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Beyond mobile

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Two views of security

To keep you out

To let you in

New, Better, less Risky Experiences

IOT is

BIG

Really Big.

You just won't believe how vastly, hugely, Mind-bogglingly big it is.

I mean, you may think it is a long way down the road to the chemist, but that's *peanuts* to IOT!

FOURTH INDUSTRIAL REVOLUTION

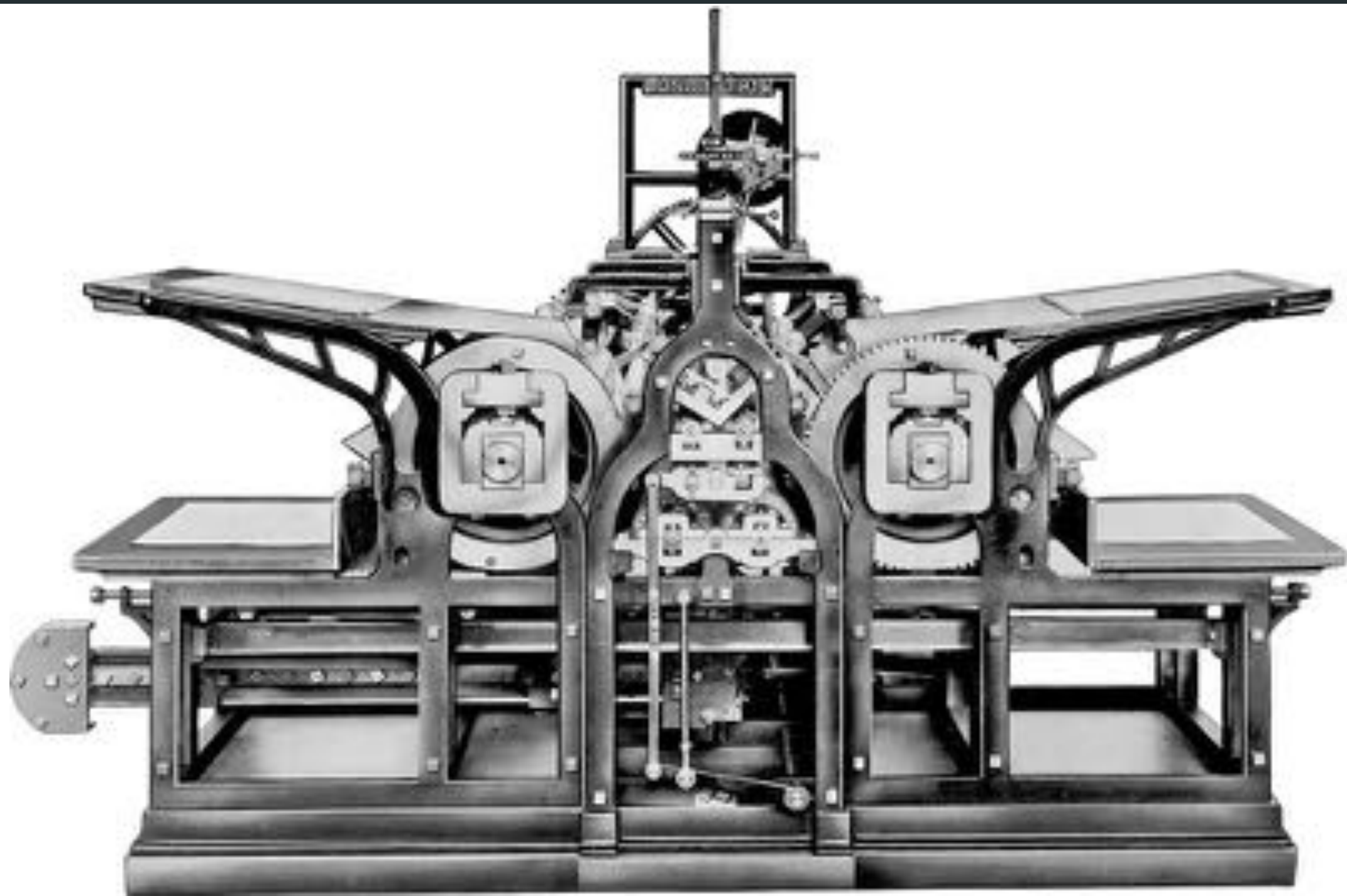| Steam engine | Mass production | Internet technology | Internet of Things |

IR#1

Chapter 7th

It was on a dreary night of November that I beheld the accomplishment of my toils. With an anxiety that almost amounted to agony I collected the instruments of life around me that I might infuse a spark of being into the lifeless thing that lay at my feet. It was already one in the morning; the rain pattered dismally against the window panes, & my candle was nearly burnt out, when by the glimmer of the half extinguished light I saw the dull yellow eye of the creature open — it breathed hard, and a convulsive motion agitated its limbs.

