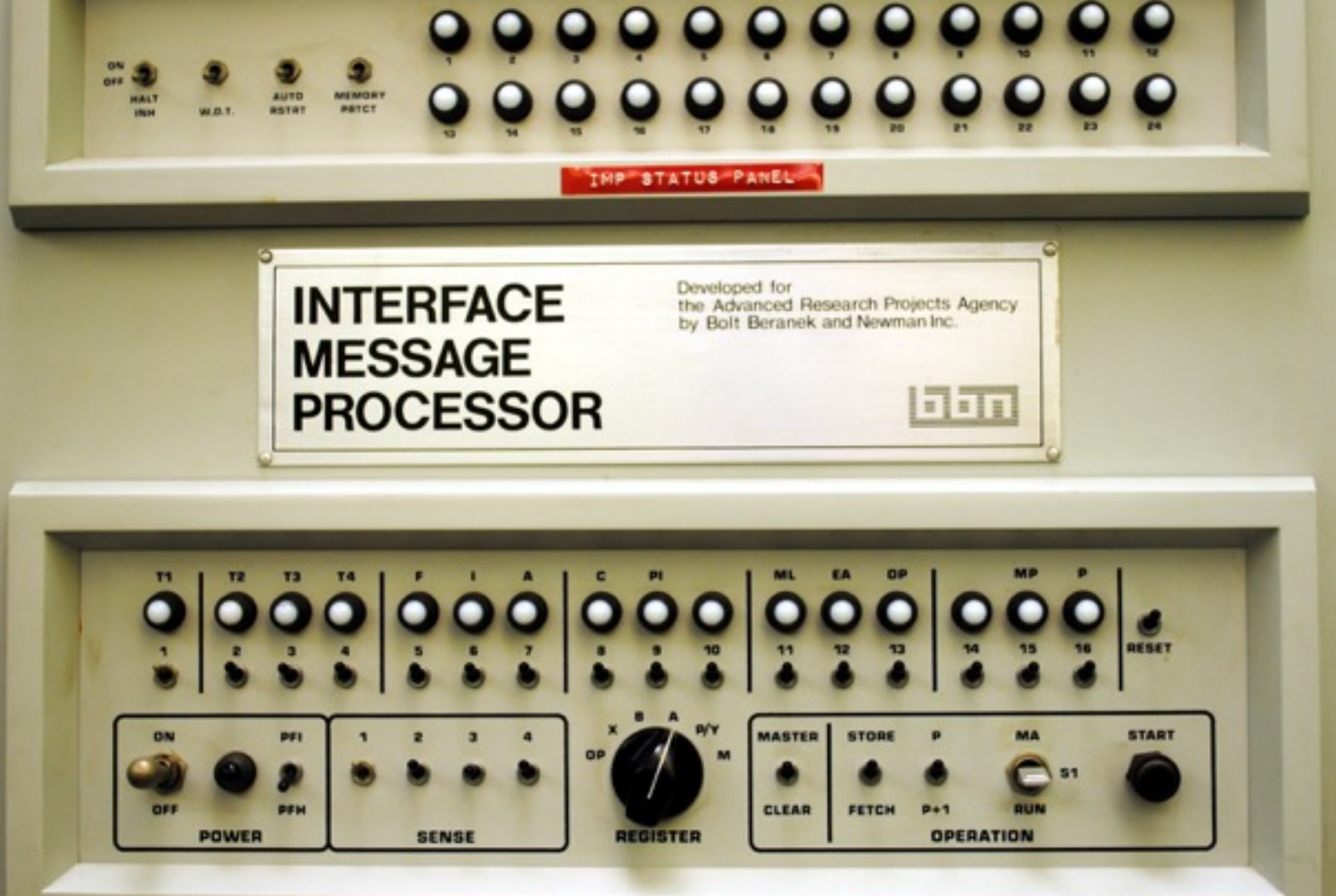


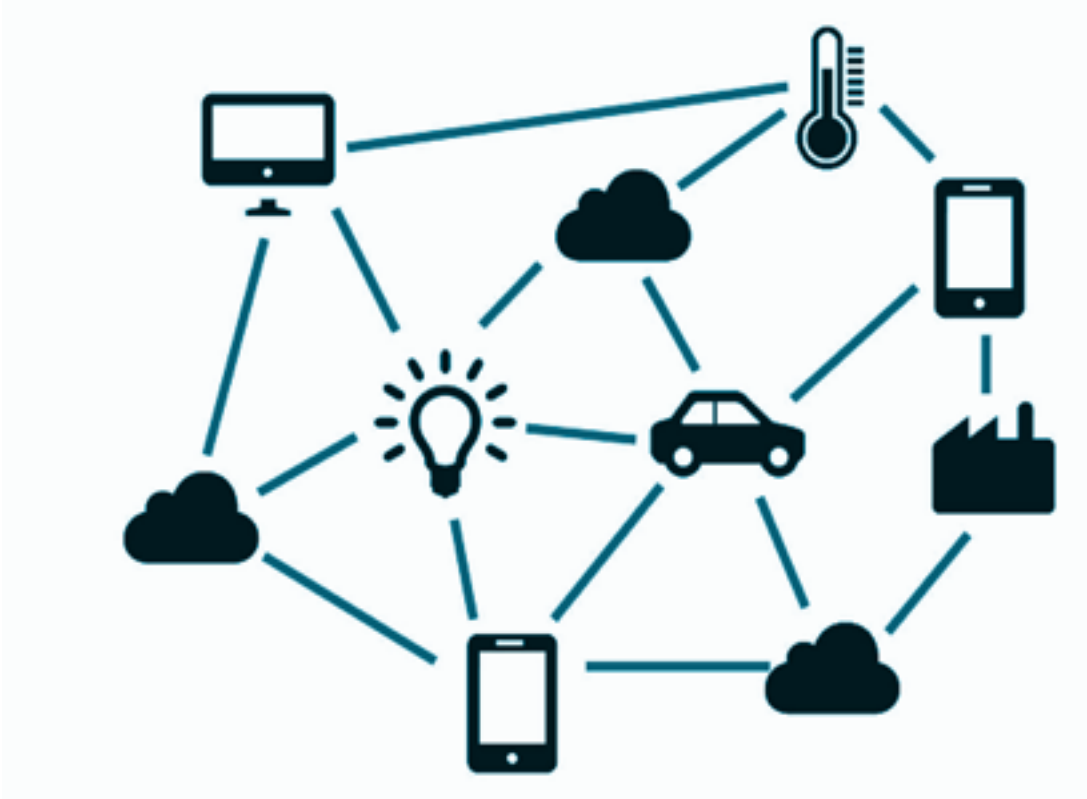

IMP STATUS PANEL
INTERFACE
MESSAGE
PROCESSOR
Developed for
the Advanced Research Projects Agency
by Bolt Beranek and Newman Inc.
POWER
SENSE
REGISTER
OPERATION
RESET

Two alternatives

A1: Large scale government regulation of ISP operations is inevitable, and just the cost of success.

A2: The parts of the Internet industry whose practices impinge most strongly directly on consumers will find a co-operative regime, without the need of direct regulation.

More connections == more critical



THANK YOU!

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