

Securing the IoT

Elmer Lastdrager 26 May 2025



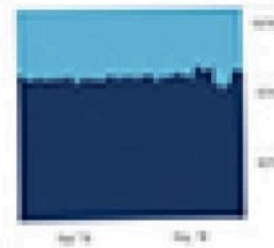
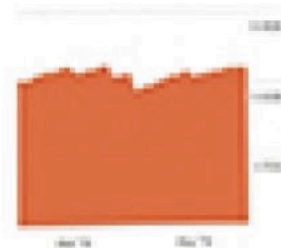


Regio's en gemeenten
Beleidsplanning
Beleidsmonitoring
Beleidsanalyse
Beleidsontwikkeling
Beleidsimplementatie
Beleidsevaluatie

.nl stats and data

This site provides current statistics and data about the use of the .nl domain, which is maintained by NIC.NL. With over 1.8 million registered domain names, .nl is the 10th largest official domain.

Learn more



Stichting Internet Domeinregistratie Nederland (SIDN)

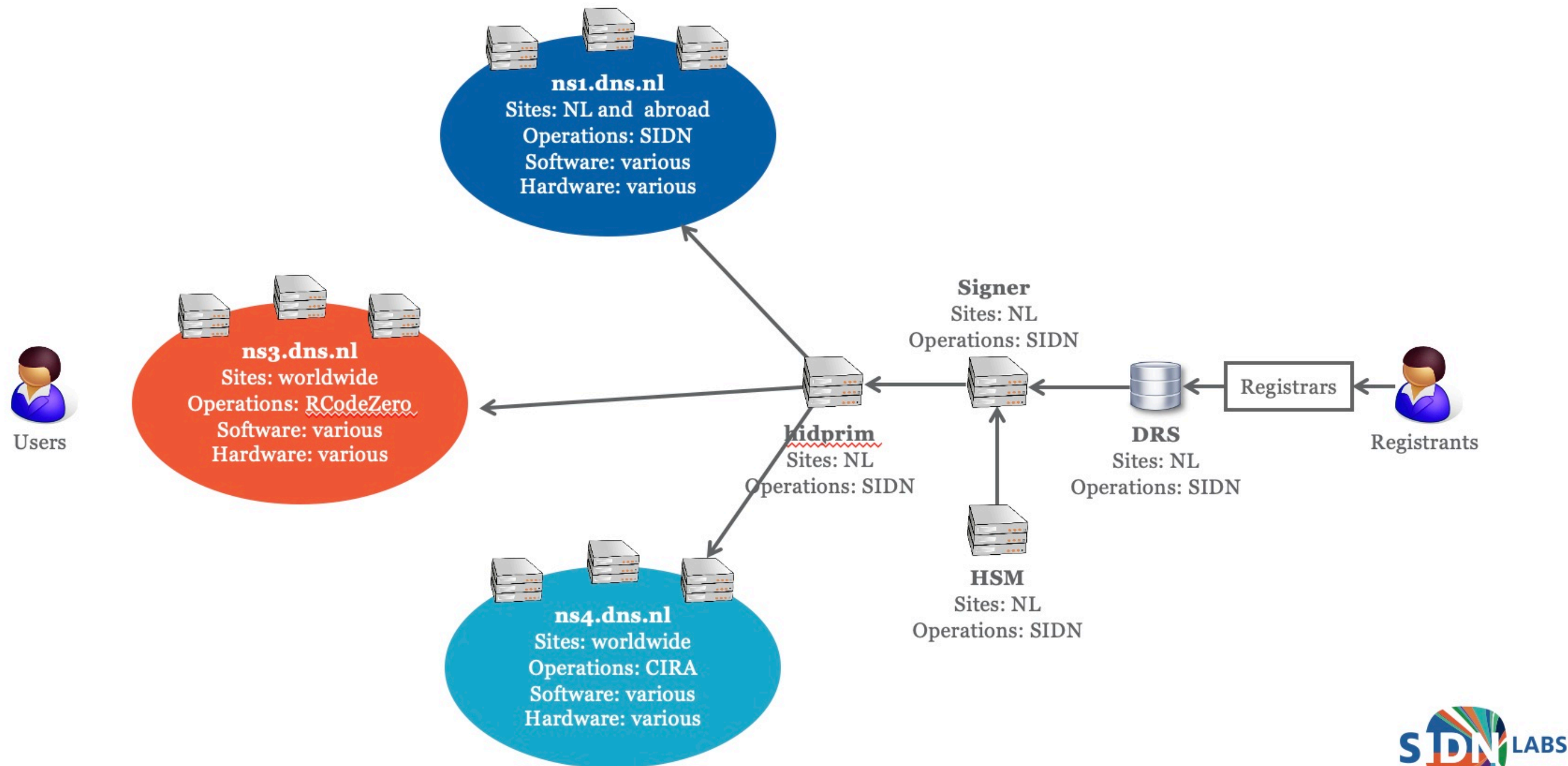
- Objective: increase society's confidence in the Internet
- Provide secure and fault-tolerant registry services for .nl
 - Anycasted DNS services with DNSSEC support
 - Registration and domain protection services
- Increase the value of the Internet in the Netherlands and elsewhere
 - Enable safe and novel uses (SIDN Fonds, IRMA)
 - Increase infrastructure security and trustworthiness (SIDN Labs)
- Private organization with a public role based in Arnhem



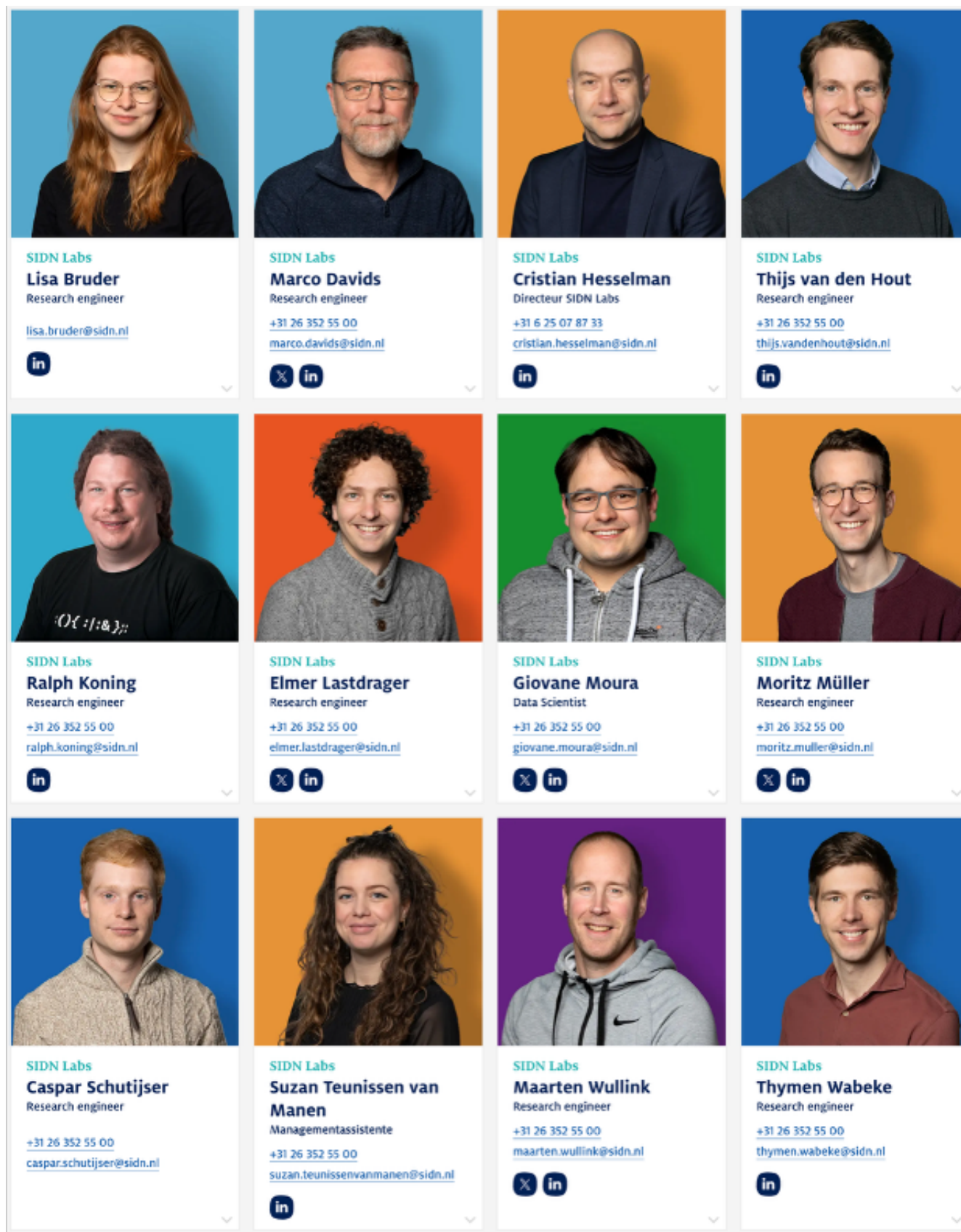
.nl = the Netherlands
18M inhabitants
6.2M domain names
3.8M DNSSEC-signed
4.0B DNS queries/day
8.6B NTP queries/day



