

EMERGING TECHNOLOGIES FOR THE ENTERPRISE CONFERENCE



WIFI
ETE2019



HASHTAG
#PhillyETE



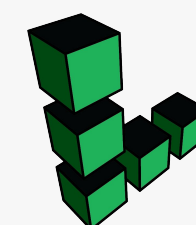
SESSION Q&A
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Presented By

CHARIOT
SOLUTIONS



THE
MEET
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linode

VISTAR MEDIA

PINNACLE²¹



ATOMIST

COMCAST

WTF IoT or IoT FTW?

Don Coleman - Chariot Solutions





The Verge ✓

@verge

Follow



Samsung's new fridge will ping your phone if you leave the door open

theverge.com/2019/1/7/18169...





Internet of Shit

@internetofshit

Following



why the heck doesn't it just close the door itself if it's so smart

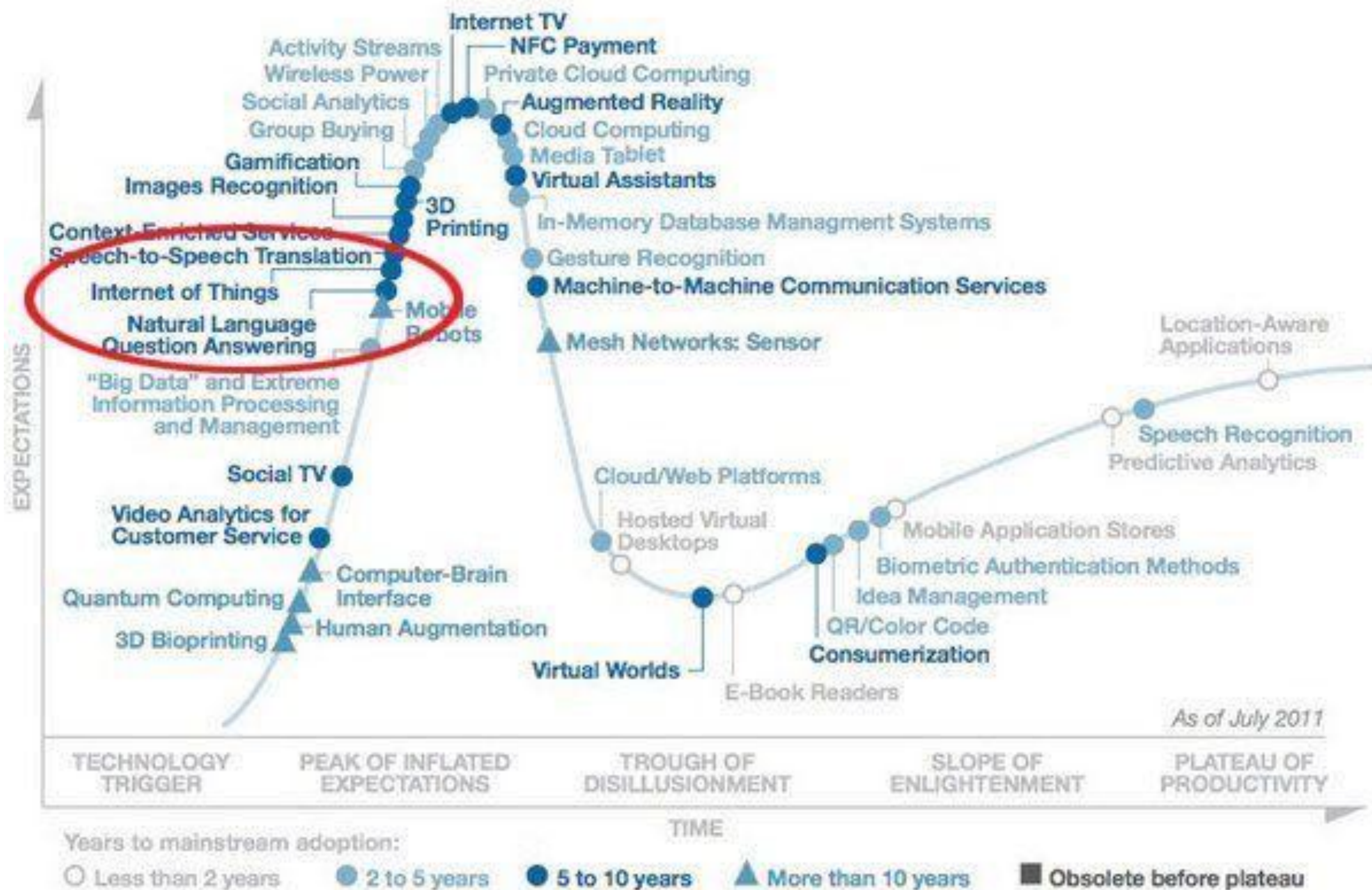


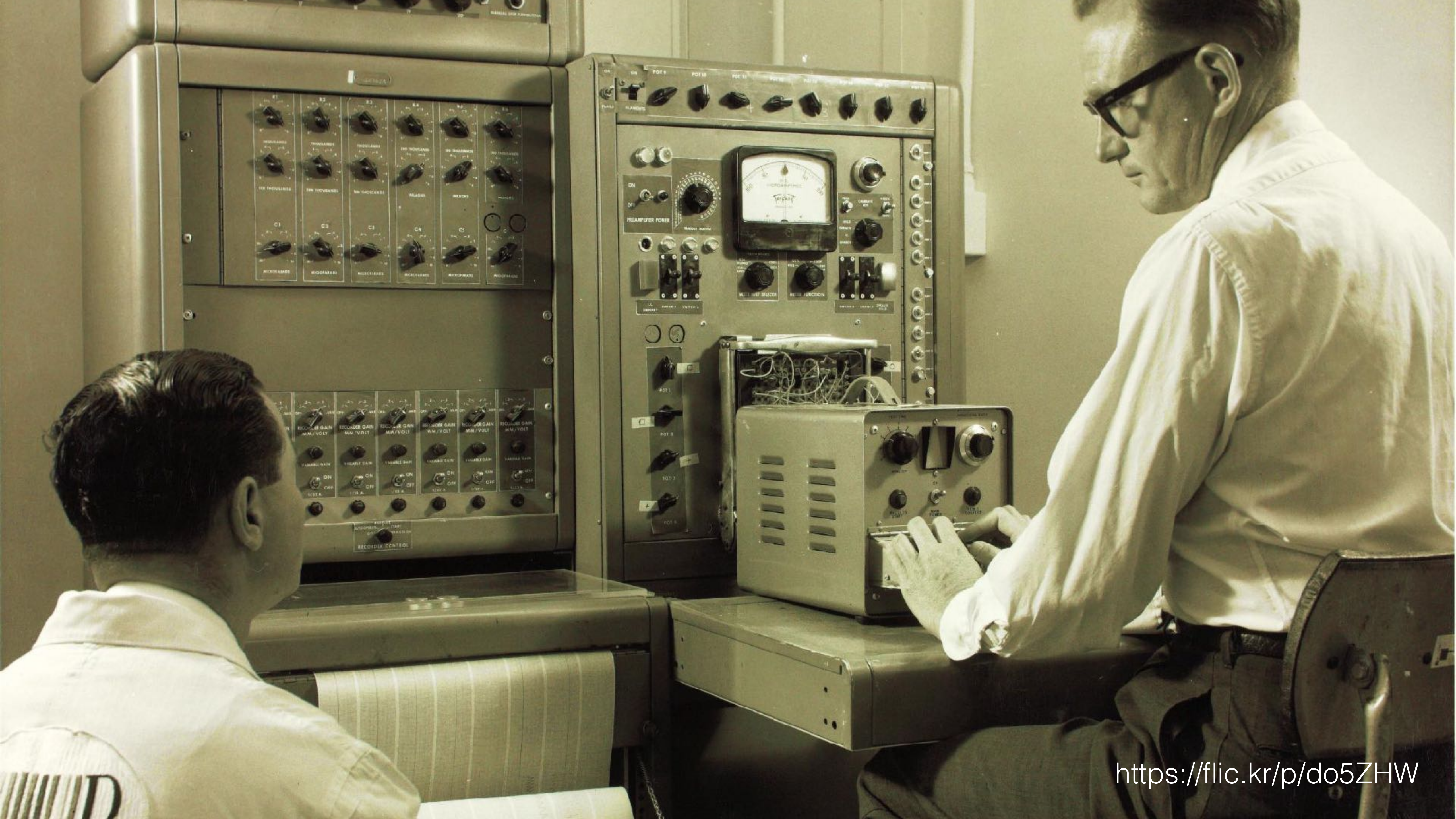
The Verge  @verge

Samsung's new fridge will ping your phone if you leave the door open theverge.com/2019/1/7/18169...

4:42 PM - 13 Jan 2019

Hype Cycle for Emerging Technologies, 2011





The Computer for the 21st Century

Specialized elements of hardware and software, connected by wires, radio waves and infrared, will be so ubiquitous that no one will notice their presence

by Mark Weiser

The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.

is approachable only through complex jargon that has nothing to do with the tasks for which people use computers. The state of the art is perhaps analogous to the period when scribes had to

The idea of integrating computers seamlessly into the world at large counter to a number of present trends. "Ubiquitous computing" in context does not mean just comp

