Internet das Coisas na Web

nic.br cgi.br | W3C® Brasil

Reinaldo Ferraz
@reinaldoferraz


W3C®
Brasil


ceweb.br


cgi.br
nic.br

MACHINE TO MACHINE

VS


SAMSUNG
12:45
Tue, 30 June
20°
London
Google
Say "Ok Google"
Email
Camera
Play Store
Google
Phone
Contacts
Messages
Internet
Apps

A Internet das Coisas tem um enorme potencial.

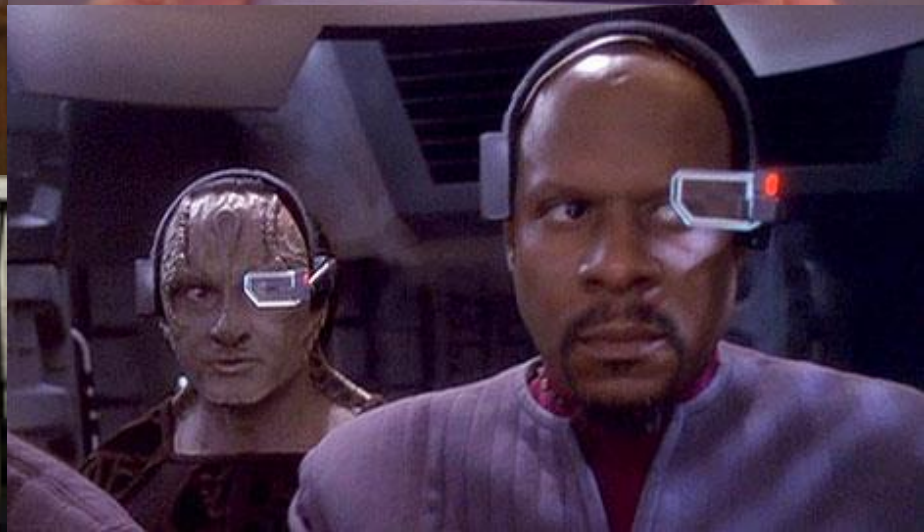
"You won't need to hunt anxiously for your missing shoes in the morning, you'll Google them."

Bruce Sterling, 'Shaping Things'

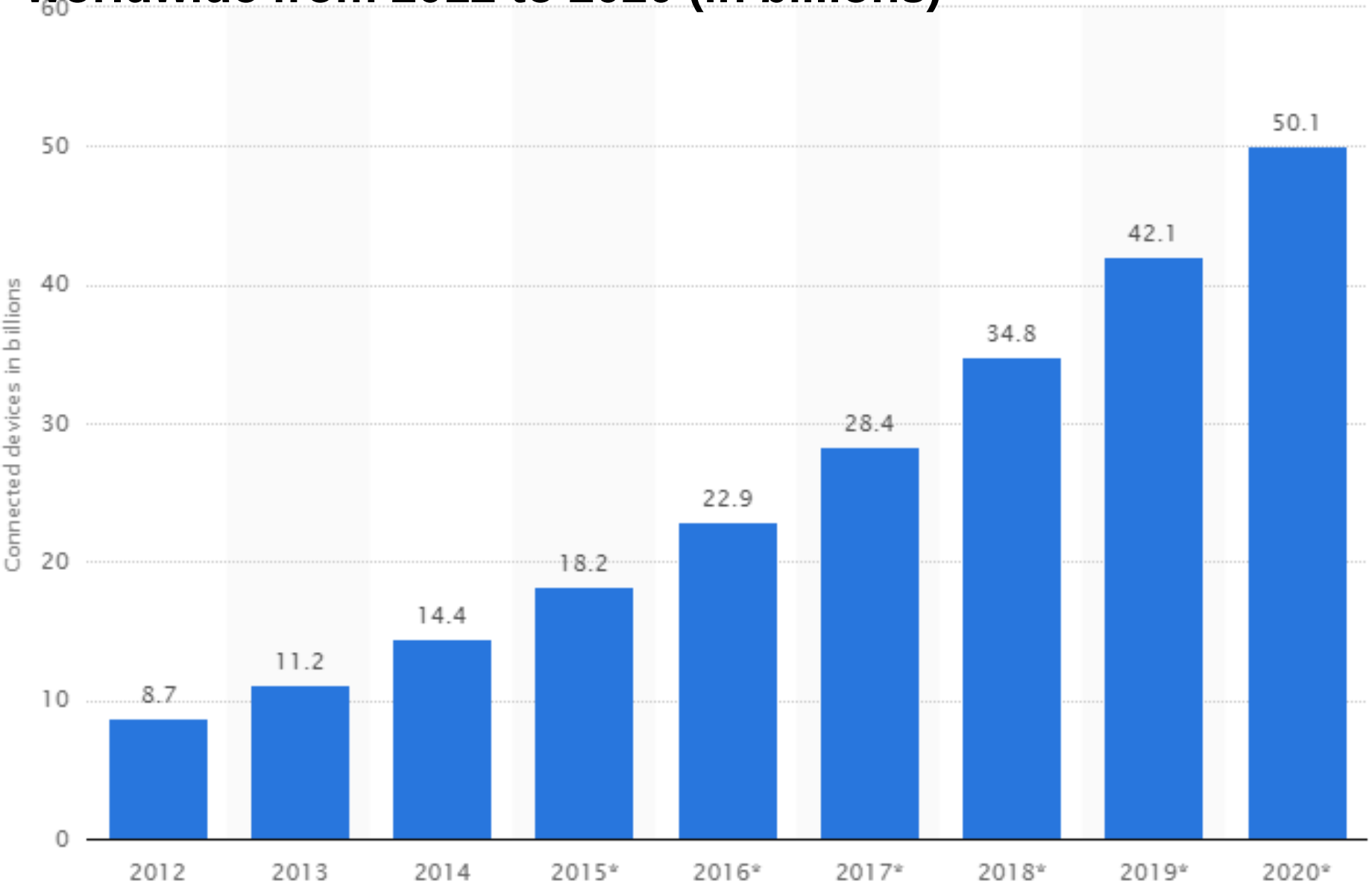

PHONE


FLAME THE DARK TRUE
SALT WAY LINK
COMPLETE STRIKE
LIMITS VICTORY
FROSTED WAKE
SIMPLE HESITATION


Needles, Douglas J.
Age: 47
Birthday: August



Internet of Things (IoT): number of connected devices worldwide from 2012 to 2020 (in billions)



Fonte: https://www.statista.com/statistics/471264/iot-number-of-connected-devices-worldwide/

Podemos conectar tudo a Internet

"Because We Can!"

Sheldon Cooper, Leonard Hofstadter,
Raj Koothrappali and Howard Joel Wolowitz
https://www.youtube.com/watch?v=BVd-rYIqSy8