Heterogeneous and fault-tolerant DNS infrastructure



SIDN Labs



- Technical experts, divers in seniority and nationality
- Help SIDN teams, write open-source software, analyze large amounts of data, conduct experiments, write articles, collaborate with universities
- M.Sc students help us advance specific areas

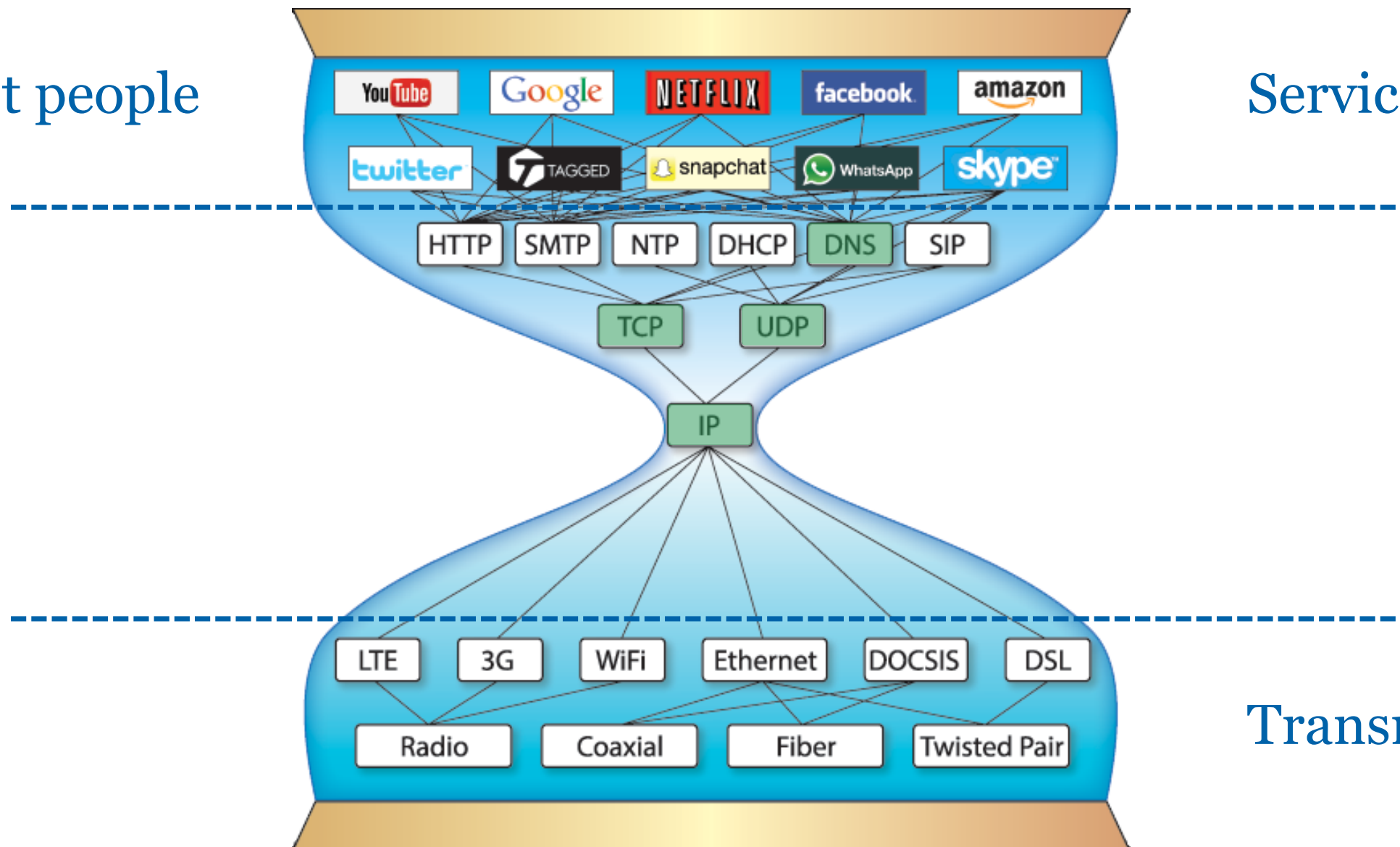


Most people

Services

Us

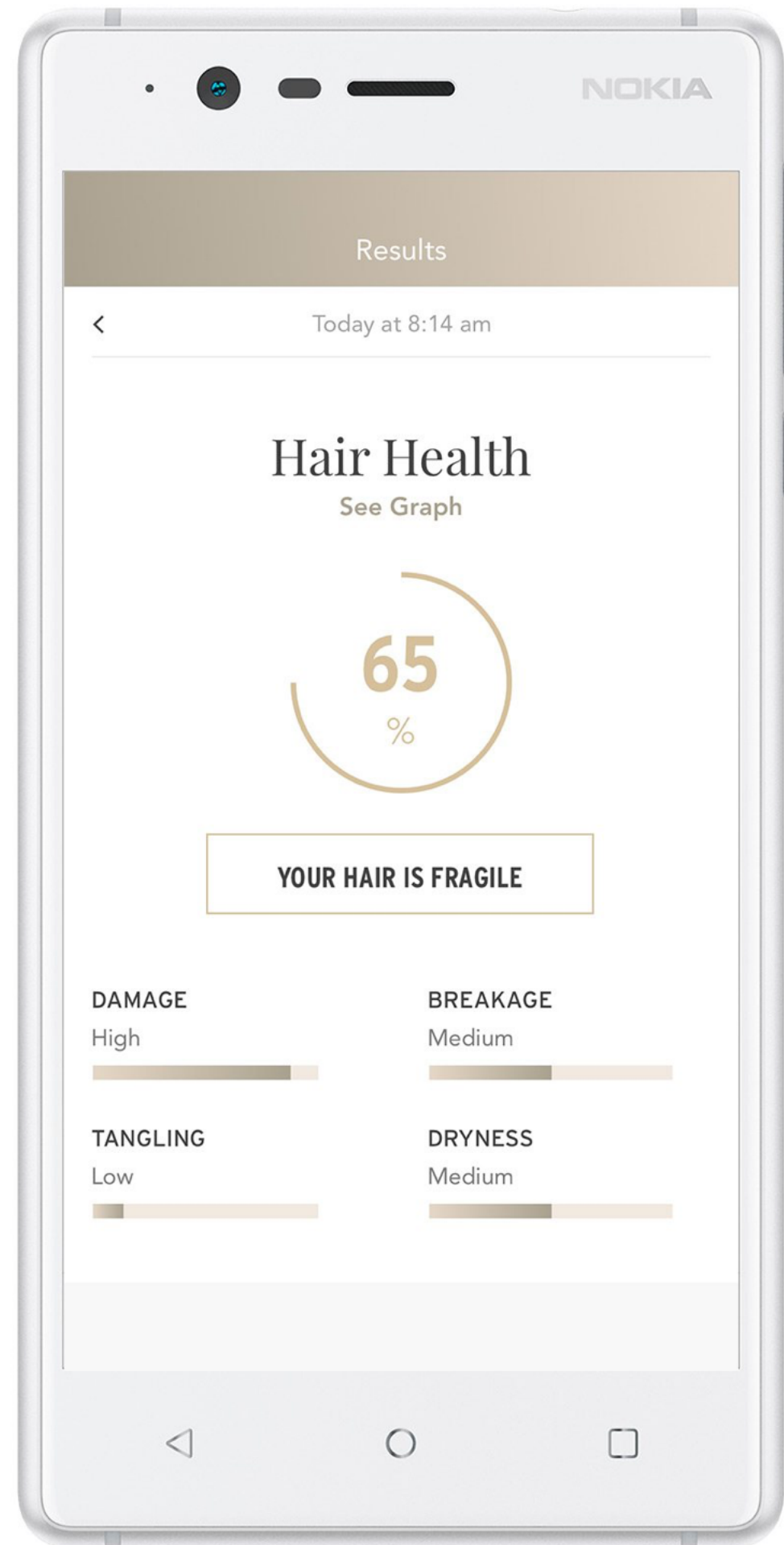
Transmission





Internet of Things









Como Huggies TweetPee funciona

Design ergonômico

O design busca o conforto e segurança do bebê. Fácil de instalar e retirar para utilizar na próxima fralda.



O sensor da fralda monitora a umidade e envia um sinal quando o bebê faz xixi



Todos que têm a permissão para acompanhar a atividade do bebê são notificados



Através do APP mães e papais conseguem comprar fraldas sem sair de casa.



