

sense
maker
ams
terdam

**IoT-SensemakersAMS is a volunteer
based community
dedicated to:**

**Connecting people and sharing
knowledge, ideas & hands-on
experience**

Powered by:

MARINETERREIN *Amsterdam*

SODAQ

speakee
...



Toolz.nl

NESSCIS SOFTWARE
INTERNET



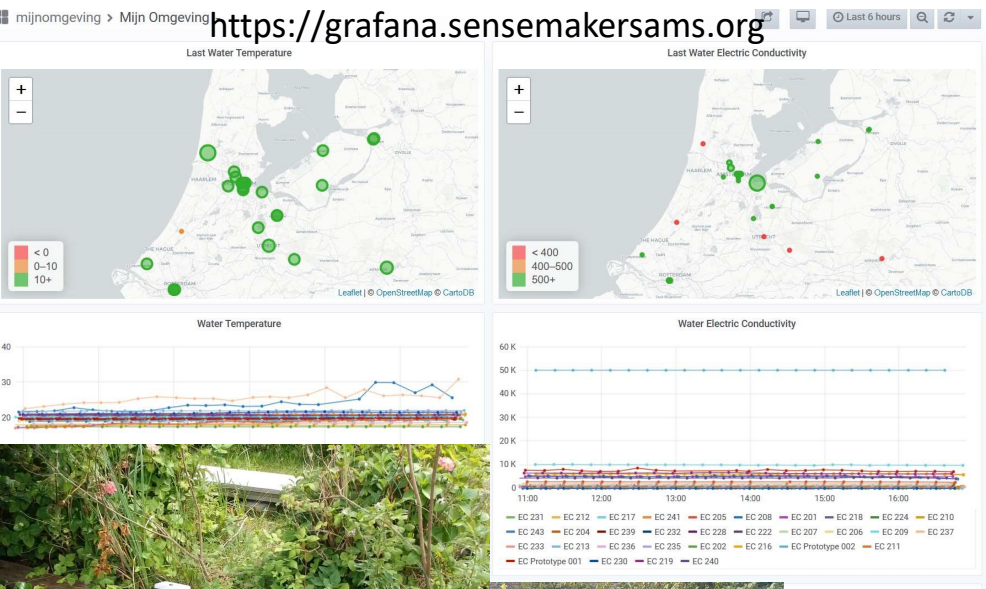


We meet up....



- 1th Wednesday of the month: DIY LAB/projects
DIY hands-on in the Makerspace at OBA (IoT, 3Dprinting, Lasercutting)
- 3th Wednesday: Sensemakers Meetup
Sharing knowledge, ideas & connecting people at Codam College
- Random: Sensemakers Specials
Handson workshops, excursions or ...
- Conferences
Sharing free & discounted tickets



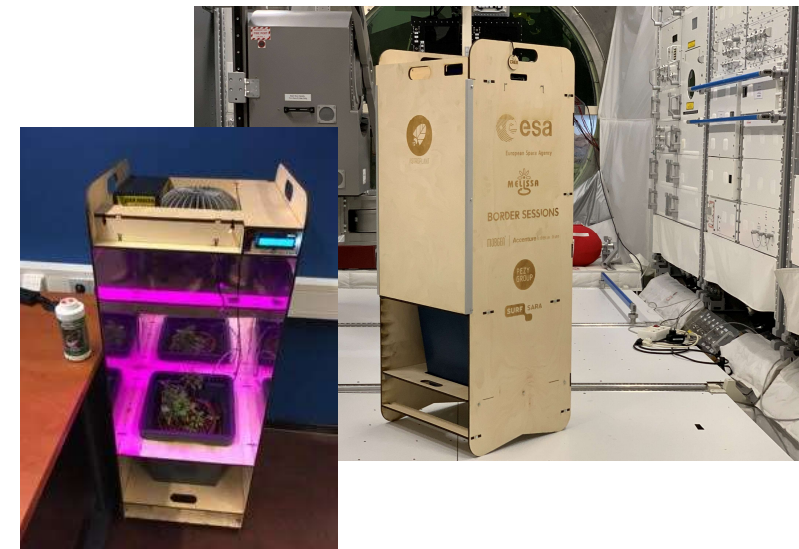
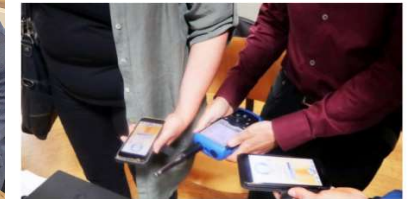