How can I describe my emotion at this catastrophe, or how delineate the wretch whom with such infinite pains and care I had endeavoured to form — His limbs were in proportion and I had selected his features as handsome. Handsome! Great God! his yellow skin scarcely covered the work of muscles and arteries beneath; his hair was flowing and his teeth of a pearly white, but these luxuriances only formed a more horrid contrast with his watery eyes that seemed almost of the same colour as the dun white sockets in which they were set—

FRANKENSTEIN.

...immer of the half-extinguished
...saw the dull yellow eye of the
...open; it breathed hard, and a
...motion agitated its limbs.
...rushed out of the room.

Page 43.

Published by H. Colburn and R. Bentley, 1831.

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Kinibi & Kinibi-M for IoT

Full TEE-OS for A Class Processors

Global Platform APIs

Flexible cryptography

Secure code separation…

Modular software for M Class Processors

Global Platform *inspired* APIs

Flexible cryptography

Secure code separation…

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Enabling device trust

Devices must be…

Legitimate – to avoid fraudulent clients and fake components and devices

Identifiable – linked to an account or purpose during operational lifetime.

Protected – Combating new threats and exploits require secure in-field automatic update

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Digital Holograms

© ABC Corp.

These are a new technology to allow anyone in the manufacturing chain to securely and *irreversibly* attest to a stage of manufacture

Can also be used in field

- Assignment to company/user

- Maintenance

- End of Life

- Etc.