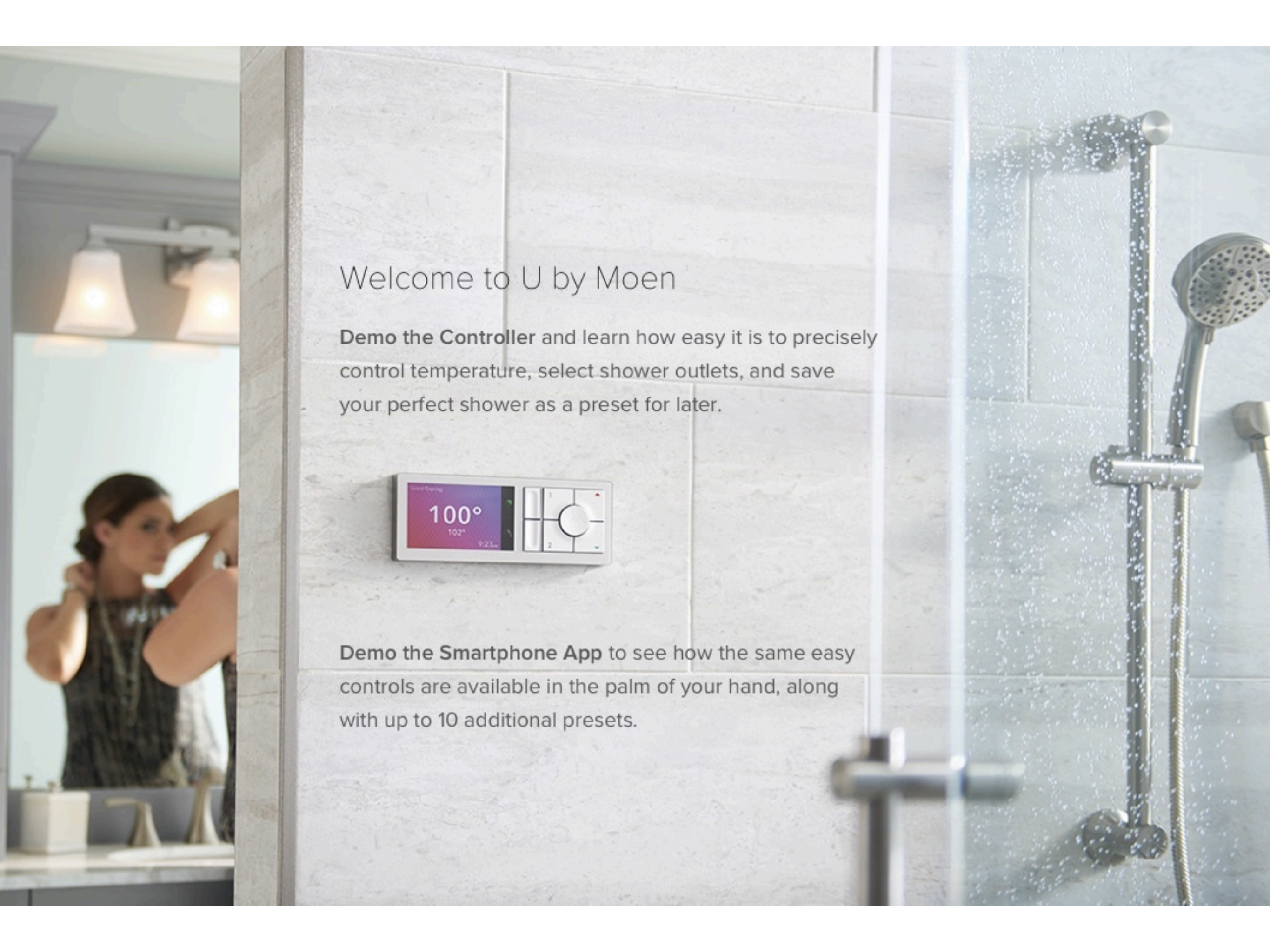
Conheça TweetPee

Como funciona

Pelo histórico de troca de fraldas do bebê, você acompanha a quantidade usada por dia

Jan	
28	6 trocas
29	9 trocas
30	4 trocas
31	6 trocas
Fev	



A woman is seen in the background, looking into a mirror and adjusting her hair. The scene is set in a modern bathroom with light-colored stone tiles. A Moen U by Moen shower controller is mounted on the wall, displaying a temperature of 100°F. To the right, a shower head is visible, spraying water. The overall atmosphere is clean and contemporary.

Welcome to U by Moen

Demo the Controller and learn how easy it is to precisely control temperature, select shower outlets, and save your perfect shower as a preset for later.

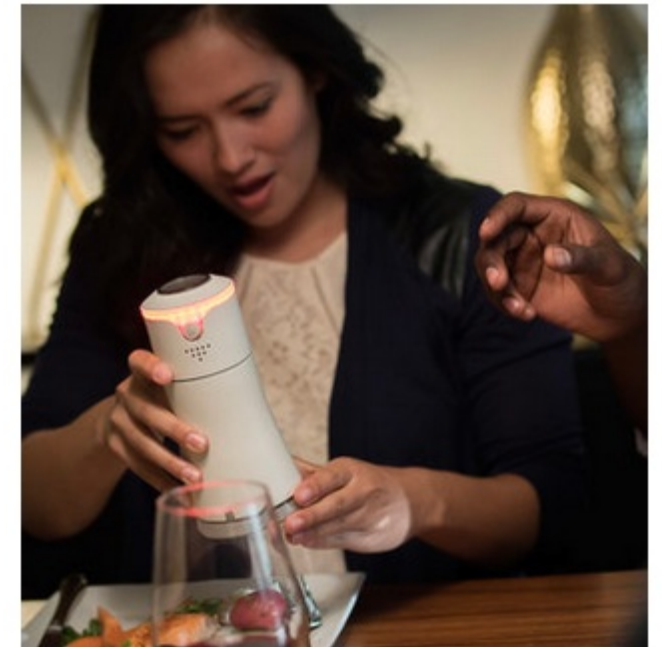


Demo the Smartphone App to see how the same easy controls are available in the palm of your hand, along with up to 10 additional presets.



SMALT with voice

Connect SMALT with Amazon Echo and simply say "Alexa, dispense half a teaspoon of salt".



Bring the flavor

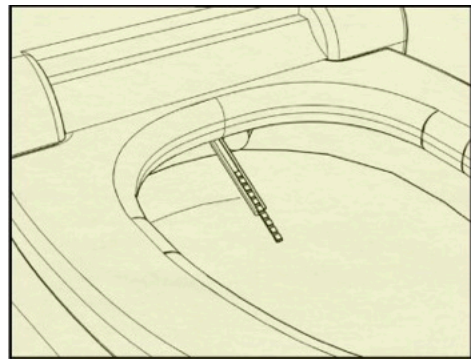
SMALT dispenses salt with a shake/pinch of your smartphone screen or simply turning the dial manually.

What does i.Con do with its data? Can I use it anonymously?

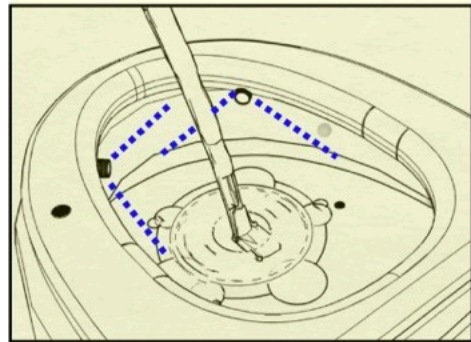
“Absolutely! All data will be kept anonymous but users will have the option to share their recent data with friends, or, indeed the world. You will be able to anonymously access stats that you can compare with i.Con users worldwide.”



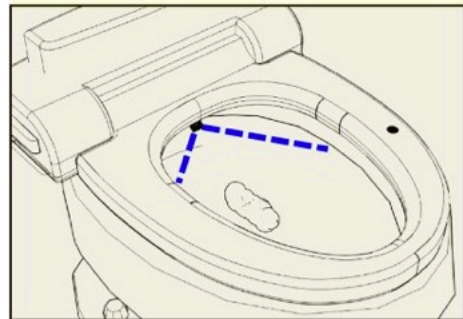




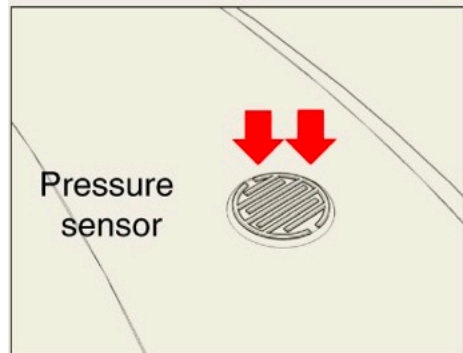
Urinalysis



Uroflowmetry



Bristol stool form scale

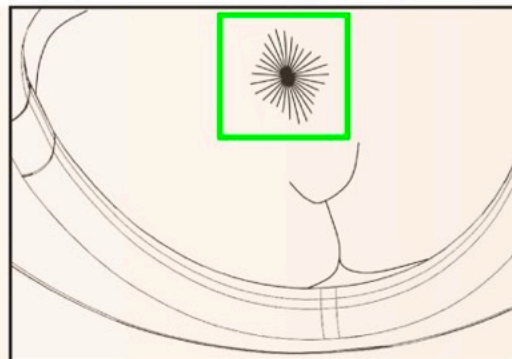


Pressure sensor

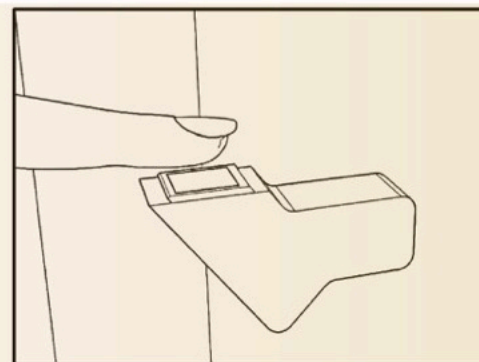
Seating time
defecation time

- (i) Pressure sensor
- (ii) Motion sensor (PIR)
- (iii) Urinalysis strip

- (iv) Stool camera
- (v) Anus camera
- (vi) Uroflow camera



Analprint scan



Fingerprint scan



Cloud-based
health portal



YOU GET CONNECTED!