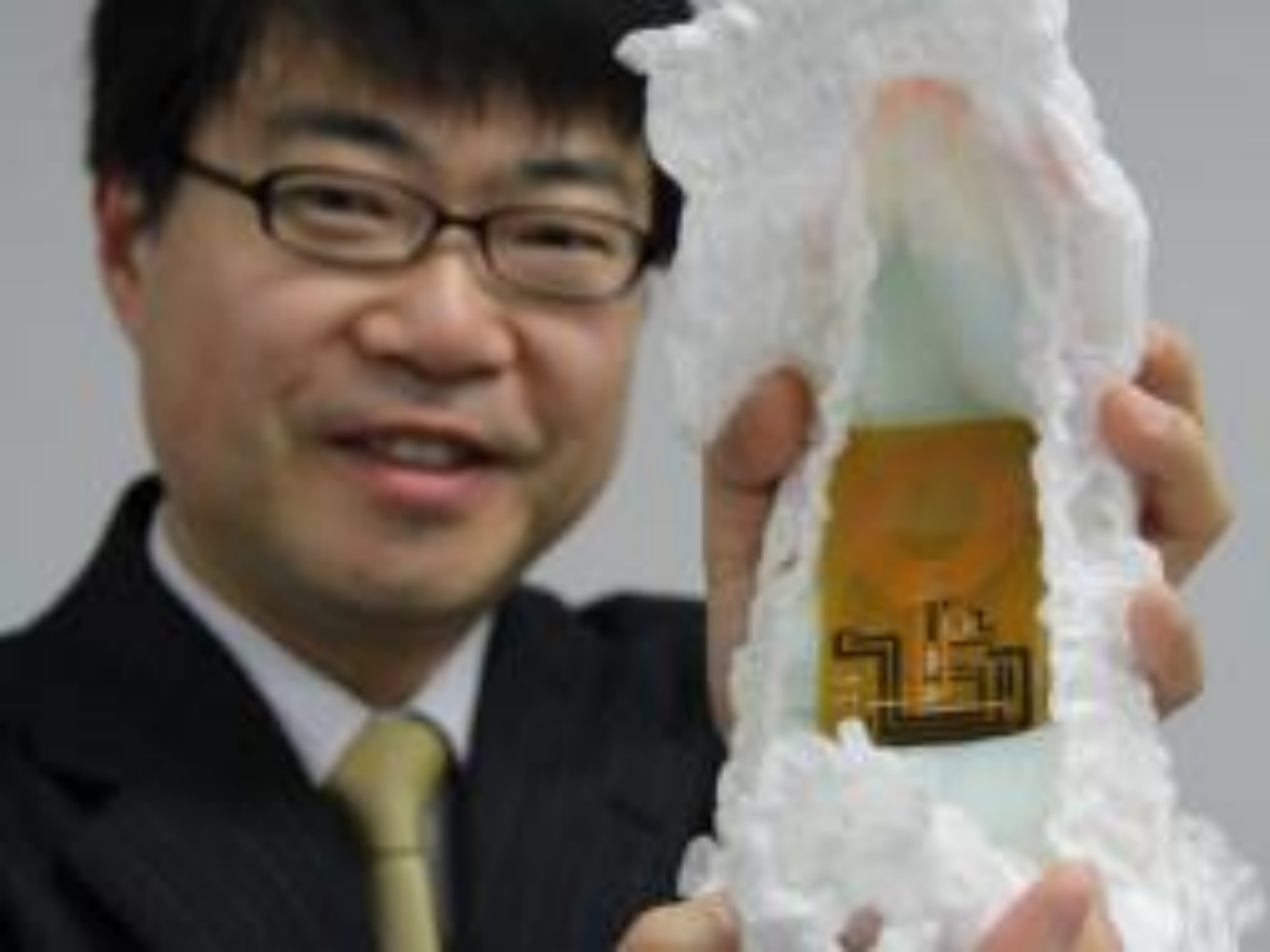

12:45
Mon, 24 Feb


12680
fitbit


iKeg SaaS Engine
Gateway wireless and celluar enabled

COURTESY: MATT RICHARDSO


COFFEE



The Internet of Useless Things

Principles Submit

February 06

Who's the most proficient crapper in your office?

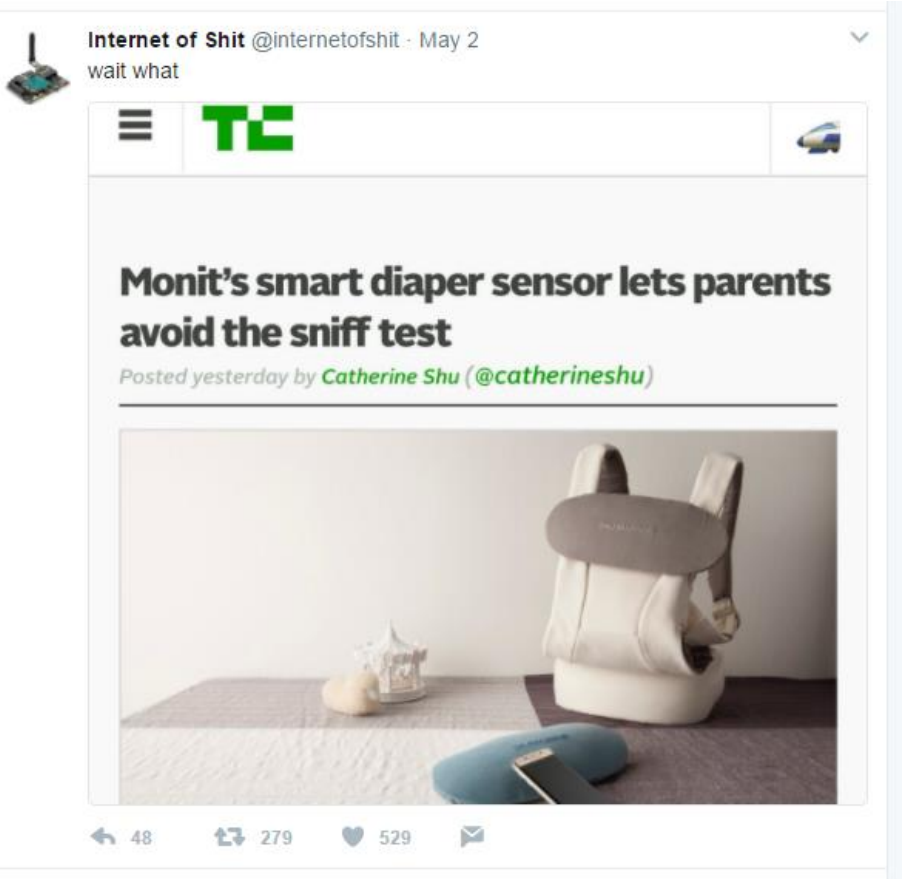
Throne Master

The time has come. Push to play.

Gamify your daily motions. Advanced on-board analytics allows you to compare and compete with your family or colleagues, showing who makes the biggest wins in the smallest room.

Contribution from @tomcoates

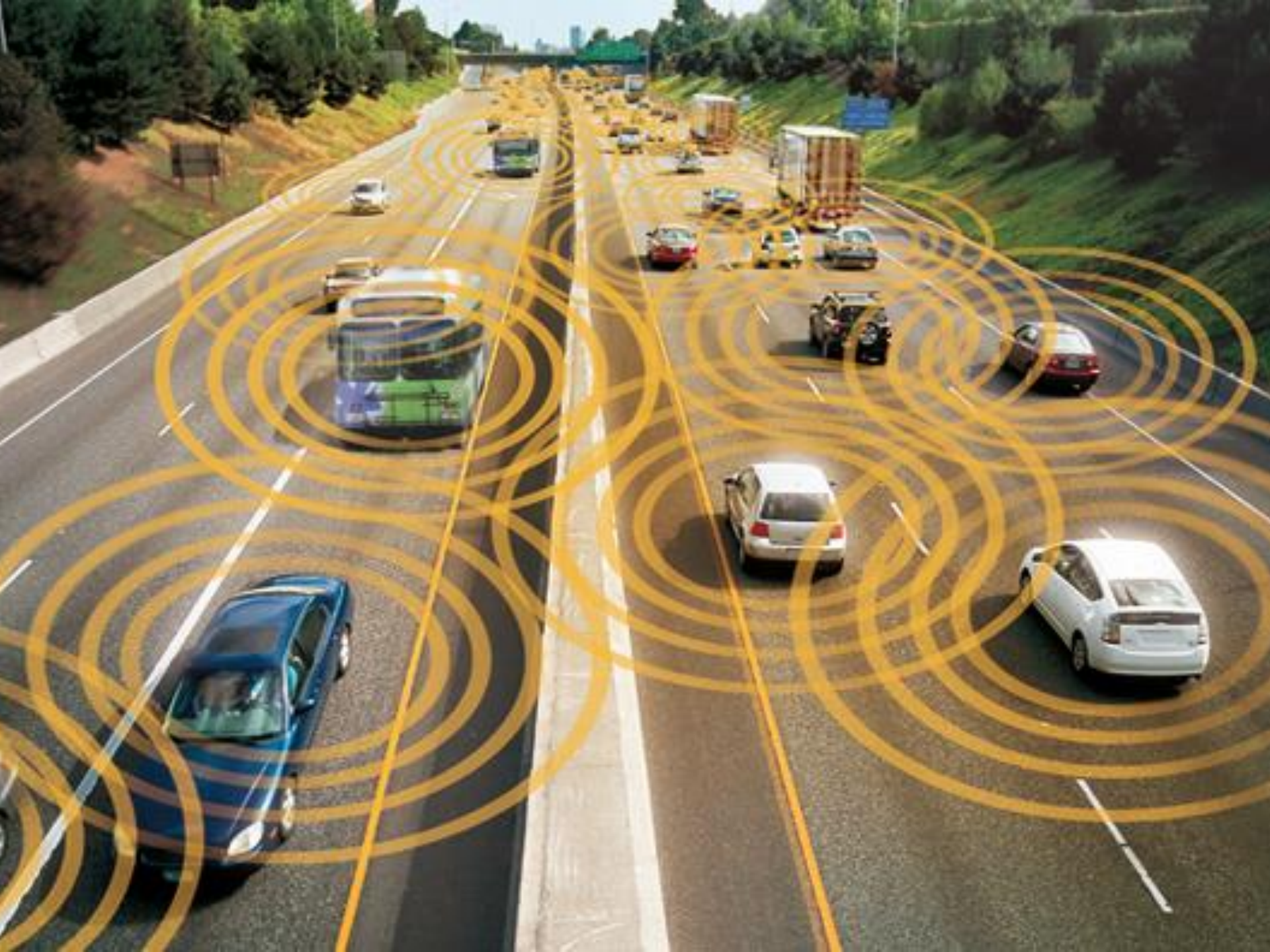
February 06



Mas isso não é IoT, e sim IoS (Internet of Sensors)

"Leve o casaco porque vai esfriar!"

Sua geladeira.

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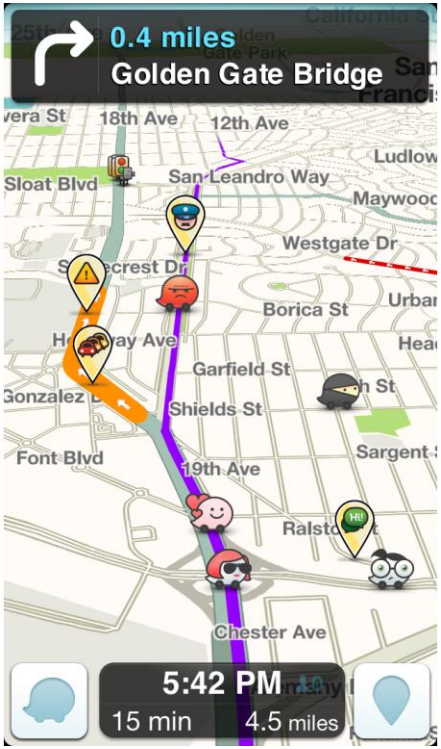
Skype
AccuWeather
WSJ Live
Web Browser
Picasa
TIME
TIME TV
USA TODAY
This Day in History
Viewster
eTuner
Logout
WallPaper
Account Manager
Tools
Return
SmartTV@samsung.com


AC•DC
BRIGHT
ON VOL


Good Morning
Driving to: Work?
Via: US Hwy 101 N
21 min.
1.7 mil
11:25
Routes
Go
23 Friends online
3 Driving there


0.4 miles
Golden Gate Bridge
18th Ave
12th Ave
Sloat Blvd
San Leandro Way
Westgate Dr
Borica St
Garfield St
Shields St
Font Blvd
19th Ave
Chester Ave
5:42 PM
15 min
4.5 miles


mother.
mother knows everything®
INCLUDED PACK OF 4
MOTION
cookie

Big data vs Small Data

"Forget Big Data –

Small Data Is Driving The Internet Of Things"

Mike Travis, Forbes.