CONNECT



ALL THE THINGS

arm

CORTEX[®]-M0

Nested vectored
interrupt controller

Wake-up interrupt
controller

CPU
Armv6-M

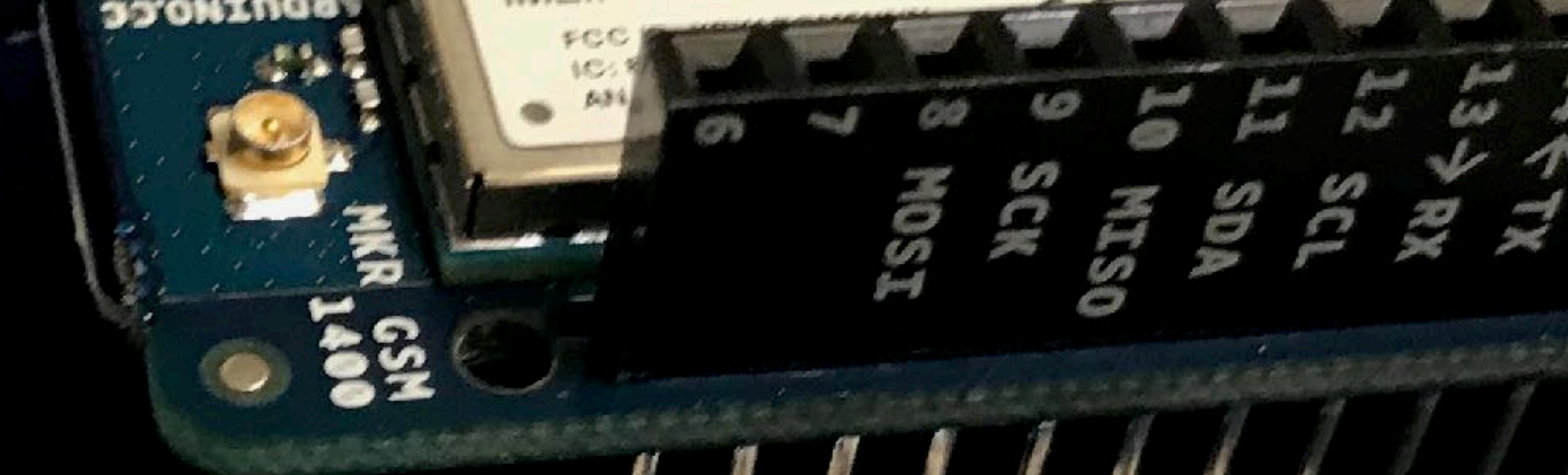
AHB-Lite

Data
watchpoint

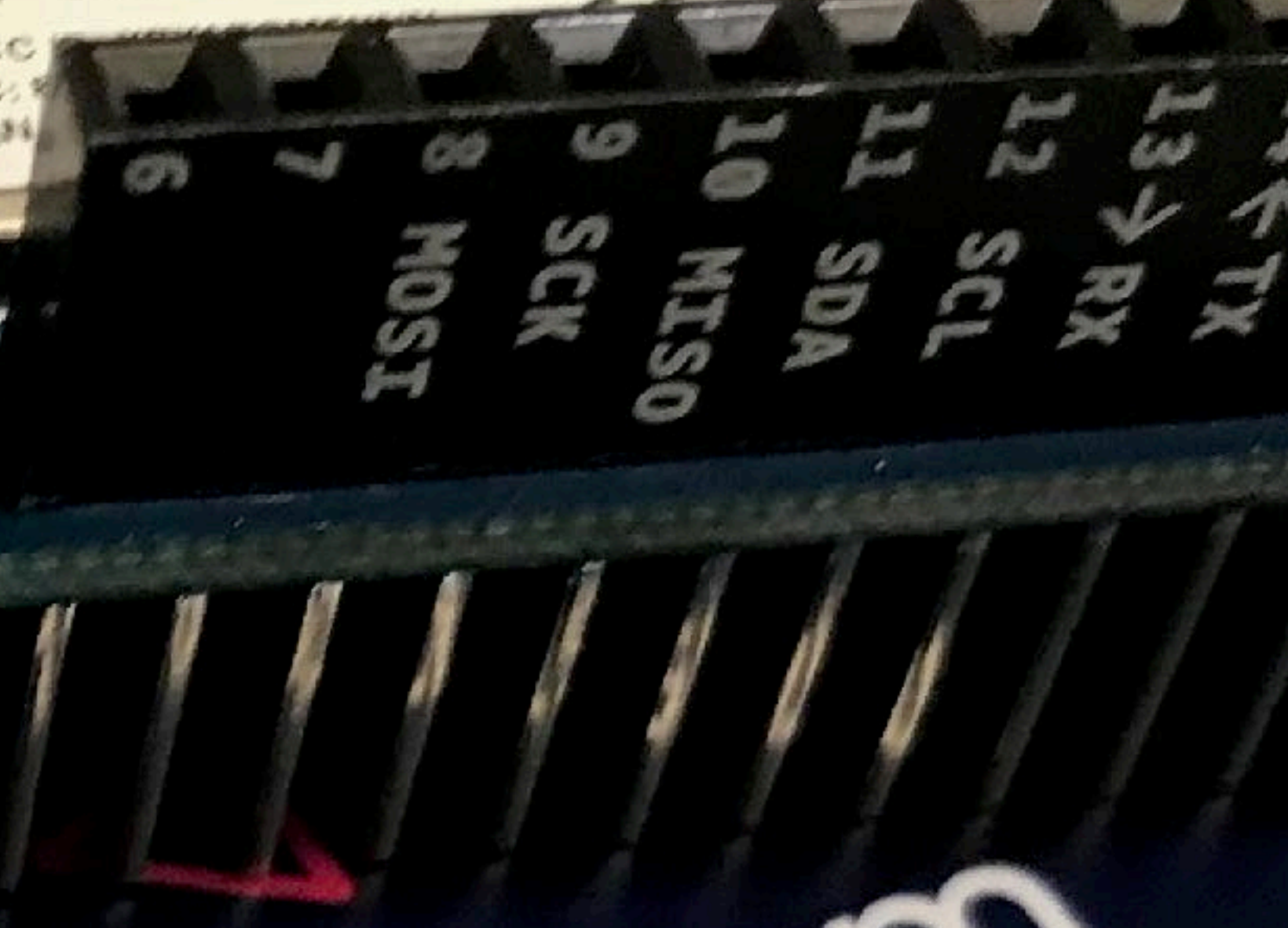
JTAG

Breakpoint