AND YOU GET CONNECTED!

EVERYTHING GETS CONNECTED!

[Home](#) > [Data Protection](#) > [Internet of Things](#)

SLIDESHOW

The internet of insecure things: Thousands of internet-connected devices are a security disaster in the making



By [Josh Fruhlinger](#), CSO | Oct 12, 2016 4:00 AM PT

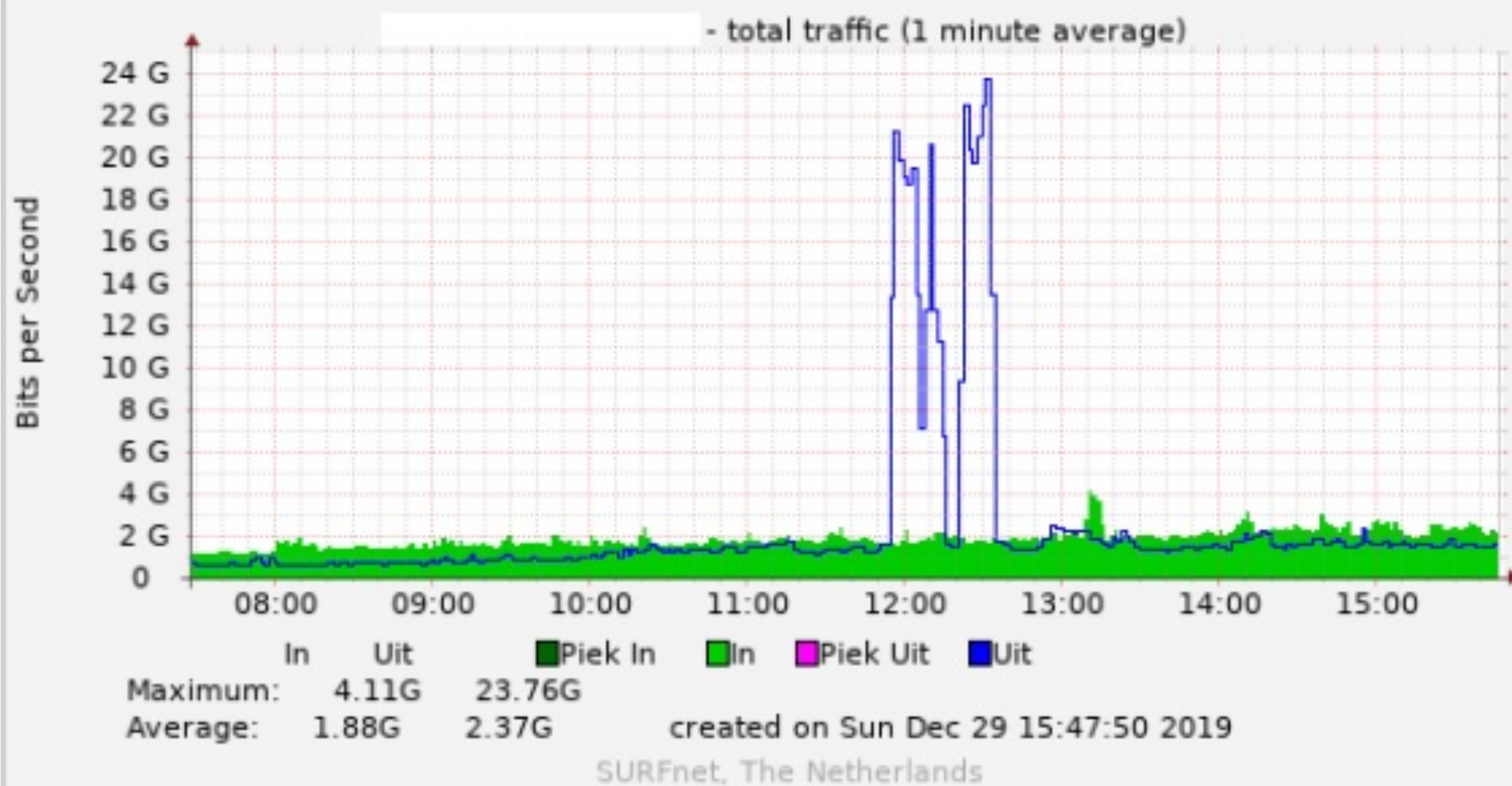


The "S" in IoT
stands for
SECURITY





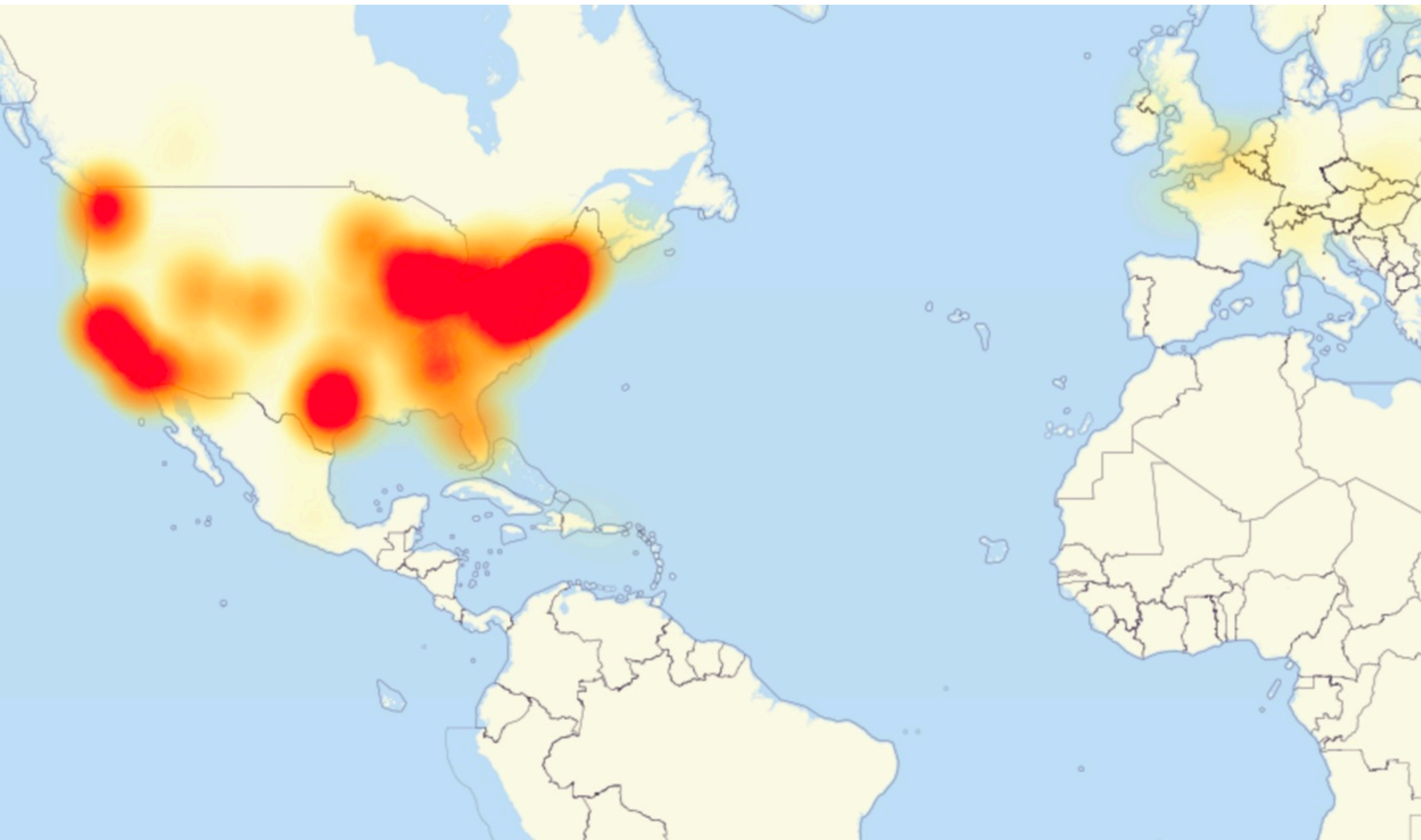




Mirai vs DynSM

1.2 Tbps

From 'only' 100.000 devices



This guy's light bulb performed a DoS attack on his entire smart house



Kashmir Hill

3/03/15 9:41am · Filed to: REAL FUTURE ▾



182



RISK ASSESSMENT —

BrickerBot, the permanent denial-of-service botnet, is back with a vengeance

New botnet squadrons wage fiercer, more intense attacks on unsecured IoT devices.

DAN GOODIN - 4/24/2017, 10:43 PM



Home > Security > Cybercrime & Hacking



SECURITY IS SEXY

By **Darlene Storm**, Computerworld | FEB 2, 2015 12:09 PM PT

About

Most security news is about insecurity, hacking and cyber threats, bordering on scary. But when security is done right, it's a beautiful thing...sexy even. Security IS sexy.

NEWS ANALYSIS

Hacker hijacks wireless Foscam baby monitor, talks and freaks out nanny

This is the third time news has circulated about some jerk hijacking a wireless Foscam camera/baby monitor and made his virtual intrusion known by talking. Please change the default password!