TEMP.
ZZ TOP
ORDER
THE IT-CROWD
LUNGO
FORTE
LAST RIDE 87 KM
TEMP.
BRIGHTNESS

Vídeo
The Social Web of Things

https://www.youtube.com/watch?v=i5AuzQXBsG4


Security and Alarm
Light Control
Motion Sensor
HVAC Control
Door Control
Environmental Control
Window Control
STB
Remote Control

IoT Technologies

Hypertext Transfer Protocol (HTTP) may be used for powered devices with a wired network connection or support for WiFi. HTTP is often used in conjunction with the Representational state transfer (REST) design pattern. HTTP is a client-server protocol, but can be used in a polling mode to handle requests pushed to the device by a server.

Web Sockets is similar to HTTP, but allows for asynchronous message transfer in either direction. Web Sockets is often used with JSON for remote method invocation and event notification.

Constrained Application Protocol (CoAP) is designed as an IP protocol for embedded or constrained devices. It translates easily to HTTP for integration with the Web and RESTful APIs. It also supports notifications pushed from a server to the device. CoAP is often used together with 6LoWPAN for short range wireless connections

6LoWPAN is short forIPv6 over Low power Wireless Personal Area Networks. It is layered on top of the IEEE 802.15.4 standard for the physical layer and media access control for personal area networks, and may be used in conjunction with CoAP.

ZigBee is a low power wireless communications technology optimized for devices requiring a very long battery life. ZigBee is layered on top of the IEEE 802.15.4 standard for the physical layer and media access control for personal area networks.

Near Field Communications (NFC) is a very short range wireless technology and can be used to access sensor readings, and operate door locks, or to open the browser in a smart phone to a URL for a web page relating to the tagged object.

Bluetooth is a short range technology with a suite of profiles for different categories of applications. Bluetooth Low Energy (BLE) offers extended battery life. It can be used for exchange of small amounts of data, either in a broadcast mode or for bidirectional connections. This is expected to be of increasing importance for applications running on smart phones or tablets. The W3C Bluetooth Community Group is drafting an API based upon the GATT profile for BLE, and Google have proposed the use of BLE for broadcasting URLs as part of their vision for the Physical Web.

IoT Technologies

ANT is a proprietary sensor network technology operating in the 2.4 GHz band. It can be used to transfer small amounts of data across networks with hundreds of sensors.

DASH7 is designed for long lived battery operated sensor networks, it works in the 433 MHz unlicensed band. The range is up to 1000m depending on power levels and data rates. Like ZigBee and BLE, DASH7 is aimed at transferring small amounts of data, and unsuitable for audio or video.

KNX for buildings s a standardized (EN 50090, ISO/IEC 14543), OSI-based network communications protocol for intelligent buildings. KNX is the successor to, and convergence of, three previous standards: the European Home Systems Protocol (EHS), BatiBUS, and the European Installation Bus (EIB or Instabus). The KNX standard is administered by the KNX Association. KNX can be realized over a mix of networking technologies, e.g. twisted pair cable, powerline networking, radio (KNX-RF), infrared and conventional ethernet.

EnOcean is a similar protocol to KNX for sensors that are self powered, e.g. harvesting energy when you push a switch that is sufficient for sending 2 or 3 packets. The sensors are quite expensive (e.g. 60 CHF) but available for motion sensors (light and thermal IR), beds, seats, window handles and so forth.

Infrared is widely used for remote control of TVs, air conditioners etc. Infrared was popular for PDAs and laptops in the late 90's and early 2000's, but lost ground to RF technologies such as WiFi and Bluetooth. Infrared is making a comeback for fast transmission of photos from phones to printers etc.

Universal Serial Bus (USB) s an industry standard defining cables, connectors and protocols. It is widely used for connecting devices to computers, e.g. keyboards, mouse pointers, hard drives for storage, game controllers, and also for connecting to printers, scanners, digital cameras, smart phones and tablets. USB is designed to power devices and is commonly used for charging device batteries, replacing the need for a separate cable.

Wireless USB (WUSB) is a standard for connecting devices using a wide band protocol in the 3.1 GHz to 10.6 GHz region. The range is 3 to 10m.

IoT Technologies

IEEE 1394 (Firewire) is a serial connection designed for high speed transfers, and similar in some ways to USB. IEEE 1394 has lost ground to USB as the latter has increased in speed, and due to the need for a separate power connection for Firewire devices.

WiFi ISO 802.11 is a local area network technology for managed or ad hoc networks in 2.4 GHz or 5 GHz bands.

Machine to Machine (M2M) is a generic term for wired or wireless communication technologies between devices. Mobile network operators are promoting cellular M2M, e.g. based upon GSM data modules, for applications such as smart meters.

Low Throughput Network (LTN) is a wide area wireless technology defined by ETSI, and offers long range and minimal battery consumption.

Weightless is a protocol for using white space spectrum for exchanging data between a base station and thousands of client devices. Base stations are directly connected to the Internet. Clients are allocated a schedule of times and frequencies to communicate with their base station. A database is used to avoid interference with local terrestrial TV broadcasts.

MQTT is a lightweight publish-subscribe protocol based upon TCP/IP connections. It is intended for embedded/constrained devices, and needs to be used in conjunction with a message broker.

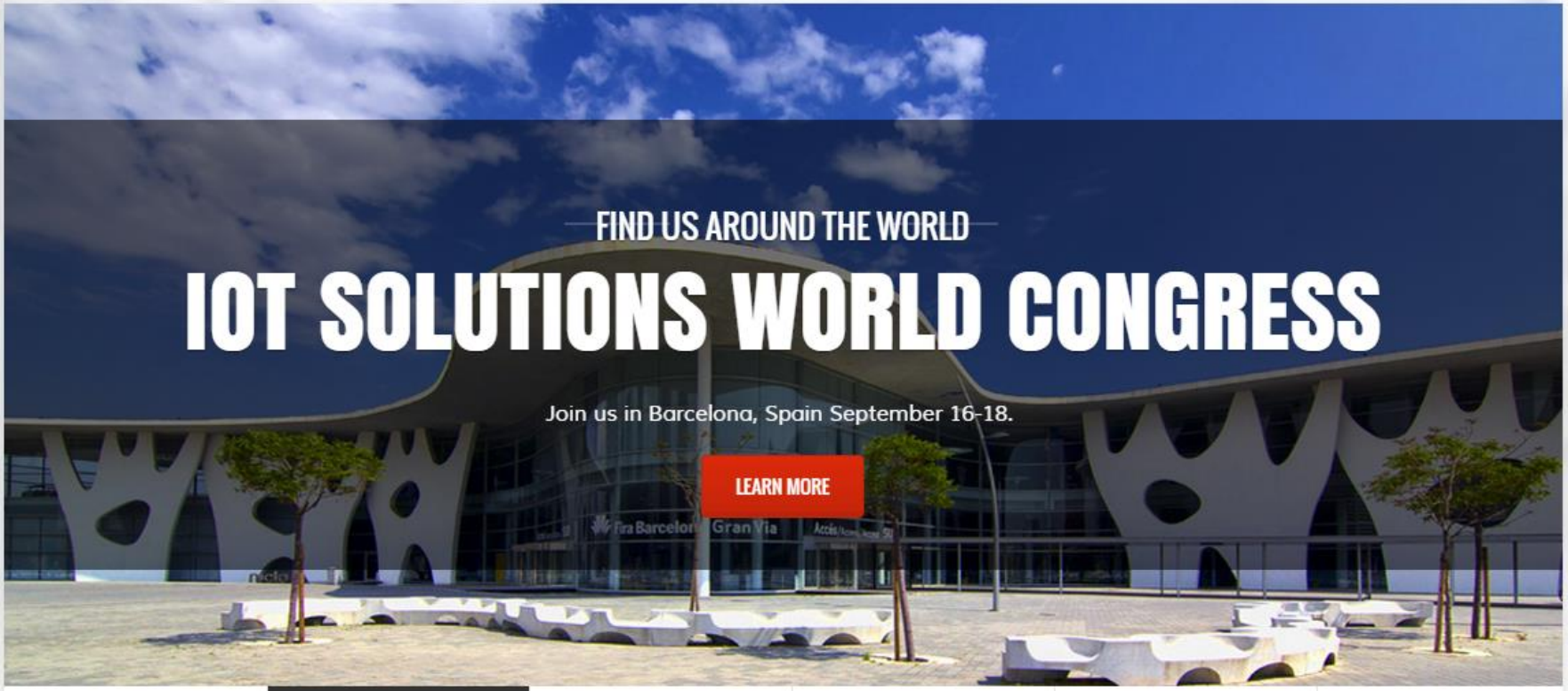
XMPP is an XML based protocol used for presence, instant messaging, and real-time communication and collaboration.