unit

Serial wire



Hologram





No one asks for an IoT project



PLUS!

VEEDEDER-ROOT



MAY 4, 2017 4:12:24 PM
T 2: PROBE OUT

ALARM



WARNING



POWER

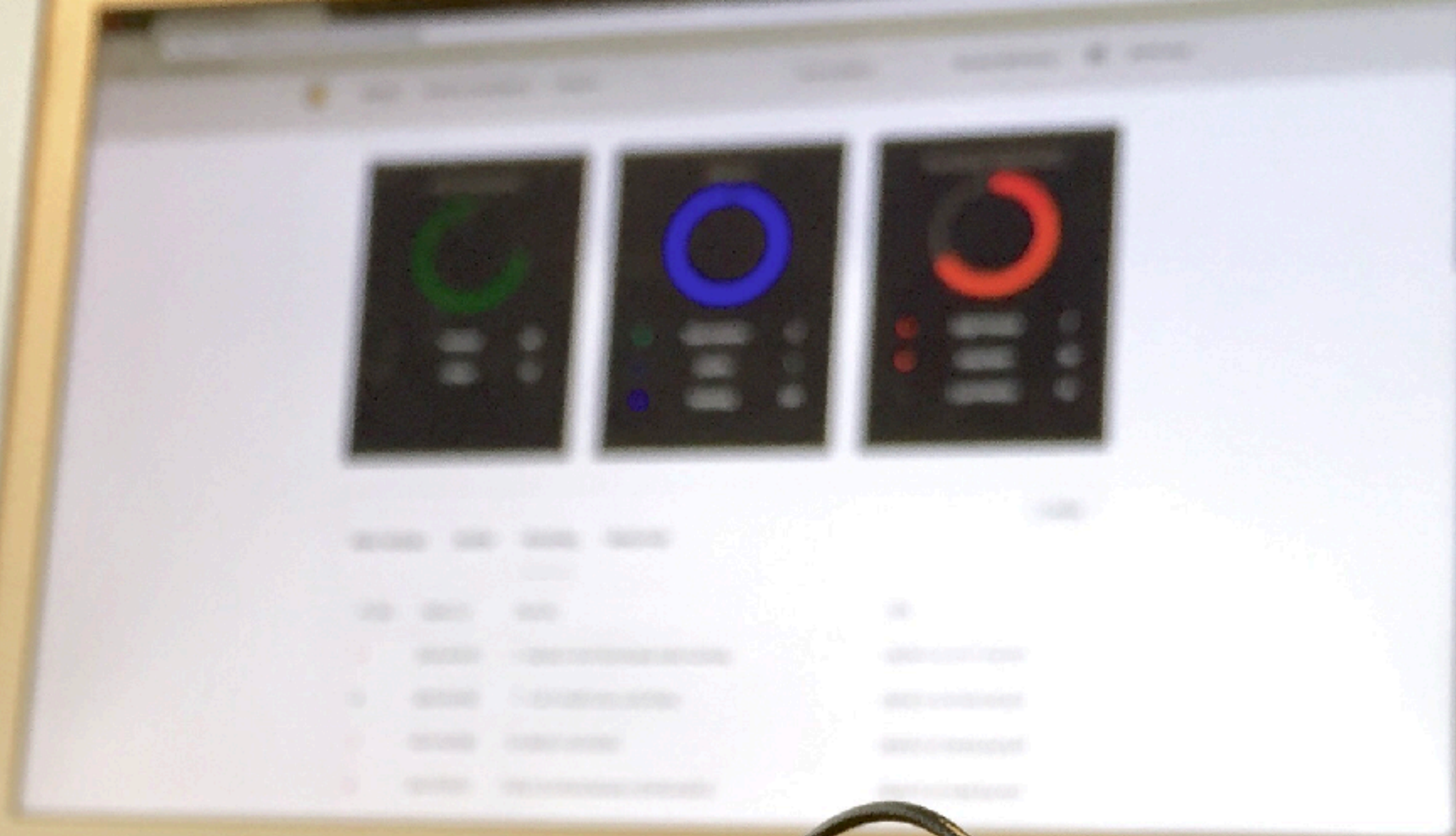
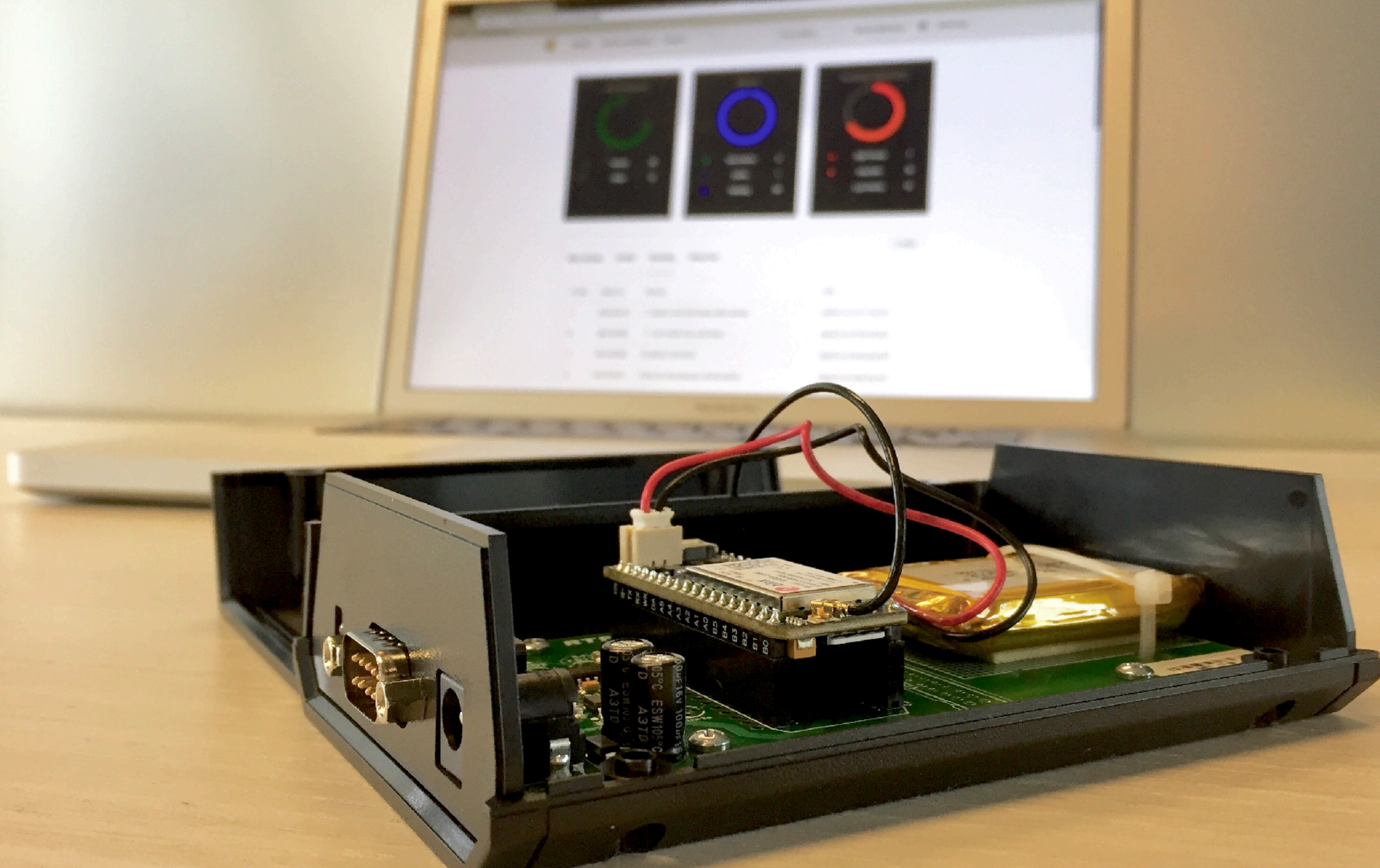