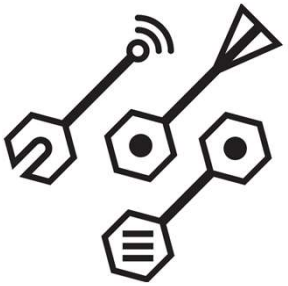
AmsterdamSounds



we code for less noise in the city
Amsterdam Sounds

Duration: 1 mei 2018 - 1 mei 2019





sense
maker
samst
erdam

Programm

- 19.10 IoT in Cyberwarfare – Chris Kubecka
- 19.45 SPIN – Jelte Jansen
- 20.15 Open mic (Make Health,...)
- 20.30 Drinks & networking



Wifi:Codamguest
CodamCodingCollege2019

Twitter: @SensemakersA
#Sensemakers

IOT in Cyberwarfare

16 October 2019

Chris Kubecka, CEO
HypaSec



Biography

- ❖ Cyber warfare incident management and advisement EU/UK governments
- ❖ Critical infrastructure security expert: Oil & Gas, Water, Electric & Nuclear
- ❖ Author, presenter at Black Hat, Security BSides, ICS/SCADA Nuclear Cyber Security
- ❖ Previous headed Aramco Overseas Security Operations, Information Protection & Intelligence
- ❖ Previous U.S Air Force Space Command





DO YOU WANT HACKERS

**BECAUSE THAT'S
HOW YOU GET HACKERS**

Security Challenges

Large number
of access points

Profit over
vulnerabilities

No required
security testing

Most
equipment
privately owned

Weak
configuration

Security an
afterthought

Safety Challenges of IOT

- ◇ Little to no safety regulations
- ◇ Smart
- ◇ Smart
- ◇ Nuclear
- ◇ Manufacturer installed a SCADA system
- ◇ Crane which moved nuclear rod failed
- ◇ Feared it was hacked remotely

Smart Ovens Are Reportedly Preheating by Themselves in the Middle of the Night

IPv4 Hosts

Page: 1/23,939 Results: 598,475 Time: 231ms

[173.13.73.56 \(173-13-73-56-NewEngland.hfc.comcastbusiness.net\)](#)

COMCAST-7922 - Comcast Cable Communications, LLC (7922) Woburn, Massachusetts, United States

Honeywell Notifier 443/https

metadata.device_type: fire alarm

BUILDING CONTROL

EMBEDDED

FIRE ALARM



Privacy Challenges

- ◇ Smart devices
- ◇ Smart appliances
- ◇ Smart electric meters
- ◇ Iranian IOT cameras
 - ◇ Required to be in specific locations
 - ◇ Monitored by IRGC
 - ◇ Images used by IRGC


How can privacy survive in the era of

Miele
IMMER BESSER

Miele@home Gateway XGW 3000

[Gateway Einstellungen](#)
[Gateway Administration](#)

[Miele@home Geräteübersicht](#)
[Miele@home Appliances Overview](#)