Efficient XML Interchange (EXI) is a binary format for structured data that is suitable for embedded/constrained devices and offers further compression when used with a specific XML schema. It may be used in conjunction with CoAP.

JavaScript Object Notation (JSON) is a textbased representation for structured data that is increasingly popular with Web developers. JSON-LD is a set of conventions for using JSON for linked data.

industrial internet CONSORTIUM

HOME COMMITTEES INDUSTRIES RESOURCE HUB MEMBERSHIP MEMBERS AREA



INNOVATION NEWS | UPCOMING EVENTS | MEMBER LIST | CASE STUDIES | MEMBERS MEETING | THOUGHT LEADERSHIP

Web das Coisas

“Interoperability is critical”

Mike Bell, head of wearables at Intel

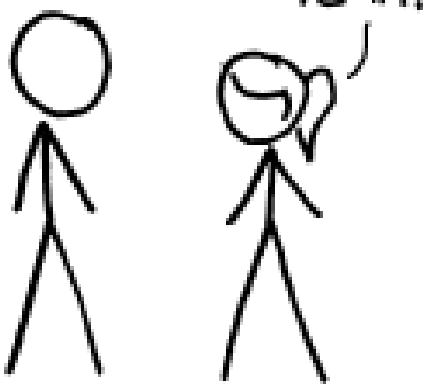
A **Web das Coisas** é essencialmente sobre o papel das tecnologias da Web para **facilitar o desenvolvimento** de aplicações e serviços para as coisas e sua **representação virtual**

HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)

SITUATION:
THERE ARE
14 COMPETING
STANDARDS.

14?! RIDICULOUS!
WE NEED TO DEVELOP
ONE UNIVERSAL STANDARD
THAT COVERS EVERYONE'S
USE CASES.



SOON:

SITUATION:
THERE ARE
15 COMPETING
STANDARDS.

Web Thing Clients

Web Thing

Non-Web Devices

Native Mobile App

Discovers Web Thing

URL: http://gateway.webofthings.io

/model
- Name, Description, Tags
- Actions/Properties model

/actions
- ledState
- reboot
- displayText

Create Actions

Read / Subscribe to Properties

Web App

/properties

Temperature	Light
1,221	579
Time Online	Humidity
00:05:59	33.99%

Web Thing

Control Non-Web Things

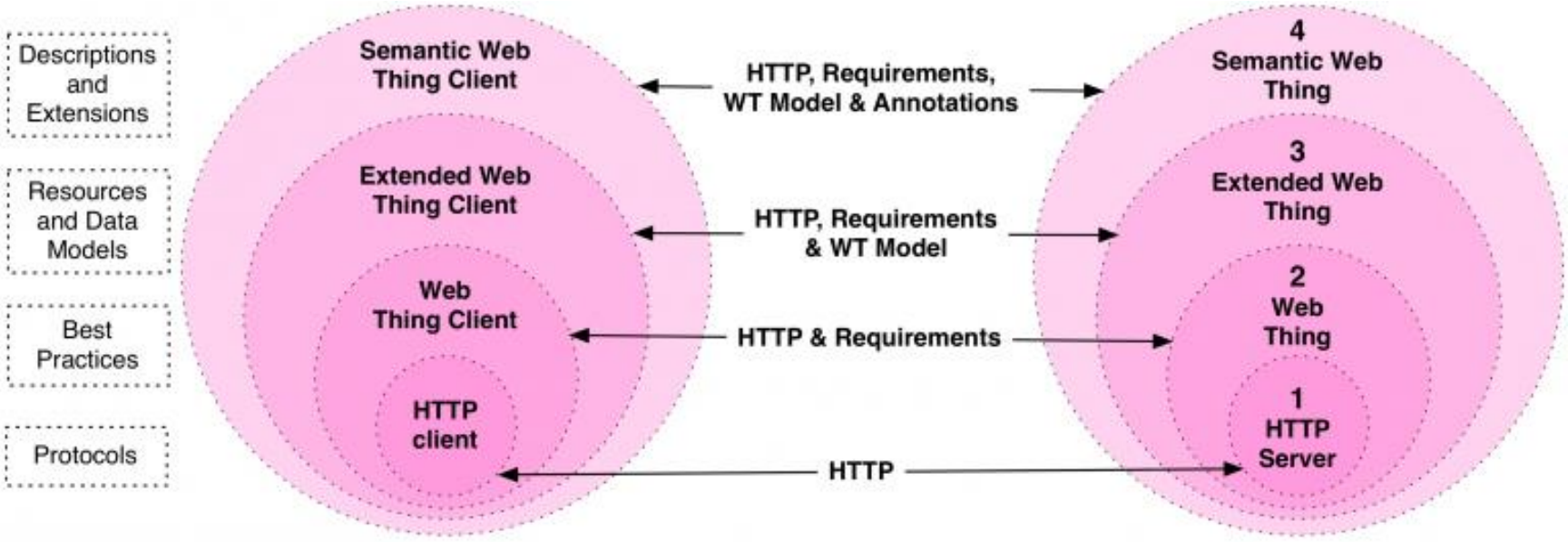
/things

Health Monitor

LilyPad

Bluetooth

ZigBee



Source: Building the Web of Things: book.webofthings.io
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Camada de aplicação e serviços

“Quem quer dinheiro?”

Silvio Santos


Communications
Connected
Managed
Secured
Medical
Smart homes
Industrial
Smart Grid
Building Automation
Vehicles

Padronização é a chave da Internet das Coisas

"The driver goal is with the developers."

Maarten Ectors, Vice President Internet of Things at Canonical Ltd. / Ubuntu


Data Formats
Interface Definitions
Security
W3C®
Privacy
Web Automotiva
Acessibilidade


LOG IN GET
W3C Community and Business Groups
CURRENT GROUPS
REPORTS
ABOUT
Mailing List
Wiki
Chat
RSS
Contact This Group
Home / Web of Things Community Group
Web of Things Community Group
The aim of the Web of Things Community Group (CG) is to accelerate the adoption of Web technologies as a basis for enabling services for the combination of the Internet of Things with rich descriptions of things and the context in which they are used.
Reports
No reports yet published. The Chair is responsible for publishing reports. More about publishing...
News
Get inv
Anyone m
Group. Al
have sign
Contribut
or learn h
account.
Note: Co
proposed
Although
conversat
http://www.w3.org/community/wot/

WEB OF THINGS AT W3C

Web of Things Interest Group

The Web of Things Interest Group provides a forum for technical discussions to identify use cases and requirements for open markets of applications and services based upon the role of Web technologies for a combination of the

data.

Unlocking the potential

The Internet of Things is currently beset by product silos. To unlock the commercial potential there is a need for open ecosystems based upon open standards. This includes standards for identification, discovery and interoperation of services across platforms from different vendors, and will involve the need for rich descriptions and shared data models, as well as close attention to security, privacy, scalability and accessibility. Open ecosystems will stimulate growth through the establishment of larger markets for developers and lifting the burden for tailoring products to

http://www.w3.org/WoT/

This includes the potential for using scripting languages like JavaScript, data encodings such as JSON and EXI, formats for data and metadata, including

Thing Description:

Semantic vocabularies for describing the data and interaction models exposed to applications, the choice of communications patterns provided by protocols, and serialization formats suitable for processing on resource-constrained devices and transmission over constrained networks.

Scripting API:

Platform-independent application-facing API for Thing-to-Thing interaction and Thing lifecycle management.

Binding Templates:

Example mappings from the abstract messages to specific common platforms and protocols in collaboration with the corresponding organizations.

Security and Privacy:

Cross-cutting policies and mechanisms integrated into the other building blocks to describe and implement security and privacy policies to enable secure and safe interaction across different IoT platforms.


HTML5
SEMANTICS
OFFLINE &
STORAGE
DEVICE
ACCESS
CONNECTIVITY
HTML
One Web W3C for All
MULTIMEDIA
3D, GRAPHICS,
EFFECTS
PERFORMANCE &
INTEGRATION
CSS3
STYLING

SEMANTIC WEB

Vertical Applications
Inference
Query
Ontologies
Data

LINKED DATA

On this page → what is linked data • what is linked data used for • examples • I
current status of specifications and groups

What is Linked Data?

The Semantic Web is a Web of Data — of dates and titles and part numbers and chem
and any other data one might conceive of. The collection of Semantic Web technologie
SKOS, SPARQL, etc.) provides an environment where application can query that data,
inferences using vocabularies, etc.

However, to make the Web of Data a reality, it is important to have the huge amount of
Web available in a standard format, reachable and manageable by Semantic Web tools
Furthermore, not only does the Semantic Web need access to data, but *relationships a*

http://www.w3.org/standards/semanticweb/data

To achieve and create Linked Data, technologies should be available for a common for
make either conversion or on-the-fly access to existing databases (relational, XML, HTI
also important to be able to setup query endpoints to access that data more convenien
provides a palette of technologies (RDF, GRDDL, POWDER, RDFa, the upcoming R2R

Views:

STANDARDS | PARTICIPATE | MEMBERSHIP | ABOUT W3C

PRIVACY ACTIVITY

PRIVACY INTEREST GROUP (PING)

- Charter
- Join the group
- Participants
- public-privacy mailing list
- Wiki
- Issue & Action Tracker

The evolution of Web technologies has increased collection, processing and publica
data. Privacy concerns are raised more often as applications built on the Web platfo
more sensitive data — including location, health and social network information — a
the Web is ubiquitously tracked. The W3C Privacy Activity coordinates standardizati
support for user privacy on the Web and develops general expertise in privacy-by-d
standards.