SYSTEM STATUS REPORT
T 1: SETUP DATA WARNING
T 1: PROBE OUT
T 2: SETUP DATA WARNING
T 2: PROBE OUT
T 3: SETUP DATA WARNING
T 3: PROBE OUT
T 4: SETUP DATA WARNING
T 4: PROBE OUT

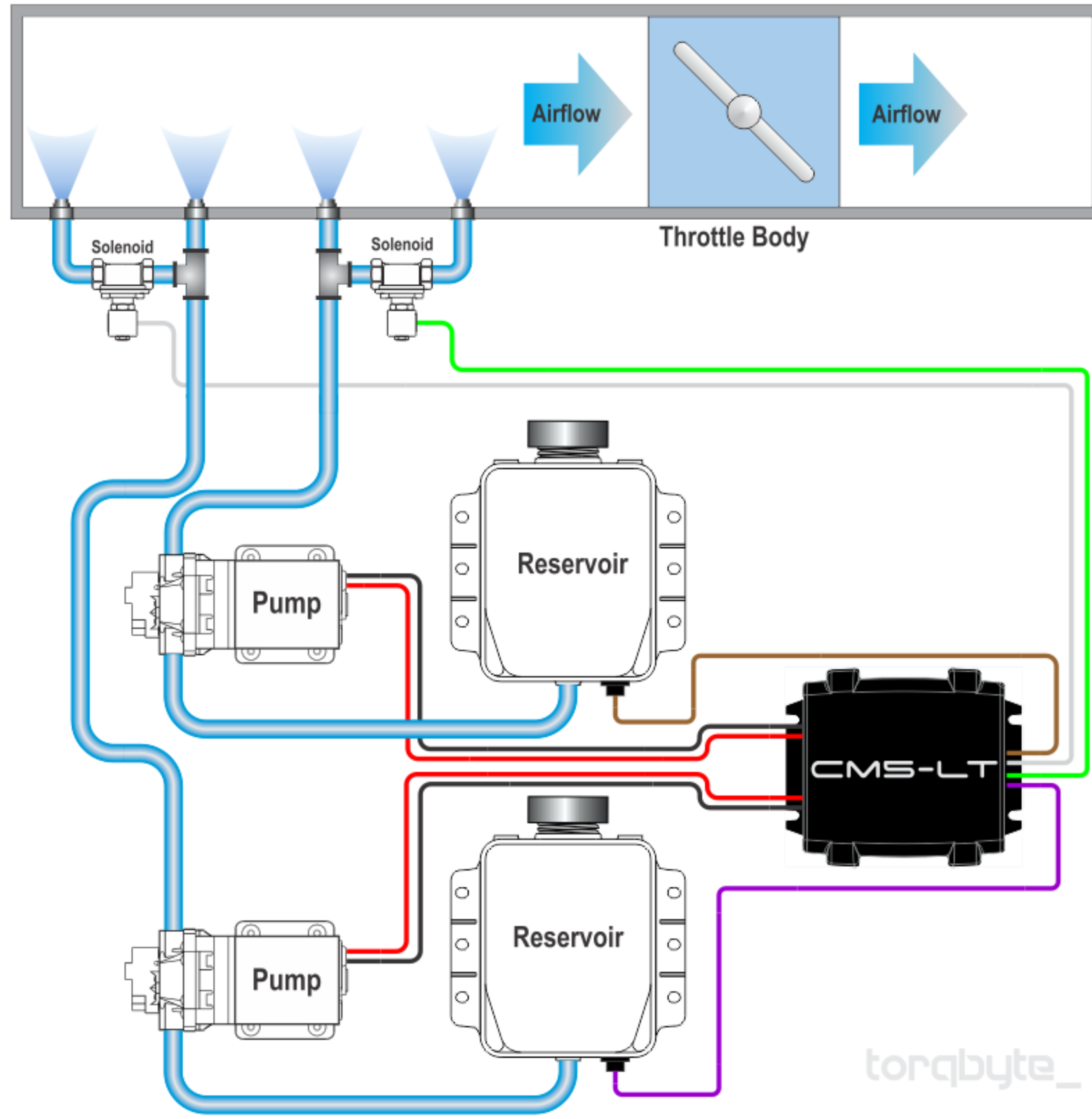
INVENTORY REPORT
NO ACTIVE TANKS

ALS-350

UST Monitoring System















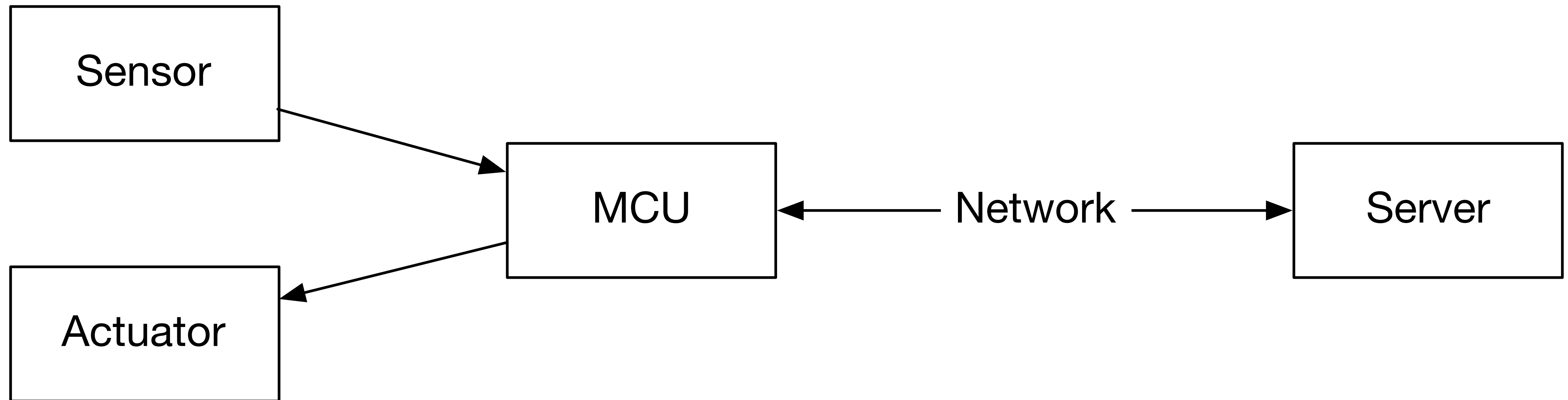
THE WORLD'S FIRST WIRELESS NPK SENSOR