MORE LIKE THIS

Hacker strikes again: Creep hijacks baby monitor to scream at infant and...



2 more wireless baby monitors hacked: Hackers remotely spied on babies and...



Eerie music coming from wireless baby cam; is it a

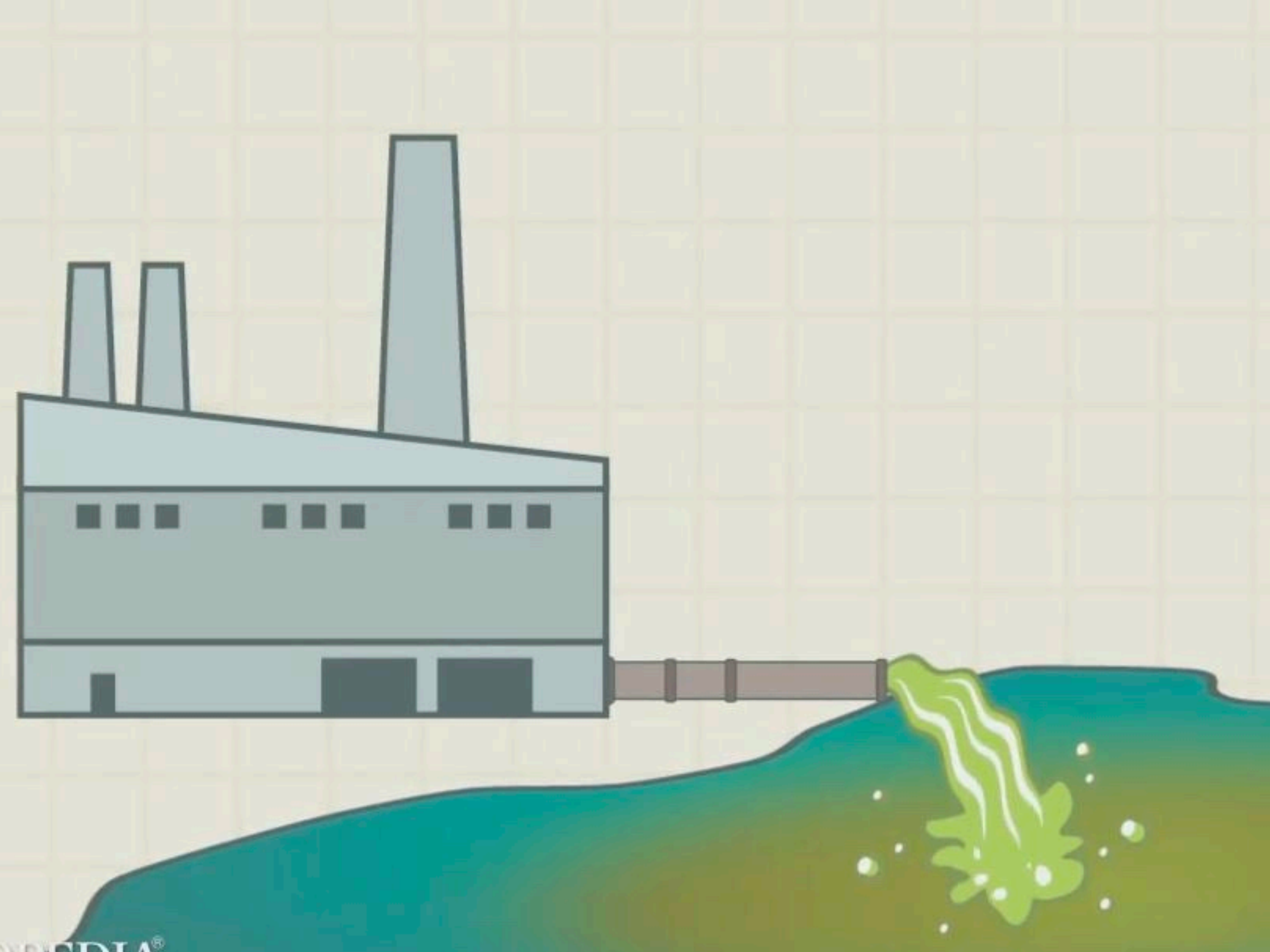


IS-1
ST. JUDE MEDICAL
Sylmar, CA USA
VICTORY™ SR
5610 SSIR
S/N 1723182





NOT MY PROBLEM...





NOT MY PROBLEM...

— HOW LONG YOU'VE HAD YOUR SMART APPLIANCE —

6 MONTHS

1 YEAR

5 YEARS

10 YEARS

BEST-CASE

YOU'RE CONSTANTLY
BEING RESCUED FROM
PERIL BY A FACELESS
TEAM OF ENGINEERS
WHO COULD WANDER
AWAY AT ANY TIME

WORST-CASE

YOUR APPLIANCE IS
PART OF A BOTNET RUN
BY ORGANIZED CRIME





IoT products required to meet minimum security standards starting 2024

🕒 2 min. read

⚡ [View original](#)

The European Commission has imposed minimum requirements for the security of IoT products, better known as smart devices, starting in 2024. If they do not meet these standards, the product will be banned from the EU market. The EU cybersecurity requirements for consumer products have been introduced as an addition to the EU Radio Equipment Directive (RED). You can read the press release from the Dutch central government [here](#).





DETECT SMOKE
AND CO

CONTROL
SWITCHES AND
OUTLETS



CONTROL
LIGHTING

CONTROL
SHADES AND
BLINDS



ADJUST
CLIMATE

UNLOCK AND
LOCK DOORS

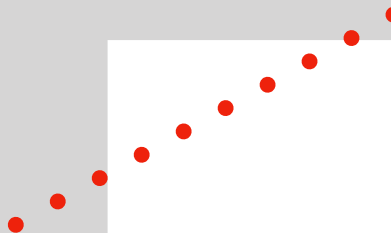
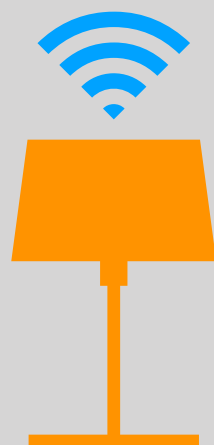
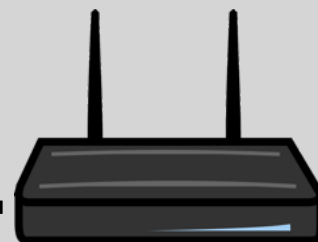
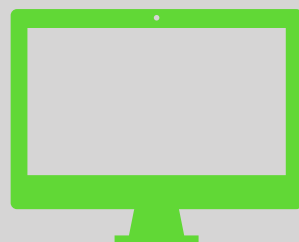
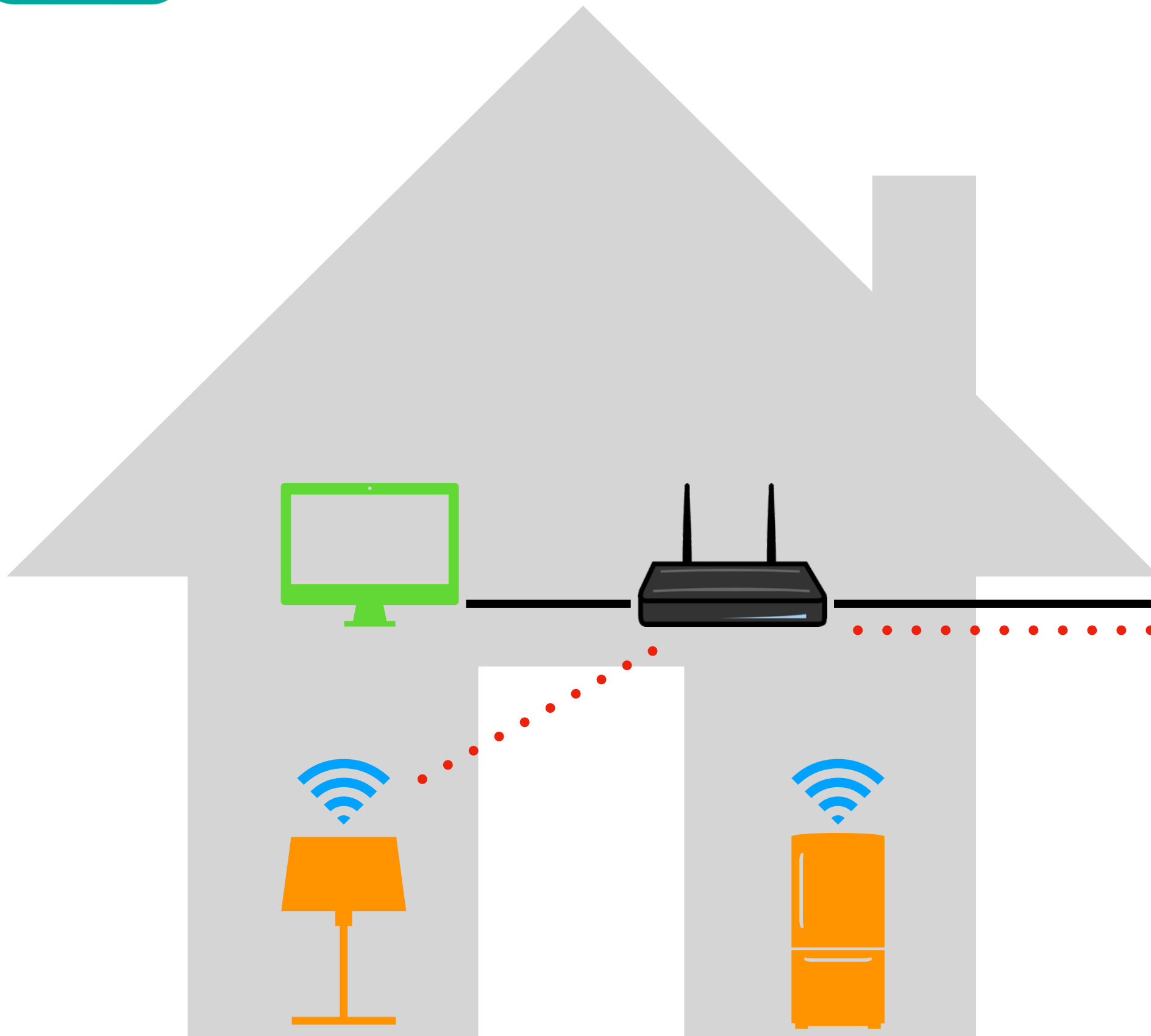
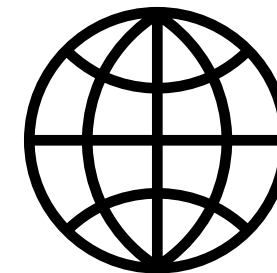