Privacy Interest Group

The group monitors ongoing privacy issues that affect the Web, investigates potential areas for new privacy work, and provides guidelines and advice for addressing privacy in standards.

Tracking Protecti Group

- TPWG homepage

http://www.w3.org/Privacy/

Christine Runnegar (Internet Society) and Tara Whalen (Google) are co-chairing the group. Nick Doty (W3C) is the Team Contact.

Past events

- Fingerprinting Guidance

Views: desktop mobile print

STANDARDS | PARTICIPATE | MEMBERSHIP | ABOUT W3C

W3C » Security Activity

ACTIVE GROUPS

SECURITY ACTIVITY

Security at W3C

Web Security is a collaborative effort across the Web ecosystem; W3C coordinates some of that work in its Security Activity, within the Technology & Society Domain. Among the work we are doing to help secure Web applications and Web usage:

Web Security Interest Group

The mission of the Web Security Interest Group is to serve as a

improving standards and implementations

Web Cryptography Working Group

emergence of more complex protocols

Web Application Security

WebAppSec is

Content Security Policy and CSP Level 2; Cross-Origin Resource

Web Payments

The Web Payments Interest

technical discussions to identify use cases

http://www.w3.org/Security/

Discover new resources for people with disabilities, policy makers, managers, and you!

Translations

"The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect."

— Tim Berners-Lee, W3C Director and

Web Accessibility Initiative (WAI)

Highlights

Updated: Tutorials on Web Accessibility

Web Accessibility Tutorials on Menus, Page Structure, Forms, Images, Tables, and Carousels have been updated. These tutorials show you how to create web content that is accessible to people with disabilities and that improves the user experience for all users. They include general guidance, and specific examples for HTML5 and WAI-ARIA. (2017-Apr-18)

WCAG 2.1 Working Draft - April 2017

Web Content Accessibility Guidelines (WCAG) 2.1 Working Draft is updated. This draft includes only the success criteria that have been formally accepted by the Working Group, and not the "proposed" success criteria that were in the previous draft. The Working Group has not addressed all comments yet; they are in queue for upcoming work. We plan to publish updated drafts monthly, to encourage timely review of the success criteria that the Working Group has approved. More information is in the WCAG 2.1 April 2017 announcement and WCAG 2.1 status. Please comment by **9 May 2017**. (2017-Apr-19)

Accessibility Conformance Testing (ACT) Rules Format 1.0 First Public Working Draft

Accessibility Conformance Testing (ACT) Rules Format 1.0 has been

WAI develops...
- guidelines wide international st
- support materi implement Wel
- resources, thro collaboration

WAI welcomes...
- participation fr
- volunteers to re promote guidel
- dedicated parti

Announcemer
- Open position Engineer (Chi
- Get WAI Anno

Events, Meeti
- At AccessU in 2017
  - Catching U Beginner's
  - Easy Check Get the Gis Necessary)
  - The WAI to

http://www.w3.org/WAI/

and manual accessibility testing approaches, and helps organizations to

[WAI Presentati

W3C

STANDARDS | PARTICIPATE | MEMBERSHIP | ABOUT W3C

AUTOMOTIVE WORKING GROUP

GROUP DETAILS

- Charter
- Mailing List
- Blog
- Wiki
- Group Participants
- Royalty-Free Patent Policy
- Join This Group

SPECIFICATIONS

LATEST EDITOR'S DRAFTS

- Vehicle Information Access API
- Vehicle Data

- Issues

As shown in the Charter, the mission of the Automotive Working Group is to develop Open Web Platform specifications for HTML5/JavaScript application developers enabling Web connectivity through in-vehicle infotainment systems and vehicle data access protocols. The API is agnostic with regard to the connection used.

This group works in public. A detailed list of the specifications being developed by the group are listed in the Automotive Wiki. The latest Editor's Drafts of the working group's specifications are available on GitHub.

The W3C Team Contacts for the Automotive Working Group are Kaz Ashimura and Ted Guild. The co-Chairs of the Working Group are Paul Boyes, Rudolf Streif and Peter Winzell.

Meetings

- See the Automotive Wiki for the past and upcoming meetings.

Shortcuts

- Mailing List: public-automotive@w3.org

http://www.w3.org/auto/wg/

- Automotive Landing Page: Automotive and Web at W3C
- WebEx: +1-617-324-0000
- IRC: irc.w3.org:6665#auto / IRC web client

Related

The Automot
Business Gro
to the standa
Working Gro
Business Gro
draft of the V
Access API a
were used as
Working Gro
work. See als
Business Gro

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W3C Community and Business Groups

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CURRENT GROUPS REPORTS ABOUT

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Chat

RSS

Contact This Group

Home / Web Bluetooth Community Group

Web Bluetooth Community Group

Bluetooth is a standard for short-range wireless communication between devices. This group is developing a specification for Bluetooth APIs to allow websites to communicate with devices in a secure and privacy-preserving way.

In particular the web Bluetooth API focuses on minimizing the device attack surface exposed to malicious websites, possibly by removing access to some existing Bluetooth features that are hard to implement securely. Further, the API takes the approach of a user interface to select and approve access to devices as opposed to using certification and installation.

Reports

about publishing...

News

Get involve

Anyone may joi
Group. All parti
have signed the
Contributor Lice
(CLA).

JOIN T

or learn how to
account.

Note: Commun
proposed and r
necessarily repr
W3C Membersh

http://www.w3.org/community/web-bluetooth/

Algumas iniciativas

"Do or do not. There is no try"

Yoda

- http://www.compose-project.eu/
- https://www.youtube.com/watch?v=G6R0pCV5MG8
- https://github.com/nopbyte/compose-idm

https://evrythng.com/

http://vimeo.com/51878487

IFTTT

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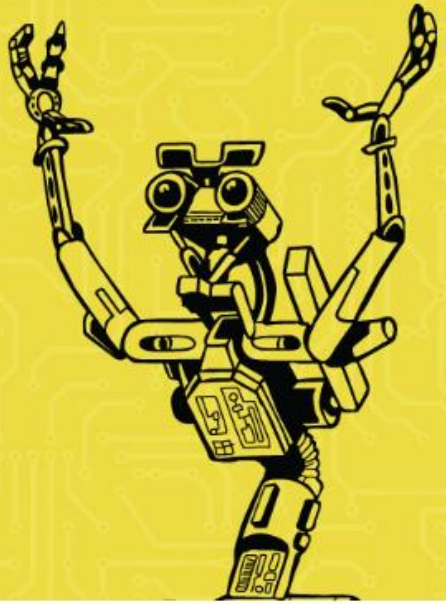
Put the internet to work for you.

Sign up

Johnny-Five

The JavaScript LightBlue Bean Robotics & IoT Platform



Johnny-Five is the JavaScript Robotics & IoT Platform. Released by Bocoup in 2012, Johnny-Five is maintained by a community of passionate software developers and hardware engineers. Over 75 developers have made contributions towards building a robust, extensible and composable ecosystem.

felixge / **node-ar-drone**

A node.js client for controlling Parrot AR Drone 2.0 quad-copters. http://nodecopter.com/

273 commits 4 branches 12 releases 19 contributors MIT

Branch: master New pull request Find file Clone or download

rmehner Merge pull request #110 from seanhussey/patch-1 ... Latest commit 228bd45 on Dec 4 2014

examples	Removed examples/tweets.js; It just prints tweets to the console & do...	4 years ago
lib	Fixes client up/down, left/right, front/back, clockwise/counterclockw...	3 years ago
test	Fixes client up/down, left/right, front/back, clockwise/counterclockw...	3 years ago
.gitignore	ignore .DS_Store for osx users	3 years ago
.jshintrc	Set unused option for jshint, removed unused variables in code	4 years ago
.travis.yml	Don't build in node 0.6 for now	5 years ago
CONTRIBUTING.md	Update 1.0 info	5 years ago
Changes.md	Release 0.3.1	4 years ago
LICENSE	Add License	5 years ago
Makefile	Use npm test as primary test runner.	5 years ago
README.md	Fixed typos.	3 years ago
index.js	Rename method	5 years ago
package.json	0.3.3	3 years ago

README.md

webofthings / **webofthings.js**

Watch 8 Star 27 Fork 14

Code Issues 1 Pull requests 1 Projects 0 Pulse Graphs

A gateway and server reference implementation of the Web of Things model http://book.webofthings.io

175 commits 9 branches 2 releases 3 contributors Apache-2.0

Branch: master New pull request Find file Clone or download

marcbachmann committed with domguinard chore(package): update uuid to version 3.0.0 (#8) Latest commit 3a96e14 on Nov 27 2016

docs	Adding final book cover	9 months ago
drivers	Adding new BCM DHT driver	a year ago
middleware	Resolving conflicts	a year ago
plugins	Revert "Compatible ES6. fix webofthings/webofthings.js#3"	8 months ago
public	Minor fix to match model	a year ago
resources	Separating heroku config in new branch	a year ago
routes	chore(package): update uuid to version 3.0.0 (#8)	6 months ago
servers	Revert "Compatible ES6. fix webofthings/webofthings.js#3"	8 months ago
test	Fixing test for Observe() patch	8 months ago
utils	Bringing access tokens back to WS server	a year ago

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This organization Search

Sign in or S

Web of Things Code Forge

http://www.webofthings.org wot@evrythng.com

Repositories People 3

Search repositories...