Get the most detailed soil quality data available, via a single probe with 26 sensors reporting soil moisture, salinity, and NPK at three different depths, as well as aeration, respiration, air temperature, light, and humidity.

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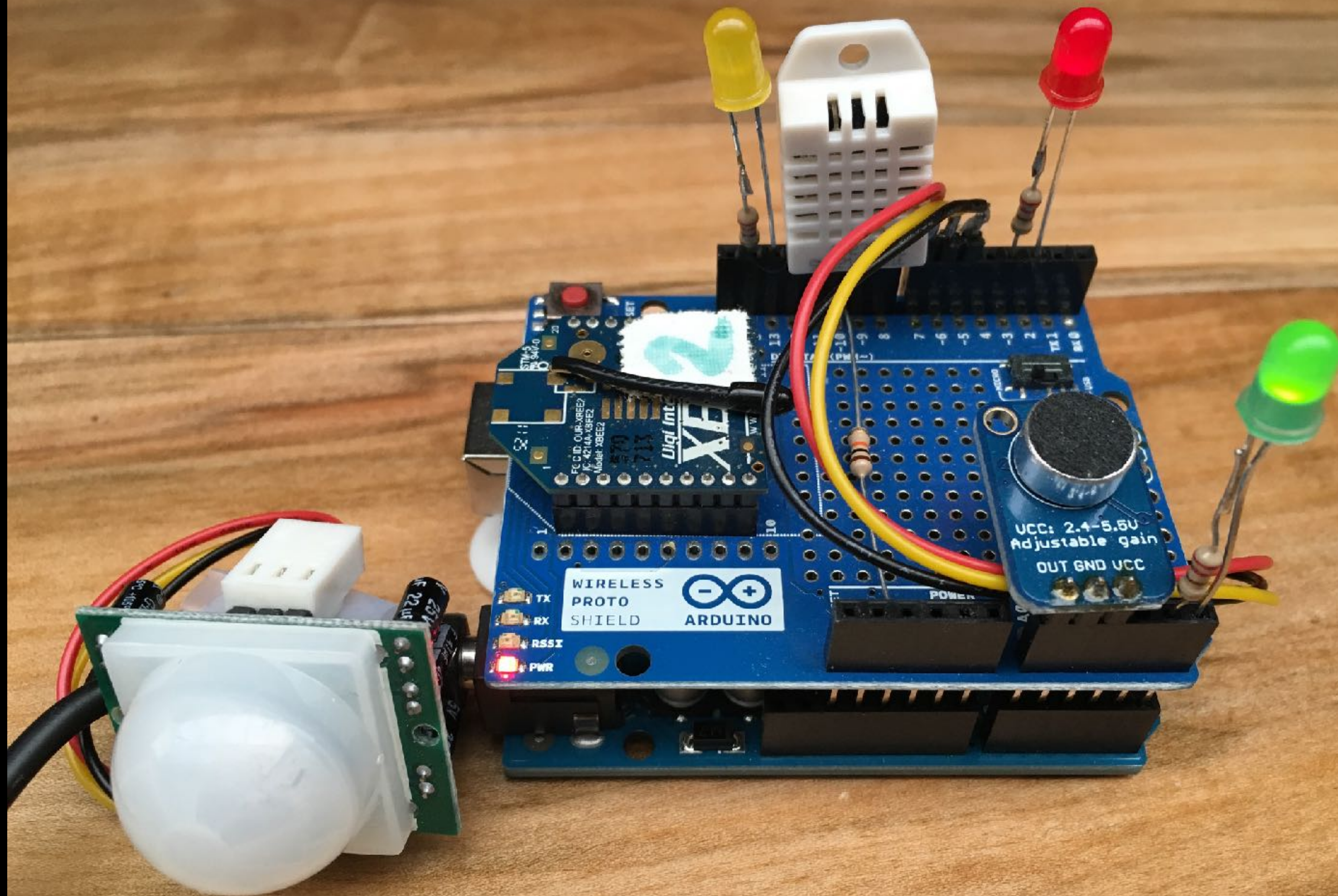
[Learn More](#) →