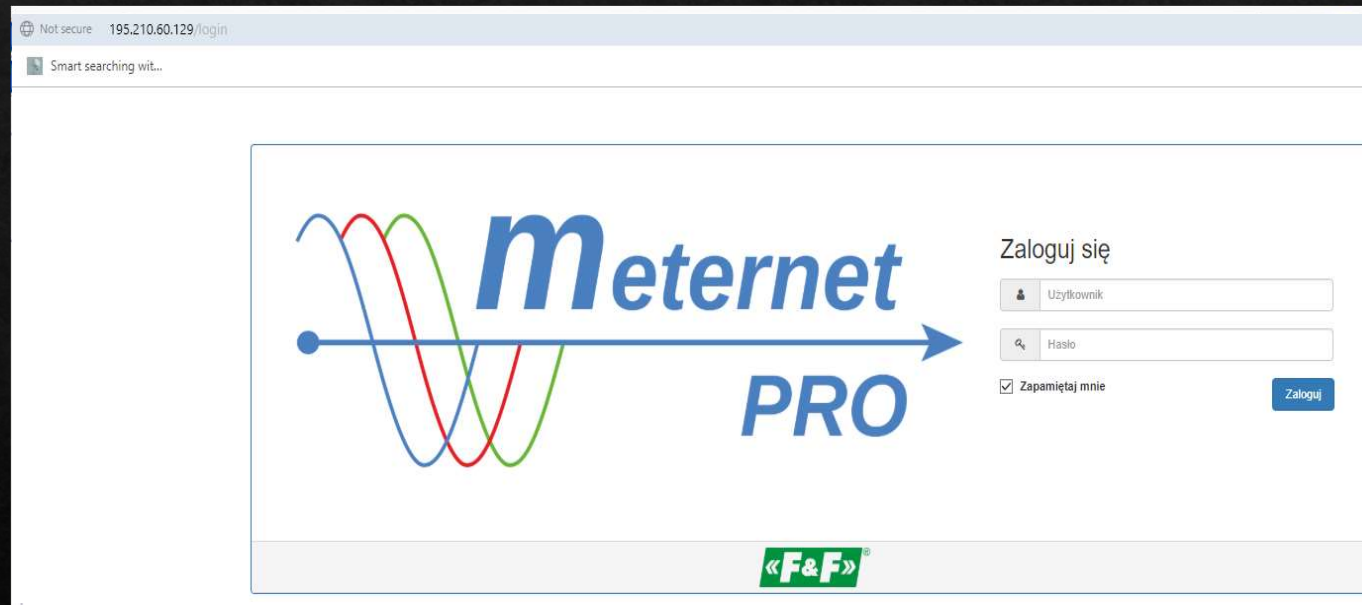


re are two futures
ick?

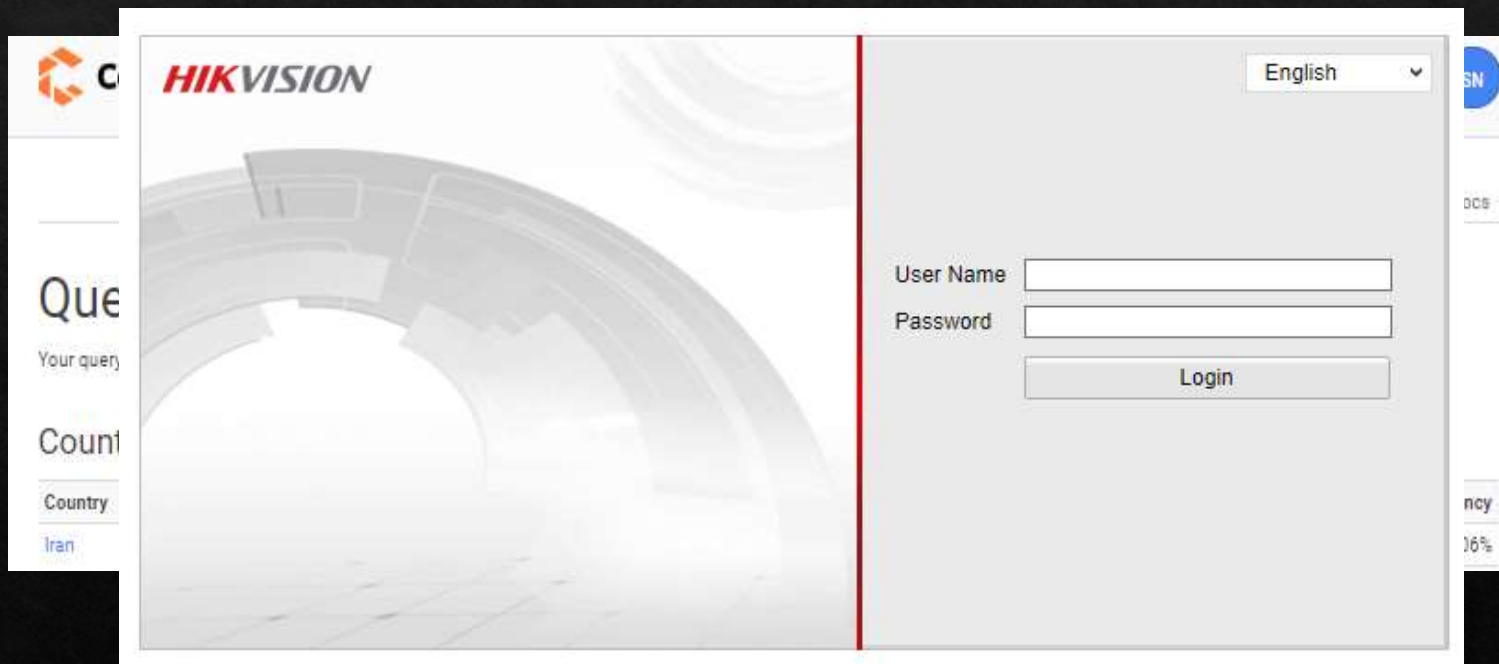
acy implications.