Type: All

Language

webofthings.js

A gateway and server reference implementation of the Web of Things model

JavaScript 27 14 Updated on Apr 20

wot-book

Code examples from "Building the Web of Things" @ Manning

https://github.com/webofthings/awesome-iot

awesome-iot

Forked from HQarroum/awesome-iot

Top languages

JavaScript Java HTML

Arduino CSS

People

domguinard

Dominique Guinard

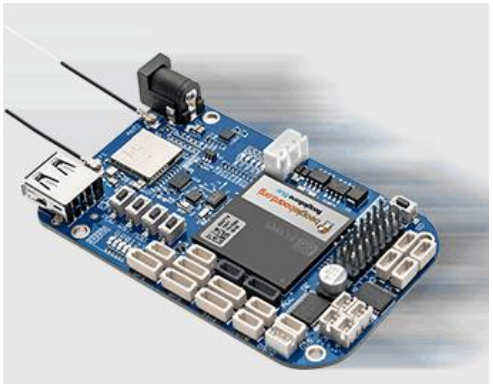
Patrick Wolleb

vladounet


UNO
Arduino


TEGRA 2


Ethernet




Galileo

Operating systems

- Apache Mynewt - Apache Mynewt is a real-time, modular operating system for connected IoT devices that need to operate for long periods of time under power, memory, and storage constraints. The first connectivity stack offered is BLE 4.2.
- ARM mbed - The ARM® mbed™ IoT Device Platform provides the operating system, cloud services, tools and developer ecosystem to make the creation and deployment of commercial, standards-based IoT solutions possible at scale.
- Contiki - Contiki is an open source operating system for the Internet of Things. Contiki connects tiny low-cost, low-power microcontrollers to the Internet.
- FreeRTOS - FreeRTOS is a popular real-time operating system kernel for embedded devices, that has been ported to 35 microcontrollers.
- Google Brillo - Brillo extends the Android platform to all your connected devices, so they are easy to set up and work seamlessly with each other and your smartphone.
- OpenWrt - OpenWrt is an operating system (in particular, an embedded operating system) based on the Linux kernel, primarily used on embedded devices to route network traffic. The main components are the Linux kernel, util-linux, uClibc or musl, and BusyBox. All components have been optimized for size, to be small enough for fitting into the limited storage and memory available in home routers.
- Snappy Ubuntu - Snappy Ubuntu Core is a new rendition of Ubuntu with transactional updates. It provides a minimal server image with the same libraries as today's Ubuntu, but applications are provided through a simpler mechanism.
- NodeOS - NodeOS is an operating system entirely written in Javascript, and managed by npm on top of the Linux kernel.
- Raspbian - Raspbian is a free operating system based on Debian optimized for the Raspberry Pi hardware.
- RIOT - The friendly Operating System for the Internet of Things.
- Tiny OS - TinyOS is an open source, BSD-licensed operating system designed for low-power wireless devices, such as those used in sensor networks, ubiquitous computing, personal area networks, smart buildings, and smart meters.
- Windows 10 IoT Core - Windows 10 IoT is a family of Windows 10 editions targeted towards a wide range of intelligent devices, from small industrial gateways to larger more complex devices like point of sales terminals and ATMs.

Frameworks

- AllJoyn - AllJoyn is an open source software framework that makes it easy for devices and apps to discover and communicate with each other.
- Apple HomeKit - HomeKit is a framework for communicating with and controlling connected accessories in a user's home.
- Countly IoT Analytics - Countly is a general purpose analytics platform for mobile and IoT devices, available as open source.
- Eclipse Smarthome - The Eclipse SmartHome framework is designed to run on embedded devices, such as a Raspberry Pi, a BeagleBone Black or an Intel Edison. It requires a Java 7 compliant JVM and an OSGi (4.2+) framework, such as Eclipse Equinox.
- Iotivity - IoTivity is an open source software framework enabling seamless device-to-device connectivity to address the emerging needs of the Internet of Things.
- Kura - Kura aims at offering a Java/OSGi-based container for M2M applications running in service gateways. Kura provides or, when available, aggregates open source implementations for the most common services needed by M2M applications.
- Mihini - The main goal of Mihini is to deliver an embedded runtime running on top of Linux, that exposes high-level API for building M2M applications. Mihini aims at enabling easy and portable development, by facilitating access to the I/Os of an M2M system, providing a communication layer, etc.
- OpenHAB - The openHAB runtime is a set of OSGi bundles deployed on an OSGi framework (Equinox). It is therefore a pure Java solution and needs a JVM to run. Being based on OSGi, it provides a highly modular architecture, which even allows adding and removing functionality during runtime without stopping the service.
- Gobot - Gobot is a framework for robotics, physical computing, and the Internet of Things, written in the Go programming language.

Middlewares

- IFTTT - IFTTT is a web-based service that allows users to create chains of simple conditional statements, called "recipes", which are triggered based on changes to other web services such as Gmail, Facebook, Instagram, and Pinterest. IFTTT is an abbreviation of "If This Then That" (pronounced like "gift" without the "g").
- Huginn - Huginn is a system for building agents that perform automated tasks for you online.
- Kaa - An open-source middleware platform for rapid creation of IoT solutions.
- Losant - Losant is an easy-to-use and powerful developer platform designed to help you quickly and securely build complex connected solutions. Losant uses open communication standards like REST and MQTT to provide connectivity from one to millions of devices. Losant provides powerful data collection, aggregation, and visualization features to help understand and quantify vast amounts of sensor data. Losant's drag-and-drop workflow editor allows you to trigger actions, notifications, and machine-to-machine communication without programming.

Libraries and Tools

- Cylon.js - Cylon.js is a JavaScript framework for robotics, physical computing, and the Internet of Things. It makes it incredibly easy to command robots and devices.
- Luvit - Luvit implements the same APIs as Node.js, but in Lua ! While this framework is not directly involved with IoT development, it is still a *great* way to rapidly build powertfull, yet memory efficient, embedded web applications.
- Johnny-Five - Johnny-Five is the original JavaScript Robotics programming framework. Released by Bocoup in 2012, Johnny-Five is maintained by a community of passionate software developers and hardware engineers.
- WiringPi - WiringPi is a GPIO access library written in C for the BCM2835 used in the Raspberry Pi.
- Node-RED - A visual tool for wiring the Internet of Things.

Twitter Developer Documentation

REST APIs

The REST APIs provide programmatic access to read and write Twitter data. Create a ne
user profile and follower data, and more. The REST API identifies Twitter applications and
OAuth; responses are in JSON format.

If your intention is to monitor or process Tweets in real-time, consider using the Streamin

Overview

Below are some documents that will help you get going with the REST APIs as quickly as

- API Rate Limiting
- API Rate Limits
- Working with Timelines
- Using the Twitter Search API
- Finding Tweets about Places
- Uploading Media

Todos os documentos

Documentos / Login no Facebook / Outras plataformas / Dispositivos / Nesta página

Login no Facebook
Visão geral
iOS
Android
Web
Outras plataformas
Dispositivos
Windows Phone
Análise de Login
Design da experiência do usuário
Permissões
Tokens de acesso
Segurança no login
Teste
Práticas recomendadas
Avançado

Login no Facebook para Dispositivos

Com o Login no Facebook para Dispositivos, as pessoas podem fazer login com facilidade e se nos aplicativos e serviços com suas contas do Facebook em dispositivos com recursos limitado entrada ou exibição. Isso inclui Smart TVs, molduras digitais ou dispositivos da Internet das Co

Se você estiver comprando um aplicativo para Apple TV, Android TV ou Fire TV, você deve usa SDK para tvOS ou Android.

Com o login no dispositivo, o dispositivo mostra um código alfanumérico e diz às pessoas para uma página da Web no computador ou smartphone. As pessoas que usam seu aplicativo ou se podem então conceder permissões. Depois que seu aplicativo obtém as permissões, o disposit um token de acesso que seu aplicativo usa para fazer solicitações da API de Gráfico para ident pessoa e obter informações para personalizar a sua experiência com o dispositivo.

Este guia descreve o seguinte:

- Experiência do usuário
- Implementar o Login para Dispositivos
- Solução de problemas

Coisas conectadas
(com a Web)

"The power of the Web is in its universality"

Tim Berners-Lee

TWEETS 15.7K | FOLLOWING 20 | FOLLOWERS 82

Follow

botanicallstest

@botanicallstest

All new Botanicalls plants post to this account by default. Welcome leafy friends!

botanicalls.com

Joined February 2008

Tweets | Tweets & replies

botanicallstest @botanicallstest · May 21
You didn't water me enough. [5041-72]

botanicallstest @botanicallstest · May 19
Water me please. [5041-71]

TWEETS 18.3K | FOLLOWING 781 | FOLLOWERS 46.4K | LIKES 585

Follow

Surf Life Saving WA

@SLSWA

The latest news and beach info, live from the SurfCom operations centre and SLSWA office. Also the source for all WA shark sighting info. #myWAbeach

Western Australia

surflifesavingwa.com.au

Joined September 2011

Tweet to Surf Life Saving WA

1 Follower you know

469 Photos and videos

Tweets | Tweets & replies | Media

Surf Life Saving WA @SLSWA · May 19
Fisheries advise: tagged tiger shark detected by North Cottesloe receiver at 12:43:00 PM on 19-May-2017

Surf Life Saving WA @SLSWA · May 19
Fisheries advise: tagged tiger shark detected by North Cottesloe receiver at 12:41:00 PM on 19-May-2017
1 1

Surf Life Saving WA @SLSWA · May 19
Fisheries advise: tagged tiger shark detected by North Cottesloe receiver at 12:36:00 PM on 19-May-2017

Surf Life Saving WA @SLSWA · May 19
Fisheries advise: tagged tiger shark detected by Swanbourne receiver at 12:12:00 PM on 19-May-2017

Philips hue API

Full API Documentation

The full API documentation is only available to registered users. Please login or register to view t
documentation and become a member of our exciting hue community. It only takes a few second

See what you can do

Your feedback following our hue launch was clear. You want to use light as you want it. Here we
material to do so. The hue bridge has a powerful RESTful interface, which behaves like a simple
as your tool. We hope this will help you to truly use light as you want it, by making new apps, wel
installations; integrating hue into something else or just playing around.