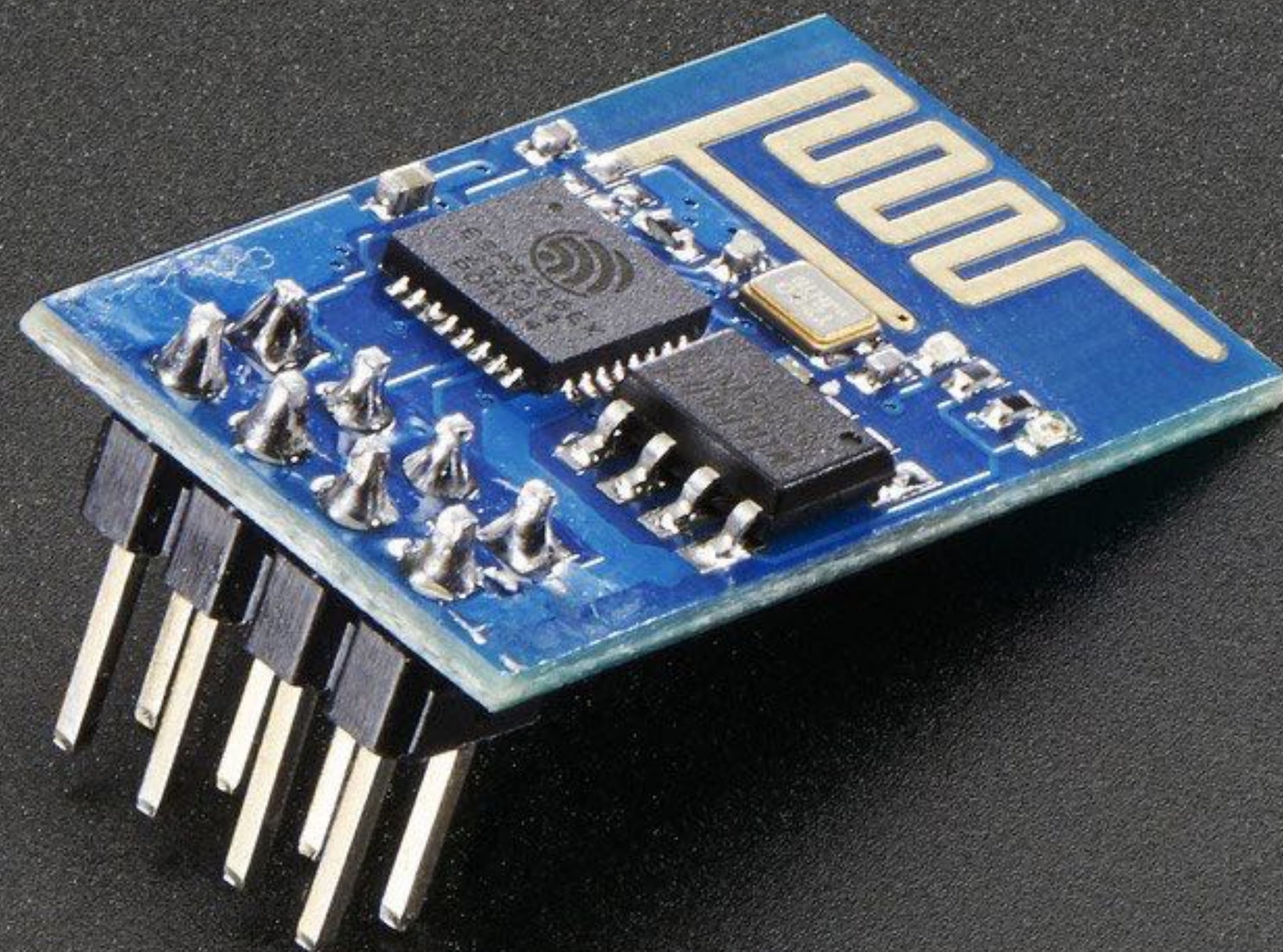
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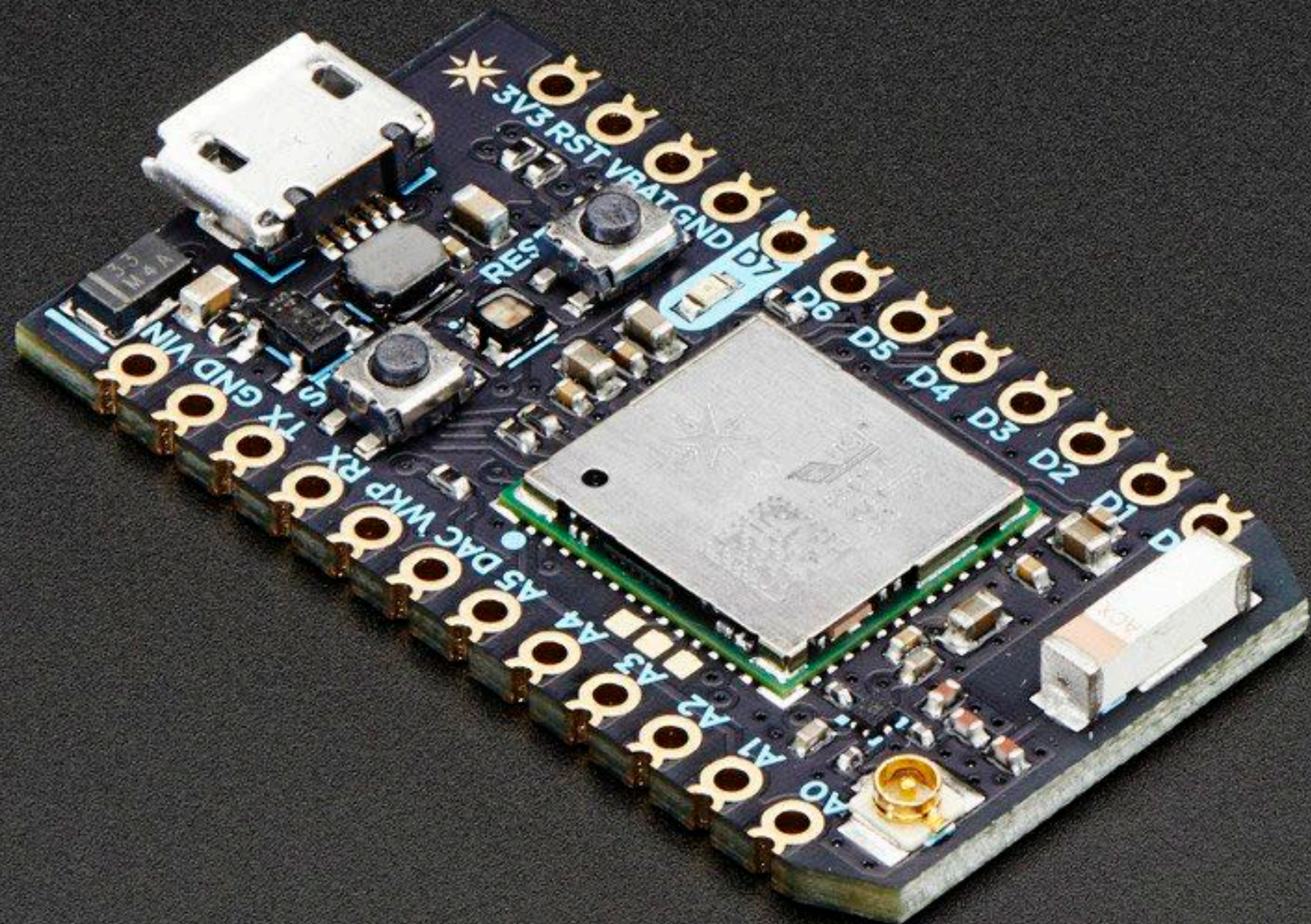