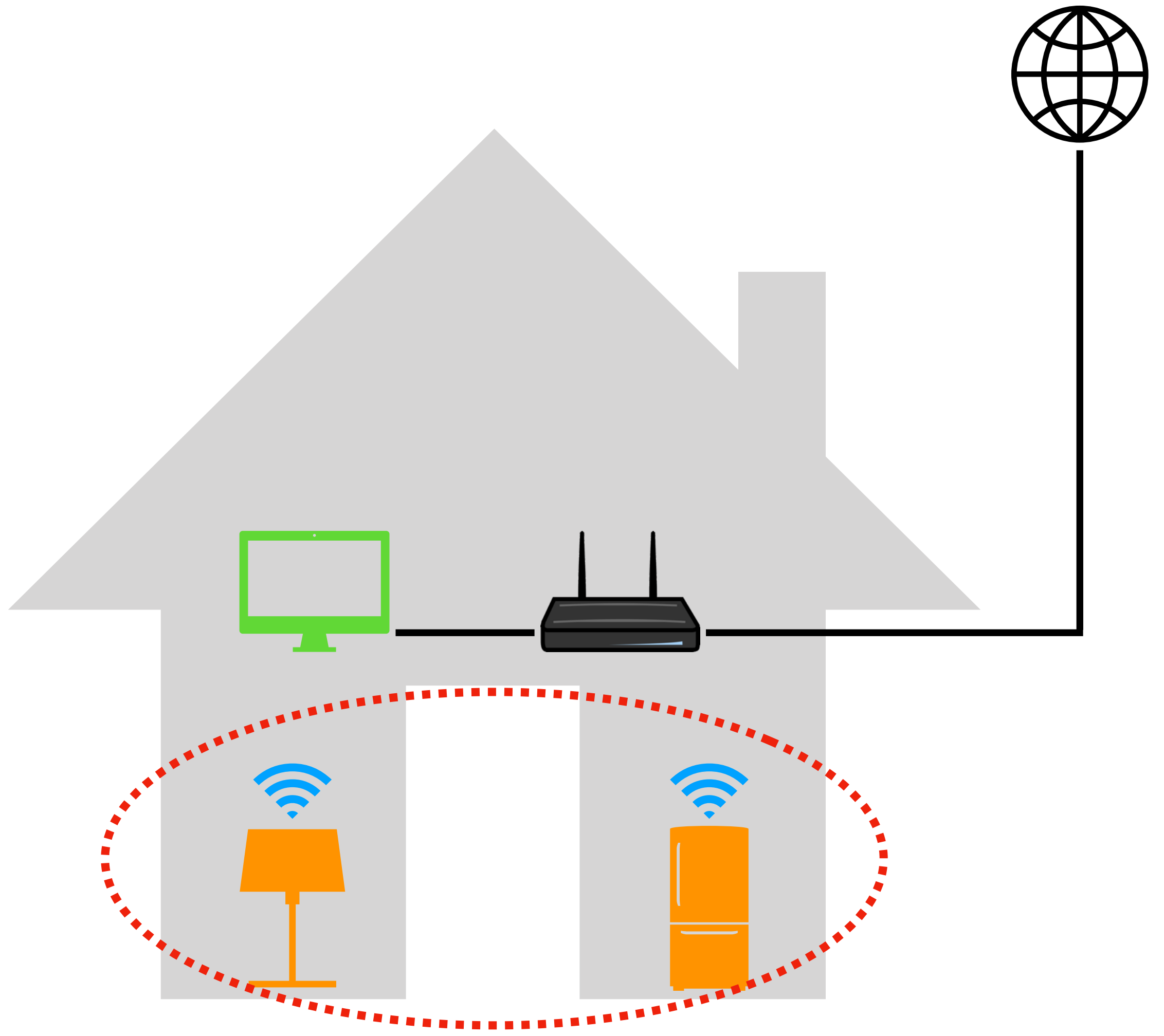
OPEN AND CLOSE
GARAGE DOORS

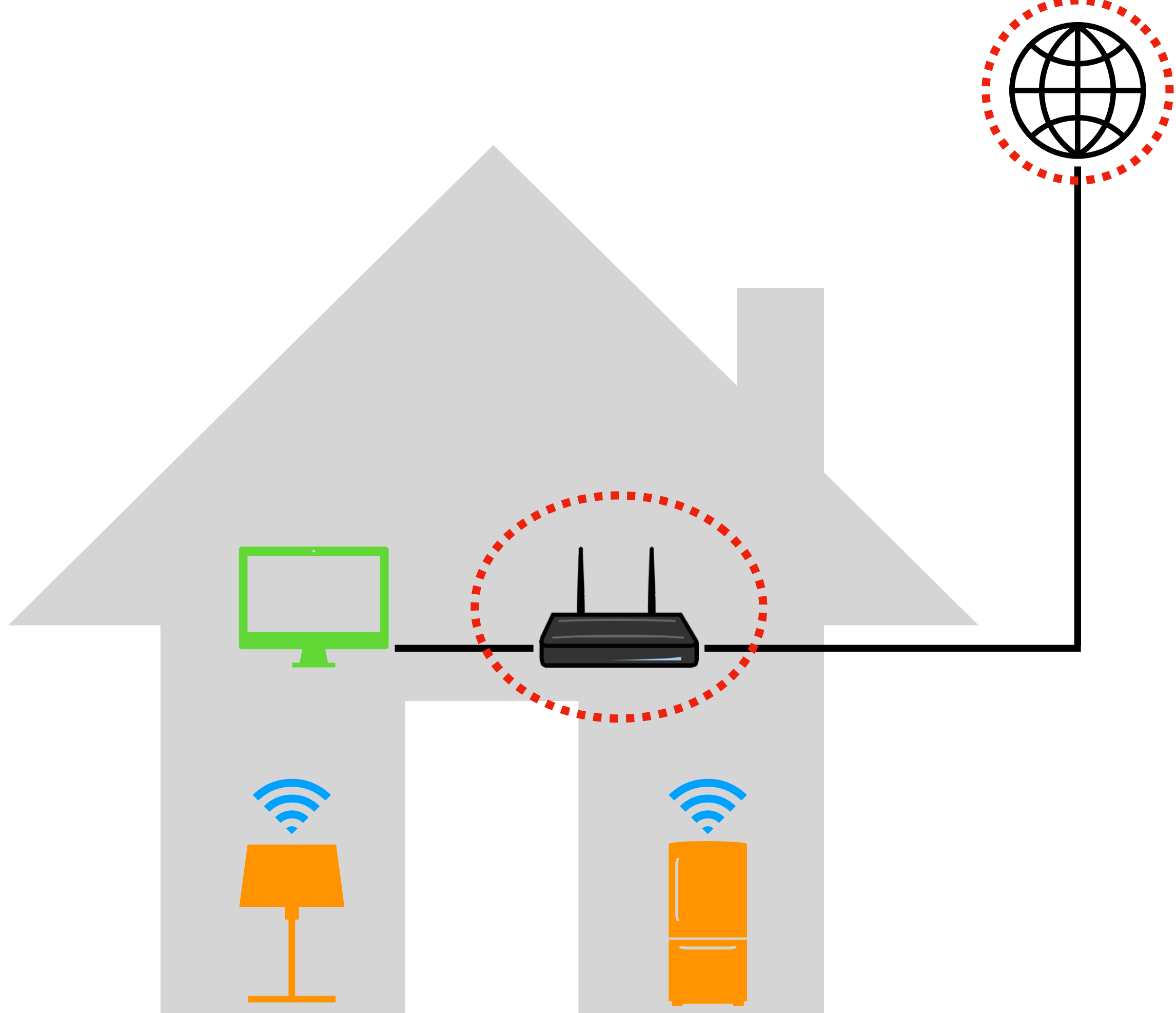


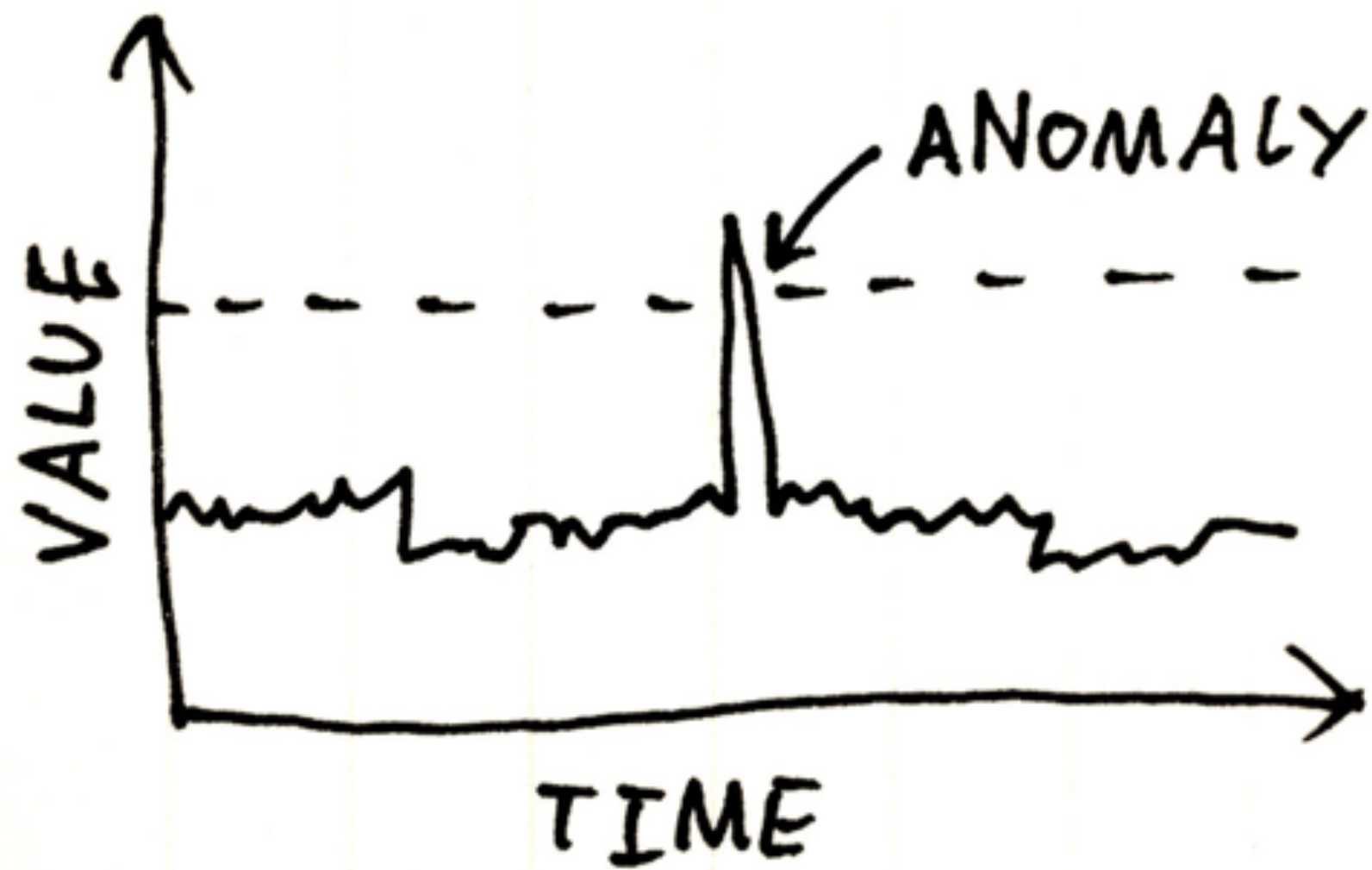
MONITOR
YOUR HOME











[[Docs](#)] [[txt](#)|[pdf](#)] [[draft-ietf-opsa...](#)] [[Tracker](#)] [[Diff1](#)] [[Diff2](#)] [[Errata](#)]

PROPOSED STANDARD

[Errata](#) [Exist](#)

Internet Engineering Task Force (IETF)

E. Lear

Request for Comments: 8520

Cisco Systems

Category: Standards Track

R. Droms

ISSN: 2070-1721

Google

D. Romascanu

March 2019

Manufacturer Usage Description Specification

Abstract

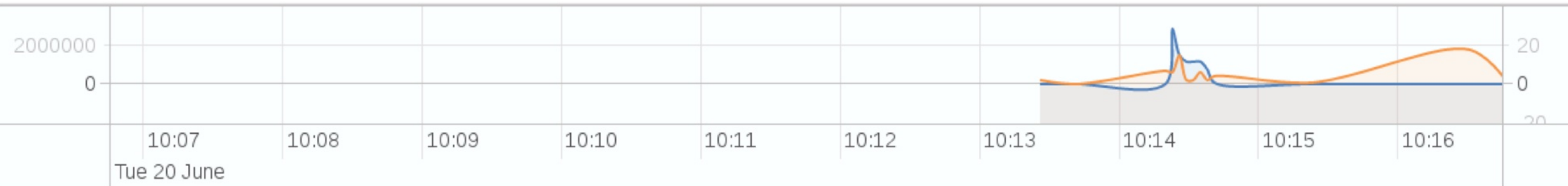
This memo specifies a component-based architecture for Manufacturer Usage Descriptions (MUDs). The goal of MUD is to provide a means for end devices to signal to the network what sort of access and network functionality they require to properly function. The initial focus is on access control. Later work can delve into other aspects.

This memo specifies two YANG modules, IPv4 and IPv6 DHCP options, a Link Layer Discovery Protocol (LLDP) TLV, a URL, an X.509 certificate extension, and a means to sign and verify the descriptions.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in [Section 2 of RFC 7841](#).