Getting started

We've started off by releasing the core parts of our bridge interface along with some easy to follo
how to use them. This should be enough to get you up and running controlling lights from your ap

- Learn how hue works
- Easy step by step guide to get you started
- See what you can do with the hue system
- Questions? Ideas? Post them on the developer forum

Samsung TIZEN TV

New Experience of Smart TV App Development.

SAMSUNG TIZEN TV

Build an application for new Samsung Tizen TV to improve ease and convenience.
Tizen gives a powerful and flexible developmental environment.

Overview

Build an application for new Samsung Tizen TV to improve ease and convenience.

Tizen gives a HTML5-based powerful and flexible environment.
HTML5 provides an easy development environment and enable an application to adapt cross-platform environment with less fragmentation.

An application can extend device access with JavaScript-based Tizen Device API and Samsung TV Product API.
Your application can have better performance and high fluency with close accessing of OS. Use differentiated functionality of Samsung TV with APIs.

You can make a high performance game by Unity 3D engine.
Try developing application with advanced features of Samsung Tizen TV.

Caph

Games

The Tweeting Pothole

The Tweeting Pothole @TweetingPothole 20m
Oops, I don't want to damage your dampers, I just can't help it. ¯_(ツ)_/¯ @MOPdePanama

The Tweeting Pothole @TweetingPothole 22m
I feel horrible, I just caused a tire damage to an old lady's car. @MOPdePanama See what you made me do.

The Tweeting Pothole @TweetingPothole 24m
@NASA uses me to measure the impact of meteorites on earth. @MOPdePanama

The Tweeting Pothole @TweetingPothole 33m
Hit me baby one more time -B- Ok no, just avoid me. @MOPdePanama

The Tweeting Pothole @TweetingPothole 35m
YO! @MOPdePanama TAKE NOTES @monicrespo is angry

MONICA CRESPO @monicrespo
Clearly avenues are a big mess. Potholes everywhere. #TweetingPothole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TUS


SANTANDER
PLAZAS LIBRES
P
Zona
01
C/ General Mola
08
© DW/L.


Centro Urbano
Zona Marítima
Ferry
PALENCIA
S-10 BILBAO
hospital
INFORMACIÓN TRÁFICO
MARGA-ALBERICIA
FLUIDO
SAN FERNANDO
FLUIDO


AS 18H00 129 KM
DE LENTIDÃO

Eternas preocupações e incertezas

"Fear is the path to the dark side. Fear leads to anger. Anger leads to hate. Hate leads to suffering."

Yoda

Privacidade

"On the Internet, nobody knows you're a dog."

Cartoon: Peter Steiner form The New York Worker

Image: CloudPets

Internet of Things Teddy Bear Leaked 2 Million Parent and Kids Message Recordings

LORENZO FRANCESCHI-BICCHIERAI

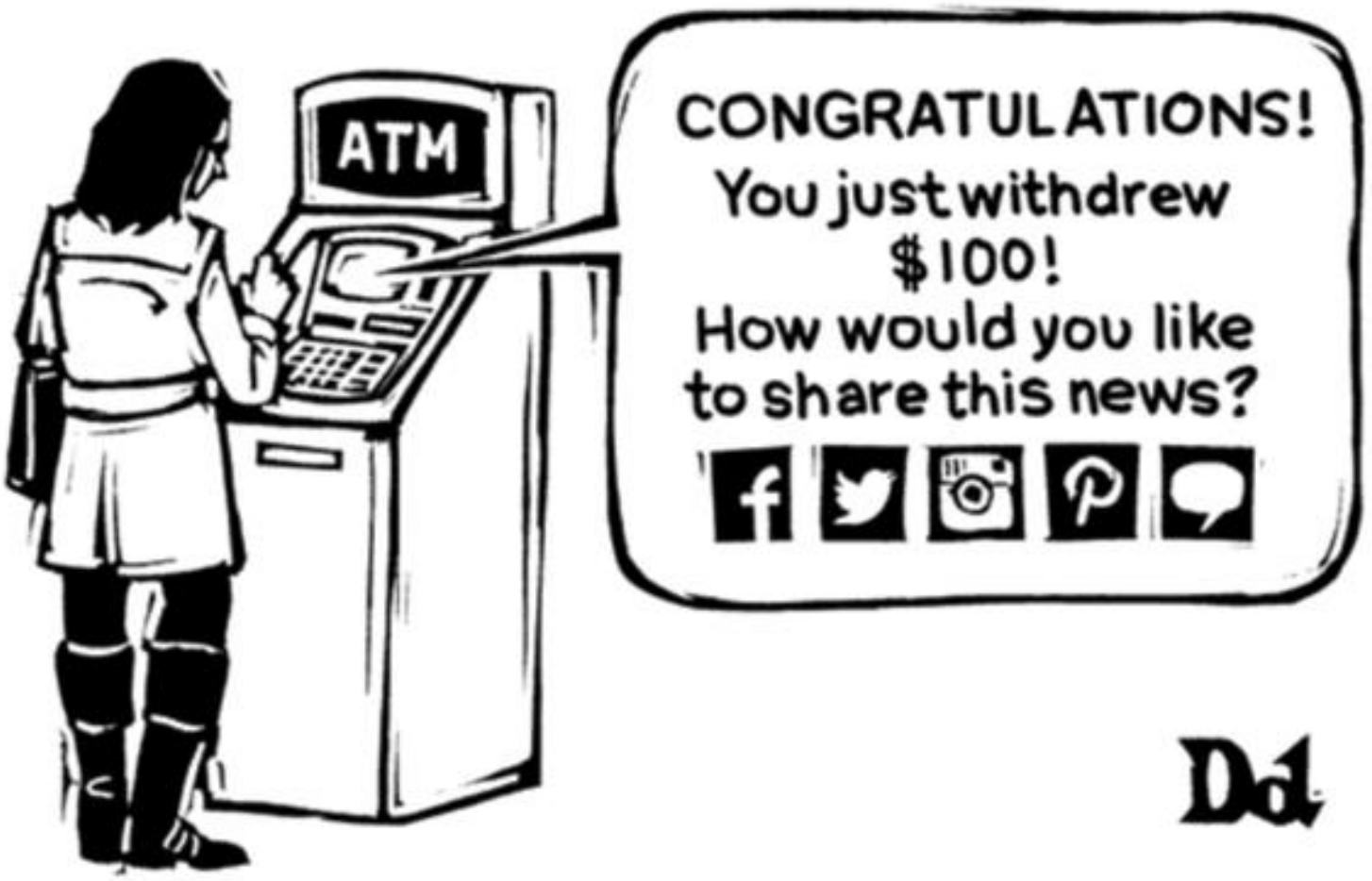
Feb 27 2017, 6:00pm

A company that sells "smart" teddy bears leaked 800,000 user account credentials—and then hackers locked it and held it for ransom.

UPDATE, Feb. 28, 12:25 p.m. ET: After this story was published, a security researcher revealed that the stuffed animals themselves could easily be hacked and turned into spy devices.

A company that sells internet-connected teddy bears that allow kids and their far-away parents to exchange heartfelt messages left more than 800,000 customer credentials, as well as two million message recordings, totally exposed online for anyone to see and listen.

Segurança



Cartoon: Drew Dernavich form The New York Worker

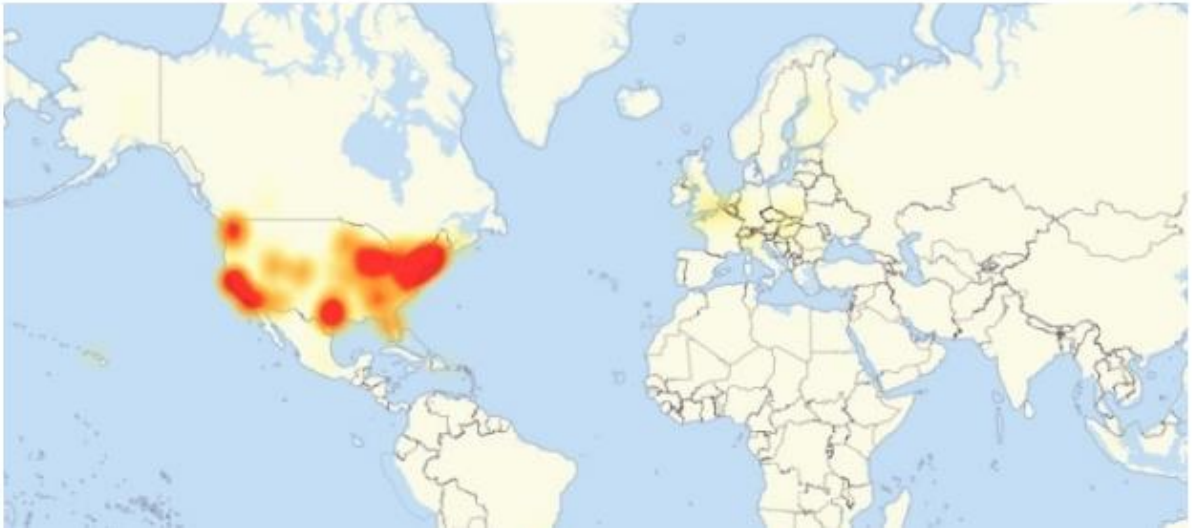
NEWS

Chinese firm admits its hacked DVRs, cameras were behind Friday's massive DDOS attack

Botnets created from the Mirai malware were involved in Friday's cyber attack.