Transports

Protocols











AWS IoT



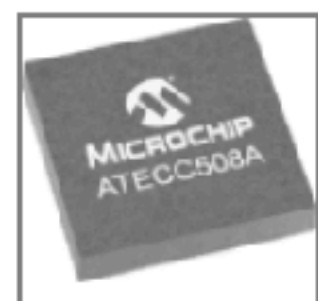
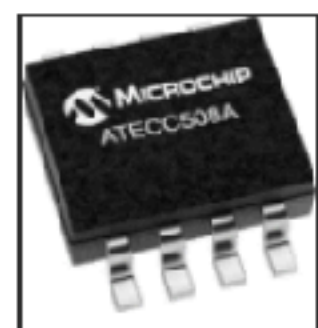
Products

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About



ATECC508A ☆

Status: In Production

 [View Datasheet](#)

Features:

- Easy way to run ECDSA and ECDH Key Agreement
- ECDH key agreement makes encryption/decryption easy
- Ideal for IoT node security
- Authentication without the need for secure storage in the host
- No requirement for high-speed computing in client devices
- Cryptographic accelerator with Secure Hardware-based Key Storage





Nathan Ruser

@Nrg8000

Follow



Strava released their global heatmap. 13 trillion GPS points from their users (turning off data sharing is an option). [medium.com/strava-enginee...](https://medium.com/strava-engineering/strava-engineering-13-trillion-gps-points-8a1e1e1e1e1e) ... It looks very pretty, but not amazing for Op-Sec. US Bases are clearly identifiable and mappable



1:24 PM - 27 Jan 2018

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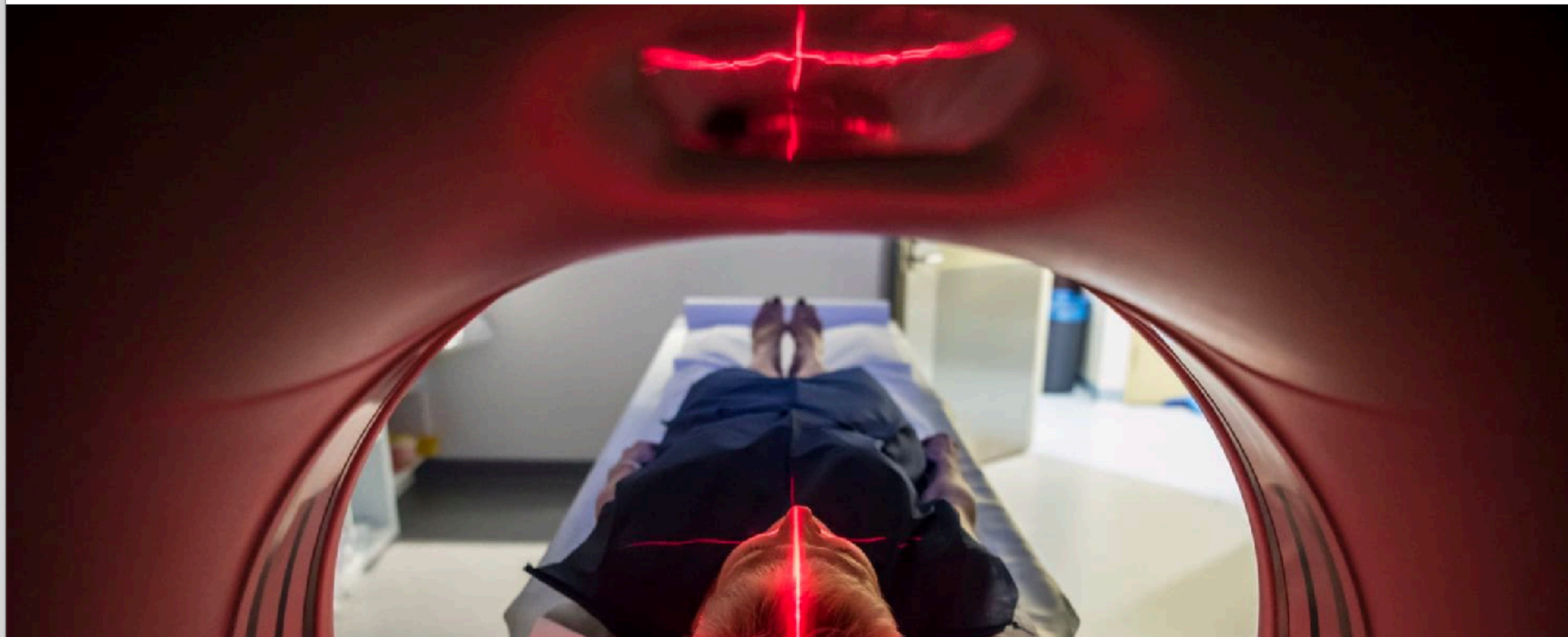
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Hospital viruses: Fake cancerous nodes in CT scans, created by malware, trick radiologists

Researchers in Israel created malware to draw attention to serious security weaknesses in medical imaging equipment and networks.

Kim Zetter • April 3



Three Small Stickers in Intersection Can Cause Tesla Autopilot to Swerve Into Wrong Lane

Security researchers from Tencent have demonstrated a way to use physical attacks to spoof Tesla's autopilot

Evan Ackerman

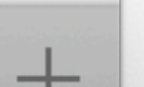






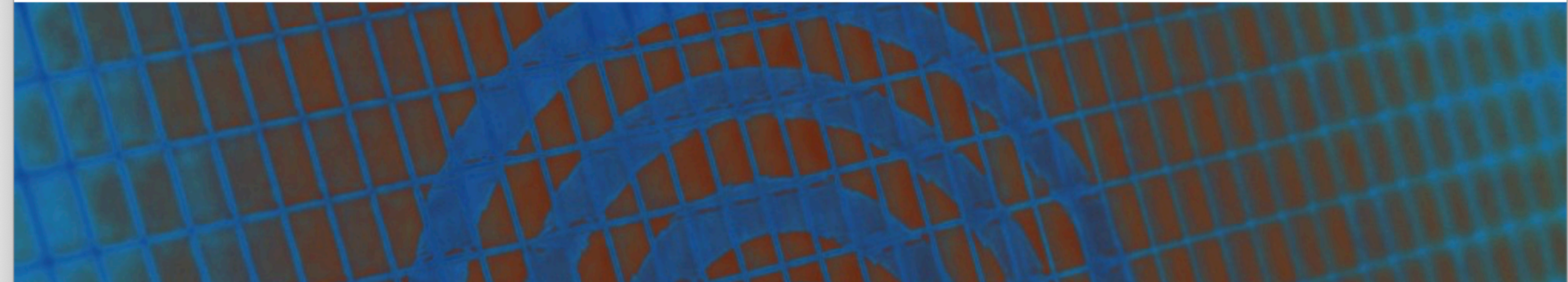
fossbytes.com/wifi-kettle-hack-to-steal-

AA



How A Researcher Hacked iKettles to Steal WiFi Passwords All Across London

Adarsh Verma • October 21, 2015





Fast and easy access to what's important.

Tapplock's smart fingerprint padlocks identify users to 99.999% accuracy and unlock in 0.8 seconds. Manage users, locks and access history using Tapplock's app and software.