IR#3

WIKIPEDIA

The Free Encyclopedia

English
5 501 000+ articles

Español
1 361 000+ articulos

日本語
1 081 000+ 記事

Deutsch
2 115 000+ Artikel

Русский
1 430 000+ статей

Français
1 923 000+ articles

Italiano
1 393 000+ voci

中文
971 000+ 條目

Português
981 000+ artigos

Polski
1 247 000+ haseł

|
EN ⌄
🔍
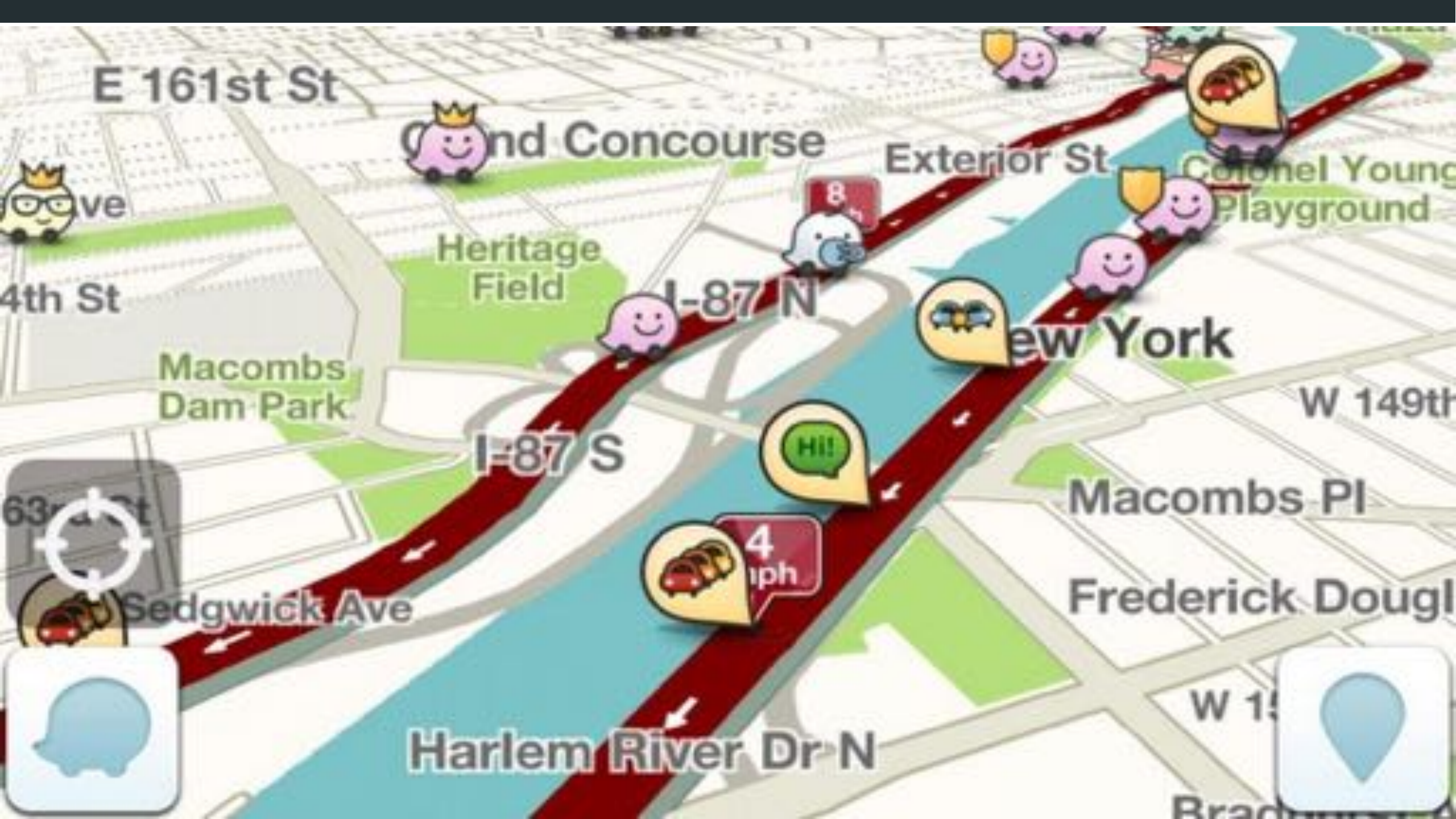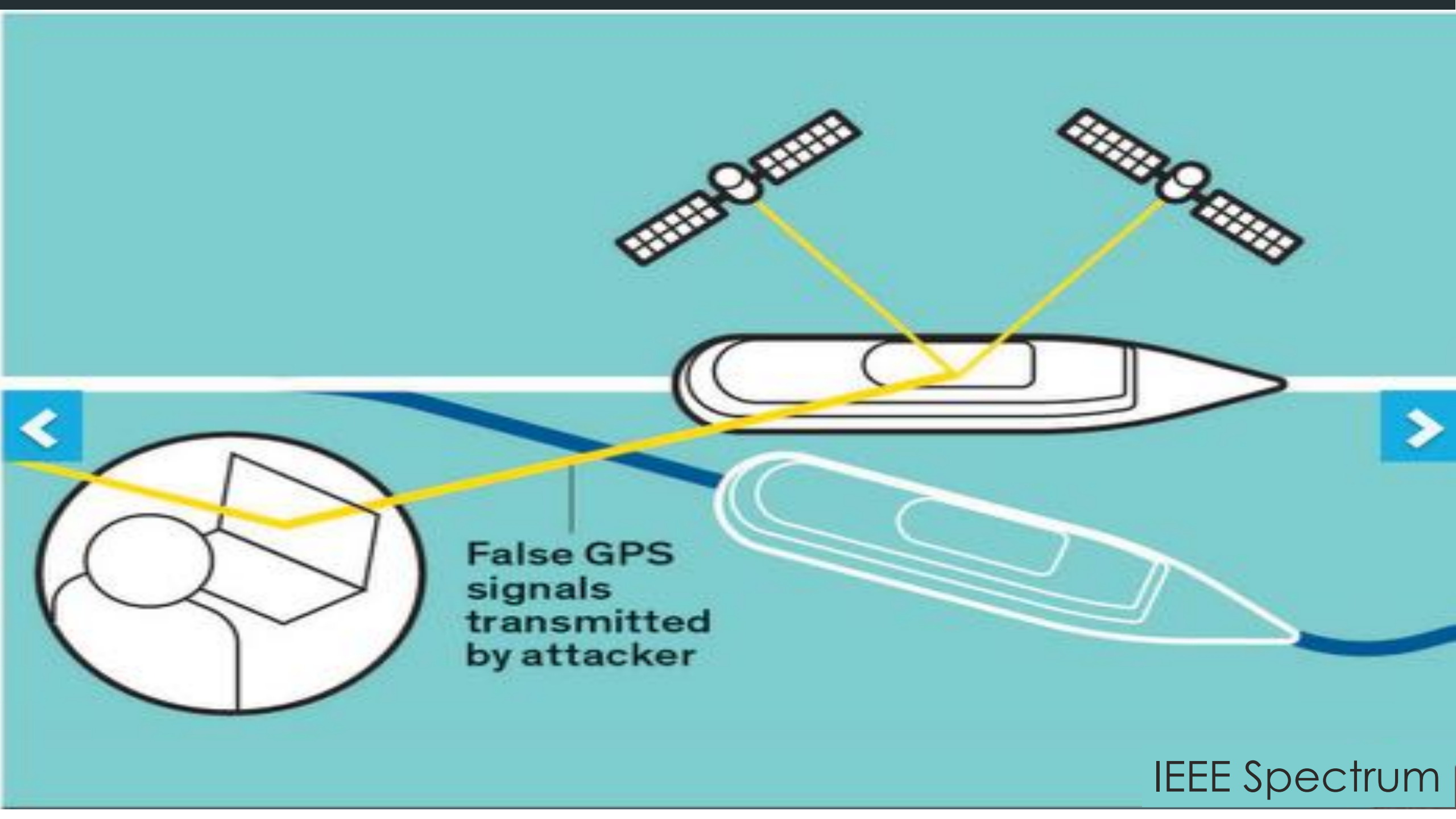
False GPS signals transmitted by attacker