By Michael Kan

U.S. Correspondent, IDG News Service | OCT 23, 2016 12:14 PM PT



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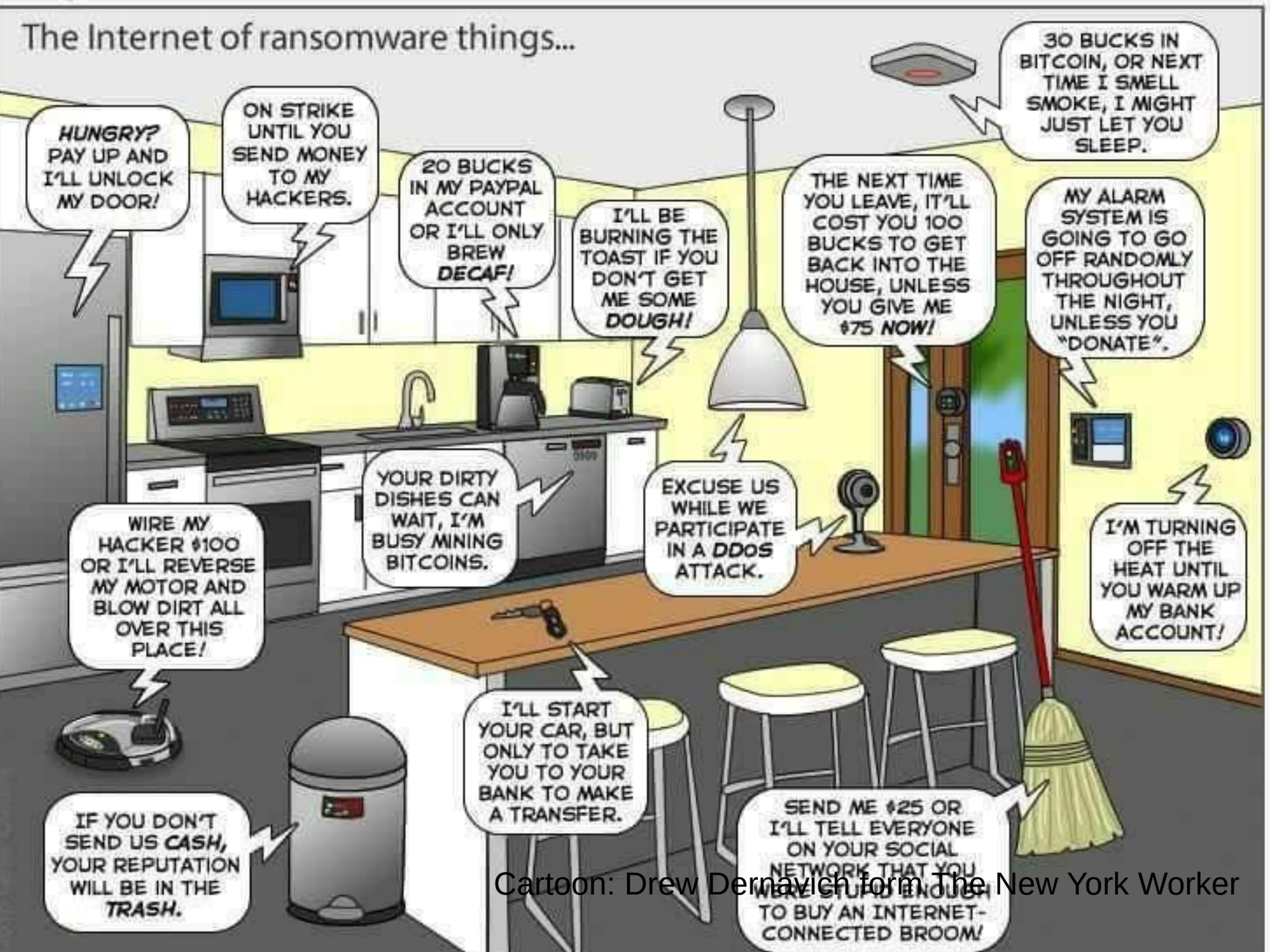
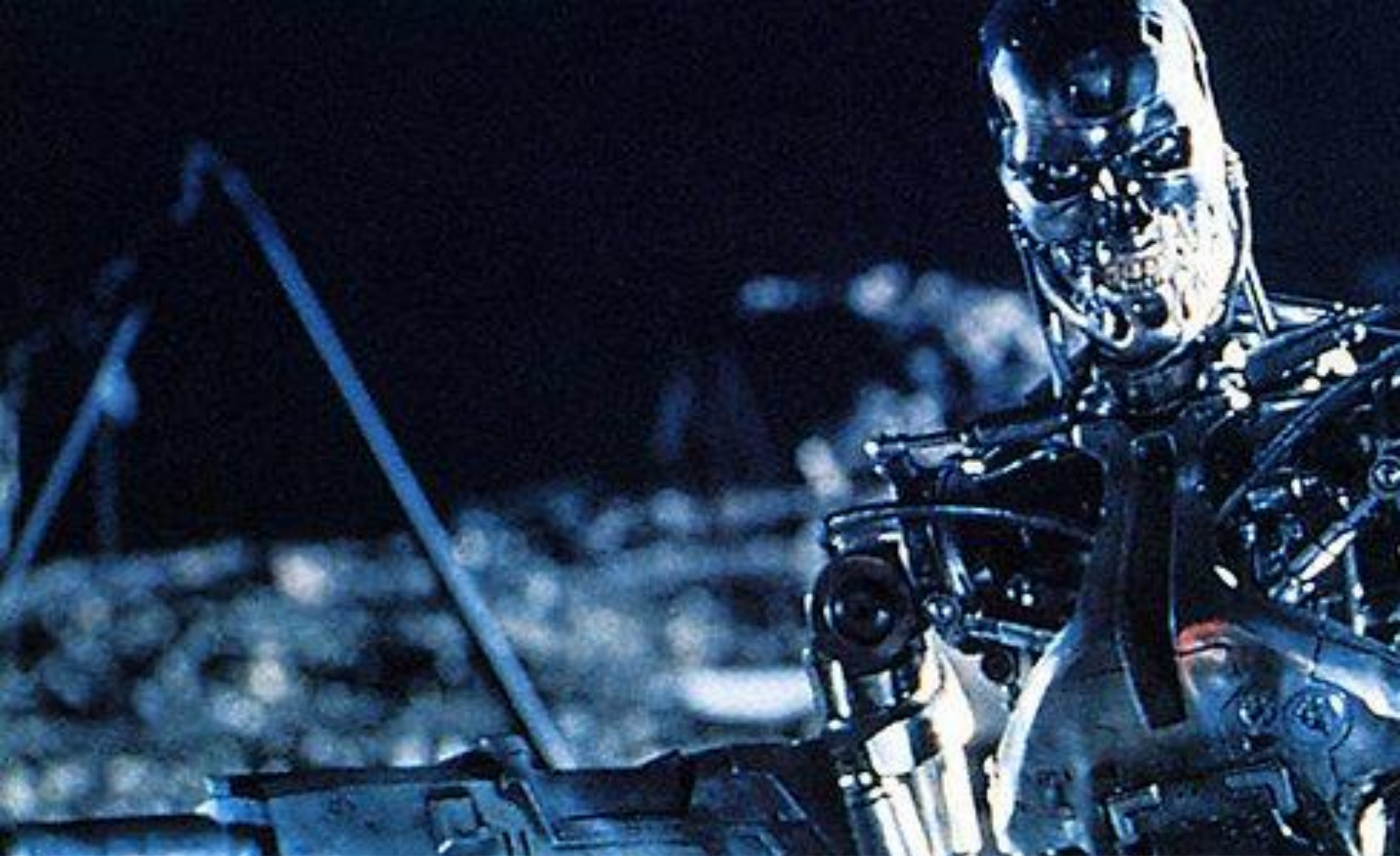
Friday's DDoS attack came from 100,000 infected devic


An IoT botnet is partly behin Friday's massive DDOS attacl


Massive smart device botnet highlights the dangers of default passwords



Cartoon: Drew Dernavich form The New York Worker



As máquinas vão dominar o mundo


HOW KIDS GO PLAY "OUTSIDE" TODAY

Participe da construção da Web dentro do W3C

“as long as man tried to fly

by imitating birds, he couldn't succeed”

Le Corbusier

Obrigado

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