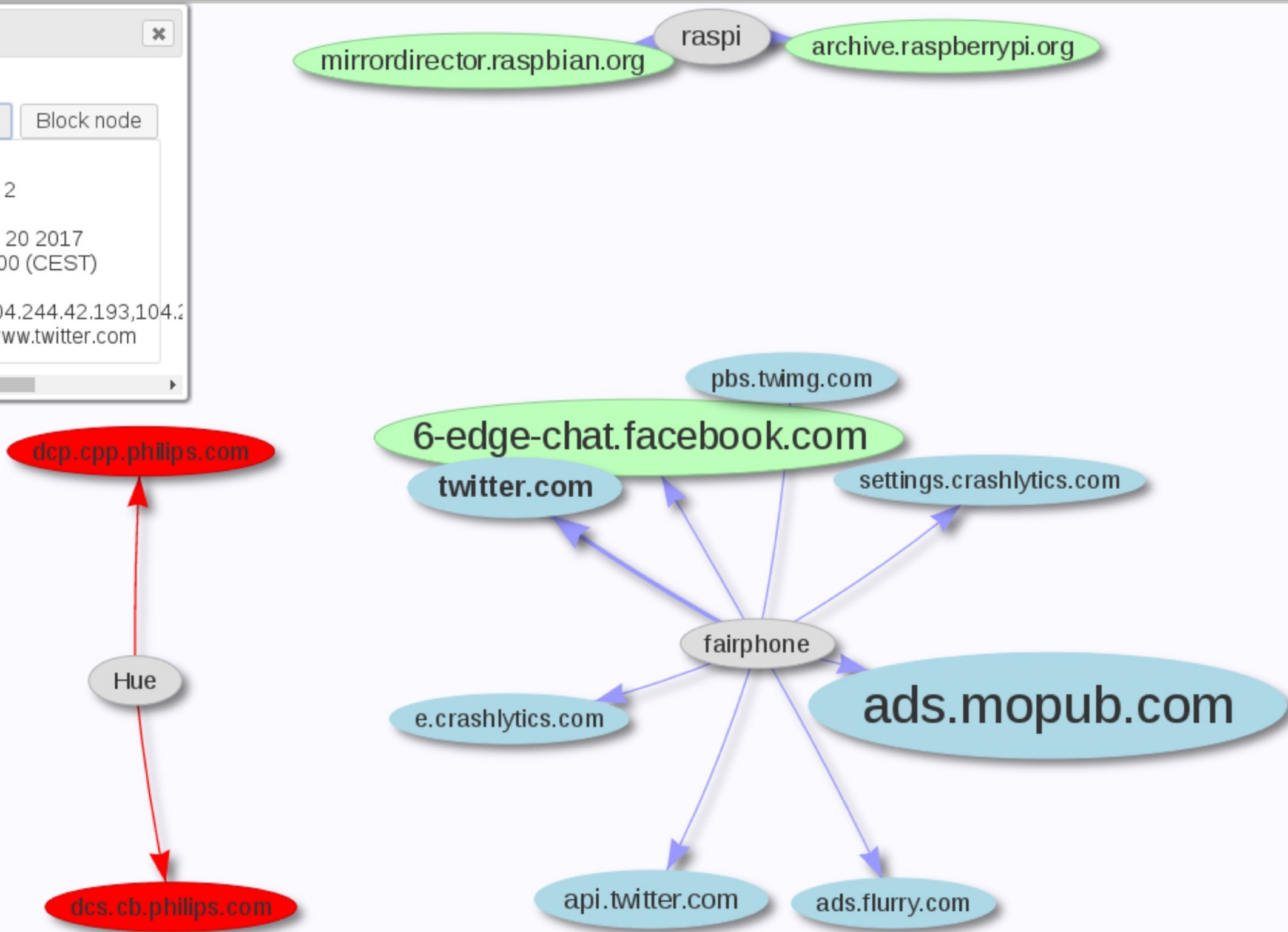
twitter.com

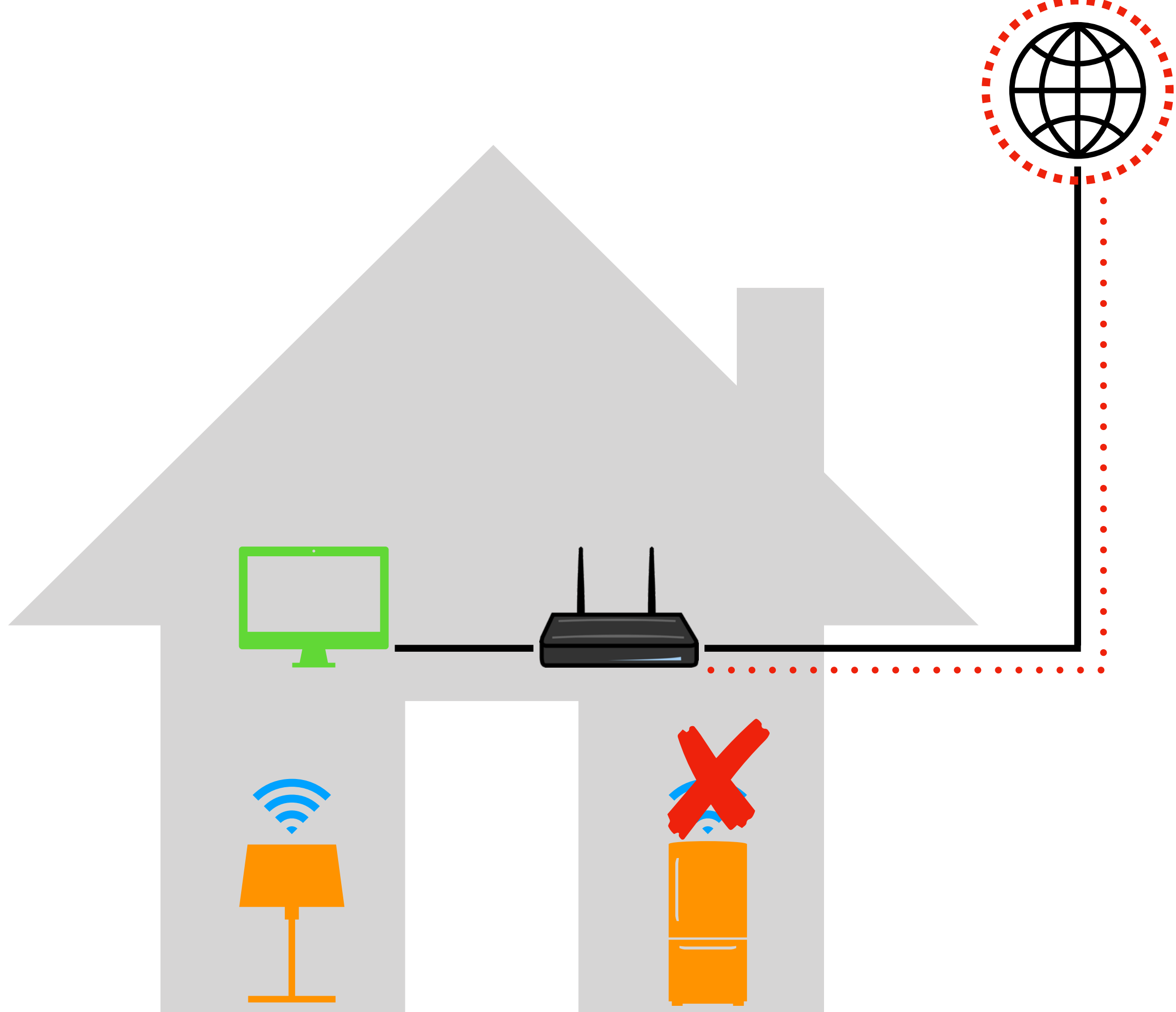
Ignore this node

Rename this node

Block node

Node: 35
Connections seen: 2
Traffic size: 1850
Last seen: Tue Jun 20 2017 10:14:35 GMT+0200 (CEST)
IP: 104.244.42.129,104.244.42.193,104.244.42.253
DNS: twitter.com,www.twitter.com







CAUTION

KEEP OUT

QUARANTINE

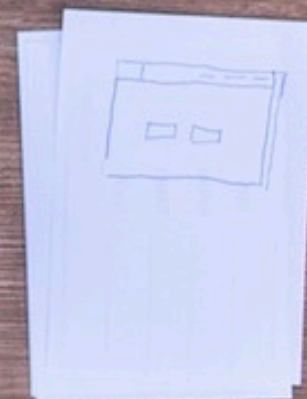




LoRaWAN™



IOT FACTORY







I'm watching you







ENERG



SUPPLIER'S NAME

MODEL IDENTIFIER



XYZ kWh/annum



XYZ L or m³



XY°C

XY°C



XYZ m²

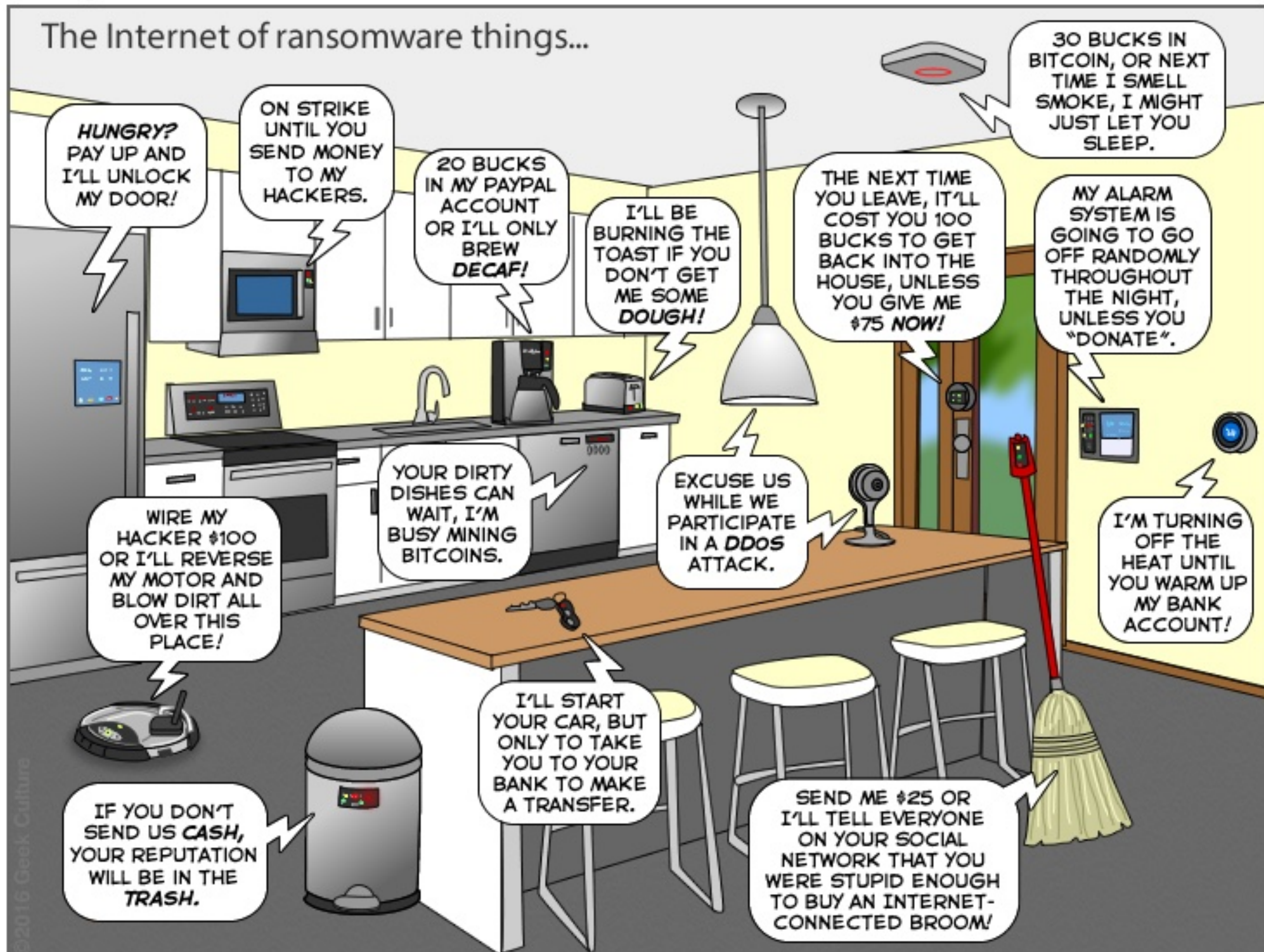


XY°C

XY°C

2019/2018

The Internet of ransomware things...



Q&A

<https://spin.sidnlabs.nl>

<https://github.com/sidn/spin>

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