BLOG: INTERNET OF THINGS

Totally Pwning the Tapplock Smart Lock

Andrew Tierney
13 Jun 2018

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507 38

TL;DR – How to open a Tapplock over BLE in under two seconds:



Categories

Show all

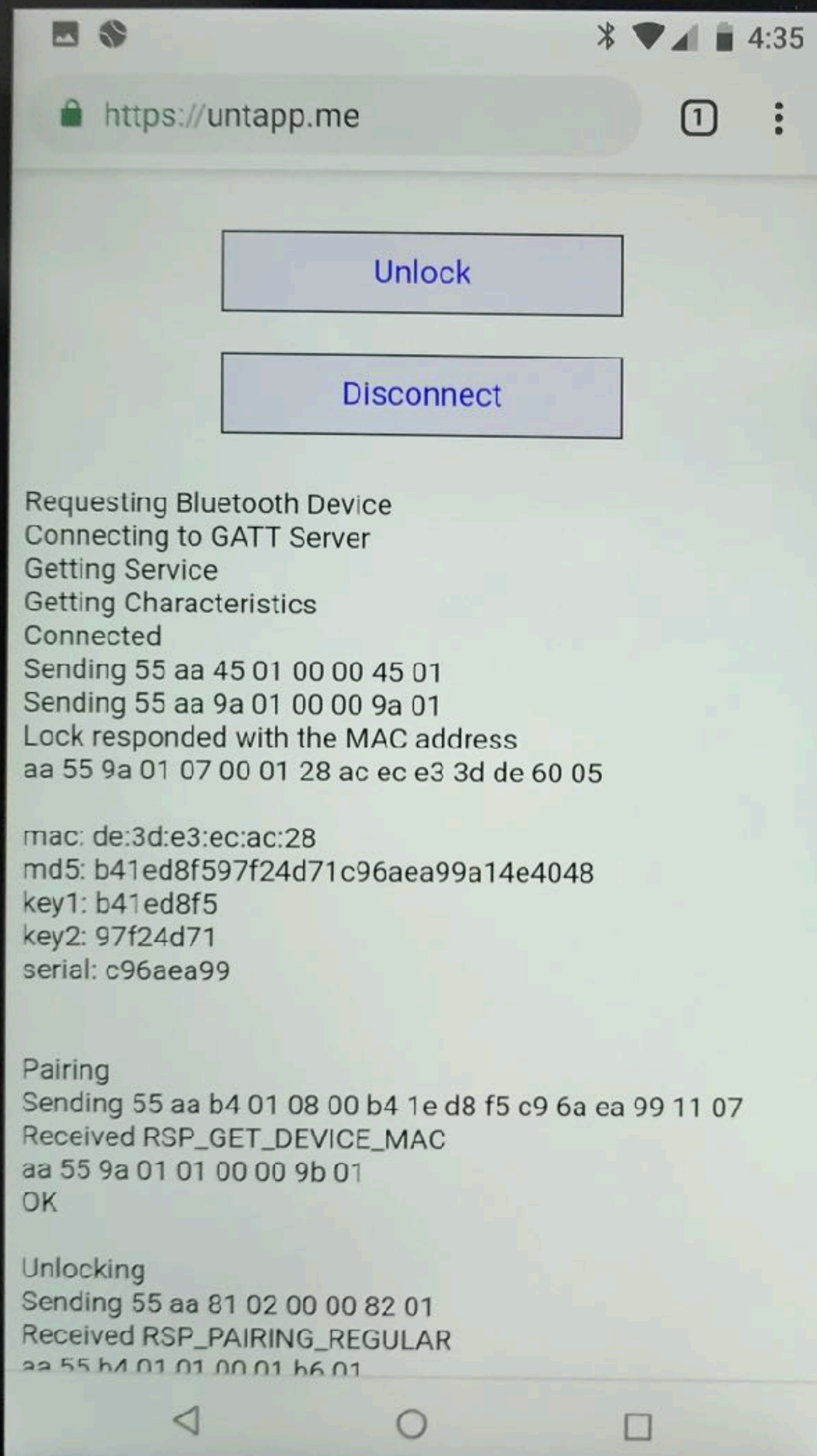
See the other cool stuff we've been doing...

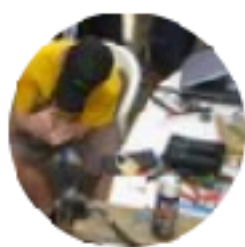
INTERNET OF THINGS
Tic Toc Pwned
15 APR 2019

“The w
that watch
to find t

RED TEAMING
Cobalt Strike

MARITIME CYBER
SECURITY





Luca Bongiorno

@LucaBongiorno

Following



So, apparently my Tapplock has even earlier FW with hardcoded 01020304 key.

Good catch from [@slawekja](#)

CC: [@cybergibbons](#)

```
intelligent.tapp.bluetooth;  
  
intelligent.tapp.model.SubscribeModel;  
intelligent.tapp.tools.AndroidTool;  
util.Locale;  
util.Random;  
  
s BluetoothTool {  
    static final String KEY_ONE = "KEY ONE";  
    static final String KEY_TWO = "KEY TWO";  
    static String NULL_ONE = "01020304";  
    static final String SERIAL_NO = "SERIAL NO";  
  
    static String byteToStr(byte[] bArr) {  
        StringBuilder stringBuilder = new StringBuilder();  
        int length = bArr.length;  
        for (int i = 0; i < length; i++) {  
            stringBuilder.append(String.format("%02x", new  
        }  
        return stringBuilder.toString();  
    }  
}
```

```
Kali Linux - 2018.1 - vmx-amd64 - vmtoolsd - VMware Workstation 12 Player (Non-commercial use only)  
File Edit View Search Terminal Help  
Applications Places Terminal  
root@kali:~/tapp  
Found lock f7:22:eb:f3:03:3a  
Reverse MAC: 3A:03:F3:EB:22:F7  
Calculated hash bedef425bbc8cf5020feb2783cd75df  
Key and serial: bedef425, 020feb27  
Packet : 55AAB40108000102030400000000  
279405  
Static key packet: 55aab40108000102030400000000  
00c601  
Sending pair  
Sending unlock  
root@kali:~/tapp#
```

8:16 AM - 29 Jun 2018

Totally Pwning the Tapplock Smart Lock (the API way)



Vangelis Stykas

Follow

Jun 15, 2018 · 3 min read

tl:dr: Tapplocks api endpoints had no security checks other than a valid token to access any data. This results in anyone with a valid login (easily obtained by creating an account) being able to manipulate every tapplock available!

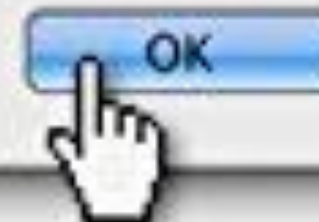
BRUCE SCHNEIER

BEST-SELLING AUTHOR OF *DATA AND GOLIATH*



CLICK HERE TO KILL EVERYBODY

Security and Survival in
a Hyper-connected World



Ruined By Design

How Designers Destroyed the World,
and What We Can Do To Fix It

Mike Monteiro

Foreword by Vivianne Castillo



Don Coleman



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