Copyright © 2017 Miele & Cie. KG

Smart Meters



Iranian IOT Cameras



The image shows a screenshot of a Hikvision web interface, likely a camera management portal. The interface is split into two main sections by a vertical red line. On the left, there is a large, stylized graphic of a camera lens or a tunnel. The right section contains a login form with the following elements:

- A language dropdown menu in the top right corner, currently set to "English".
- Two input fields labeled "User Name" and "Password".
- A "Login" button below the password field.

On the far left, there is a sidebar with a logo and some text, including "Que" and "Count". On the far right, there are some additional UI elements, including a "DSN" button and a "100%" zoom indicator.

- ❖ Older Linux kernels
- ❖ Known vulnerable services
- ❖ Open ports
- ❖ Old technology
- ❖ Security nightmares

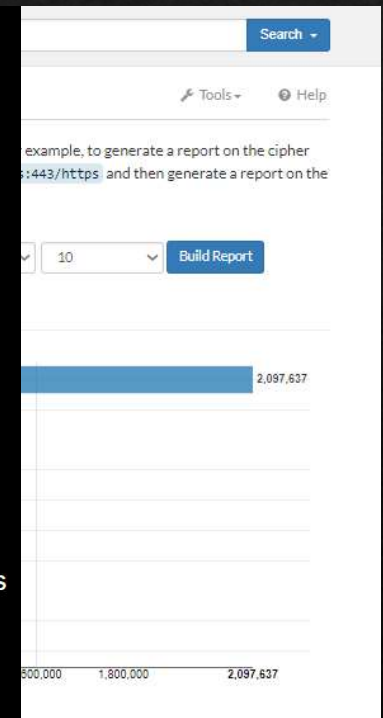
In 2012 the
on doing s
botnet us
amazing.

Your query (protocols: "23/telnet") found 3,149,901

Country Breakdown

Country	Hosts	Frequency
China	736,420	23.38%
United States	485,427	15.41%
South Korea	165,942	5.27%
Japan	155,701	4.94%
Argentina	145,795	4.63%
Brazil	140,889	4.47%
Russia	88,063	2.8%
India	74,133	2.35%
United Kingdom	69,566	2.21%
Taiwan	67,078	2.13%