Health
Trial

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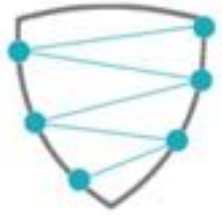
Establishing a framework for Trust

"Trust me I'm a Robot" & "A Matter of Policy"

https://www.trustonic.com/news/category/blog/

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IR#4

What will be unique about the IoT Revolution?

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New class of actor…

Not necessarily full blown robots…

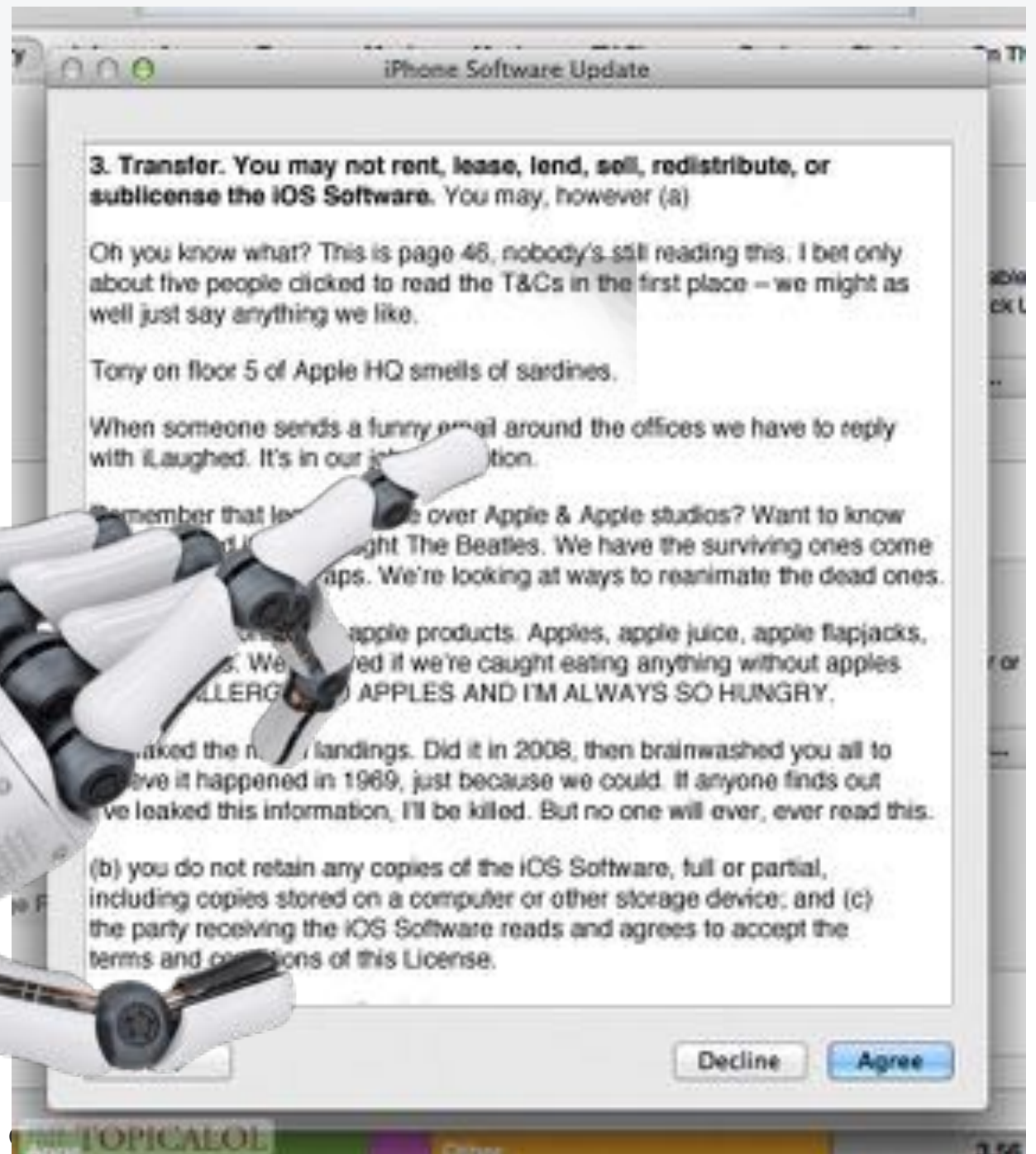But devices doing things that used to be preserve of humans

Seriously?

iPhone Software Update

3. Transfer. You may not rent, lease, lend, sell, redistribute, or sublicense the iOS Software. You may, however (a)

Oh you know what? This is page 48, nobody's still reading this. I bet only about five people clicked to read the T&Cs in the first place – we might as well just say anything we like.

Tony on floor 5 of Apple HQ smells of sardines.

When someone sends a funny email around the offices we have to reply with iLaughed. It's in our j_____ _____ition.

_emember that le___ ___e over Apple & Apple studios? Want to know ___d ____ght The Beatles. We have the surviving ones come ___ps. We're looking at ways to reanimate the dead ones.

___ apple products. Apples, apple juice, apple flapjacks, ___. We ___ed if we're caught eating anything without apples LLERG__ __ APPLES AND I'M ALWAYS SO HUNGRY.

___ked the n___ landings. Did it in 2008, then brainwashed you all to ___ve it happened in 1969, just because we could. If anyone finds out ___ve leaked this information, I'll be killed. But no one will ever, ever read this.

(b) you do not retain any copies of the iOS Software, full or partial, including copies stored on a computer or other storage device; and (c) the party receiving the iOS Software reads and agrees to accept the terms and con____ons of this License.

Decline   Agree

- *Really Smart Meter*

- *Control my electricity usage*

- *Buy (or sell) electricity on the open market*

Who might be behind a hack...

"End User"?

- Get free electricity.

"Terrorists"?

- Overload grid? Burn down house? ...

"Criminals"

- Manipulate energy market

"Power Companies"

- Use more power – work for supplier not consumer...

"Insurance Companies"

- Spy on homeowners to determine risk

"Governments"

- Enforce policies / "lifestyles". Overreach...

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One penny on each transaction...

WHAT CAN WE LEARN?

Breadth

Changed assumptions

Scale & Competition

Need to establish Trust in your brand

Decentralized Control

Need to be flexibility

Non Human Actors

Who/What Do you trust?

① Steam engine

② Mass production

③ Internet technology

④ Internet of Things

Its all about Trust

Flexible Policies

Validation & Certification

Secure Software

Secure Manufacture

Thank you

Richard Hayton
CTO

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