't have any intentions
internet better. This
came out of it was



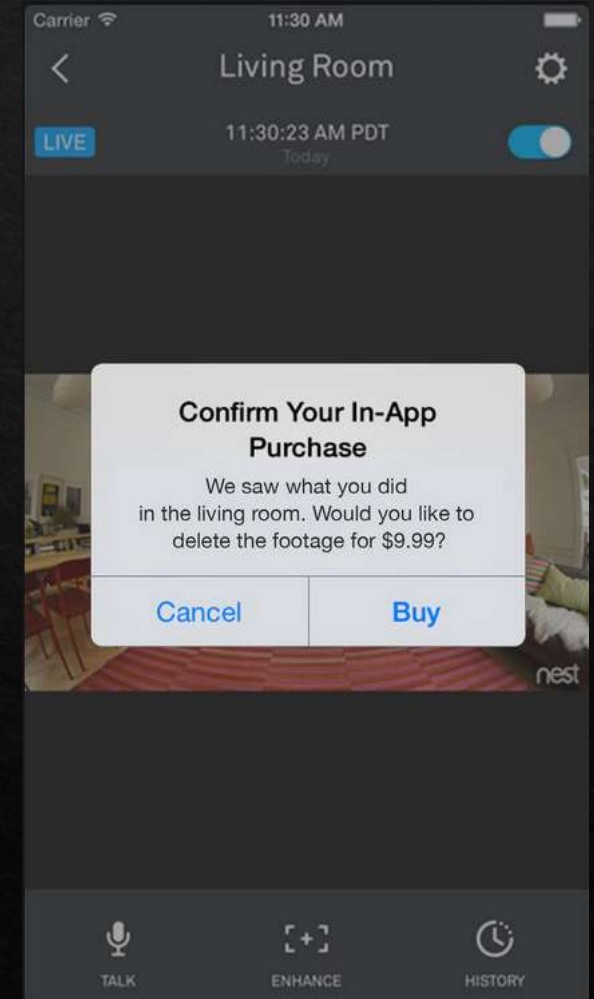
IOT Cyberwar Strategy

- ◆ Most are privately owned
- ◆ Can be used during an Act of Emergency
- ◆ No international definition of cyberwar (yet)
- ◆ Amplification after digital borders closed
- ◆ Can be attacked or used to attack
 - ◆ Dual Use

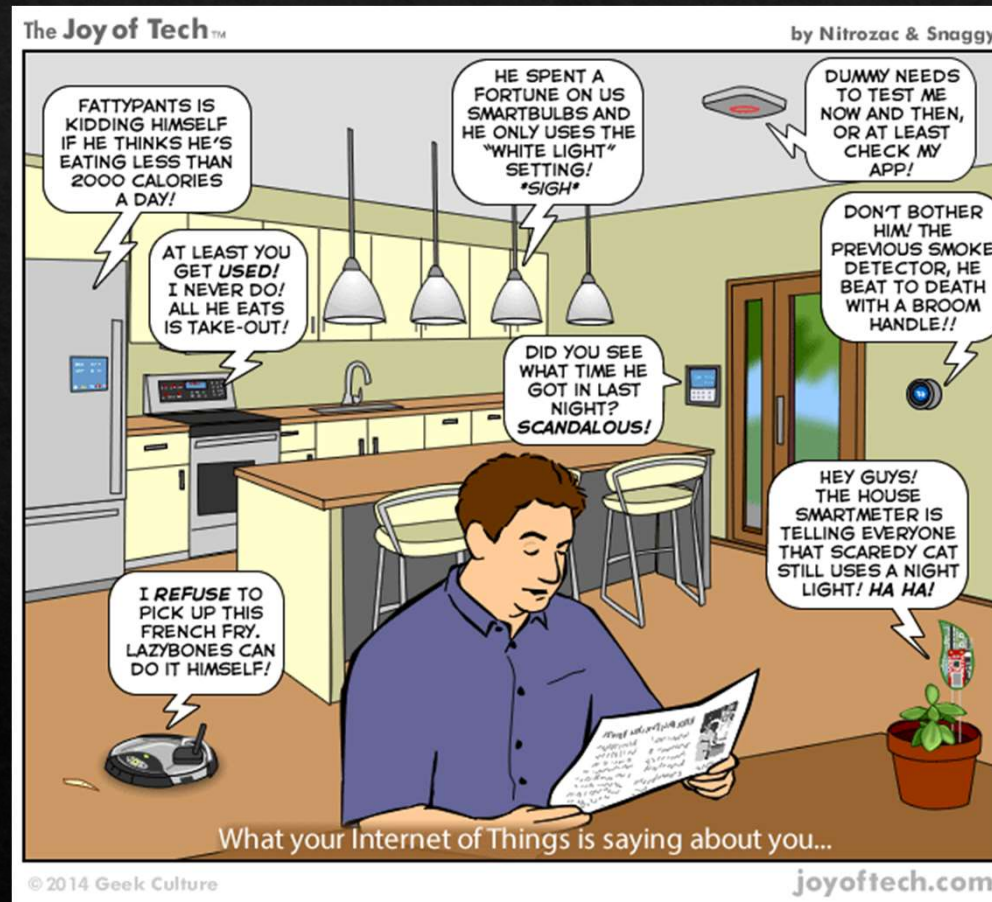


Possible Solutions

- ◆ Proactive EU level CERT
- ◆ Including cyber in all EU national defense
- ◆ Basic regulations
- ◆ Joint EU & US response plans
- ◆ Vendor liability
- ◆ S-BOM Software bill of materials
- ◆ Stop connecting everything to the internet (?)



Questions



Thank you

- ◆ @SecEvangelism
- ◆ https://en.wikipedia.org/wiki/Chris_Kubecka
- ◆ Hacking the World with OSINT & Censys
- ◆ Down the Rabbit Hole an OSINT Journey
- ◆ Dank u wel @_Manonsens

