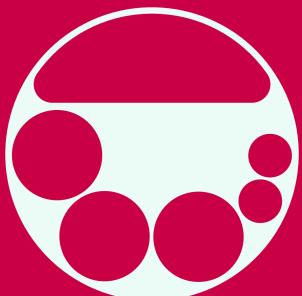


# Change the World with IoT and the Peer Web

Matthew Podwysocki  
@mattpodwysocki

<https://github.com/mattpodwysocki/jsconf-lastcall>





**Principal SDE  
Open Sourcerer**  
**@mattpodwysocki**  
**github.com/mattpodwysocki**

**MICRÖSOFT**

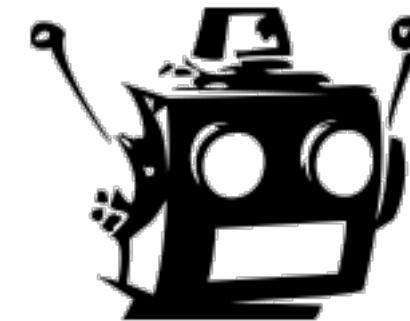


# **Reactive Extensions (RxJS)**

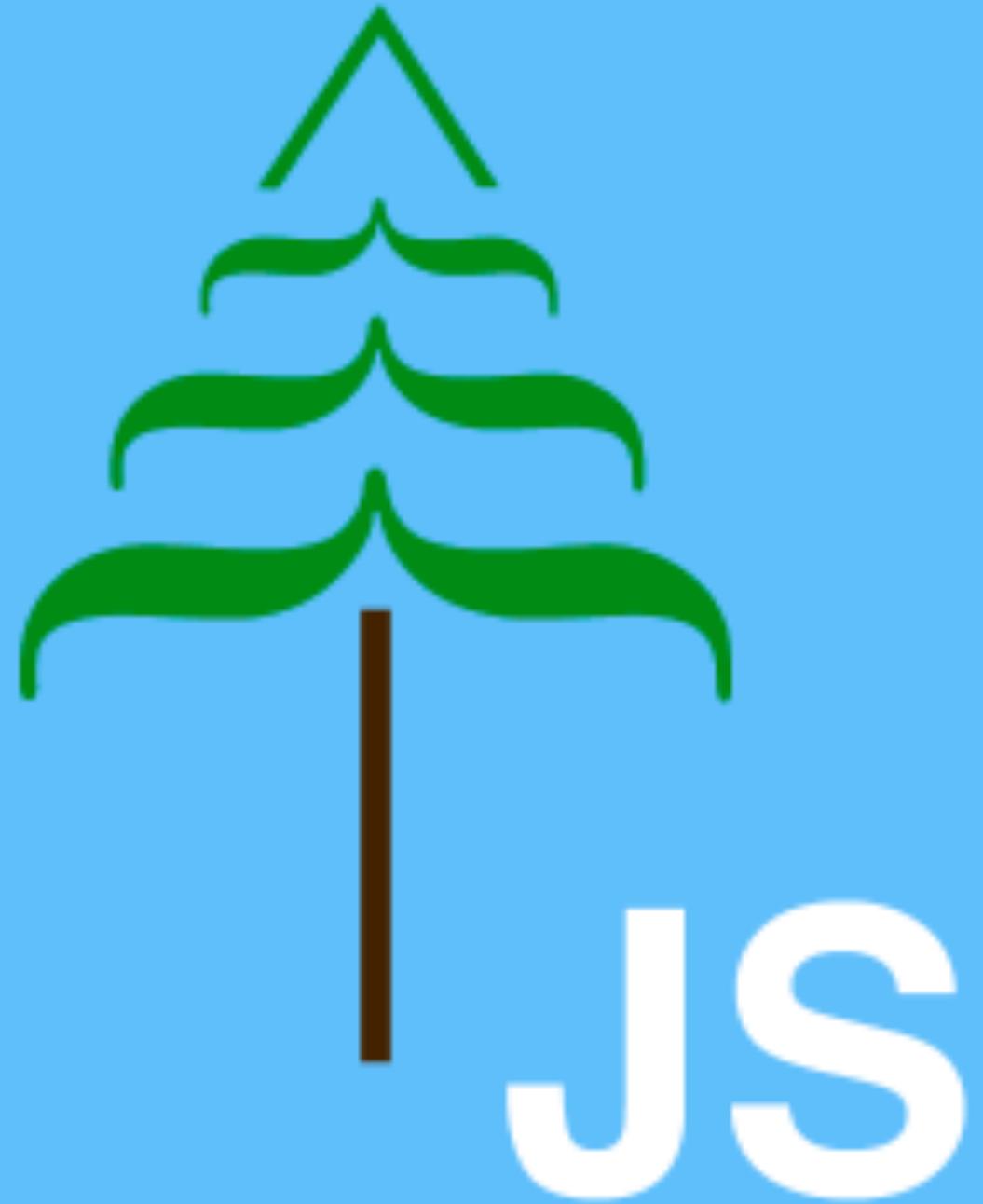
@ReactiveX  
<http://reactivex.io>



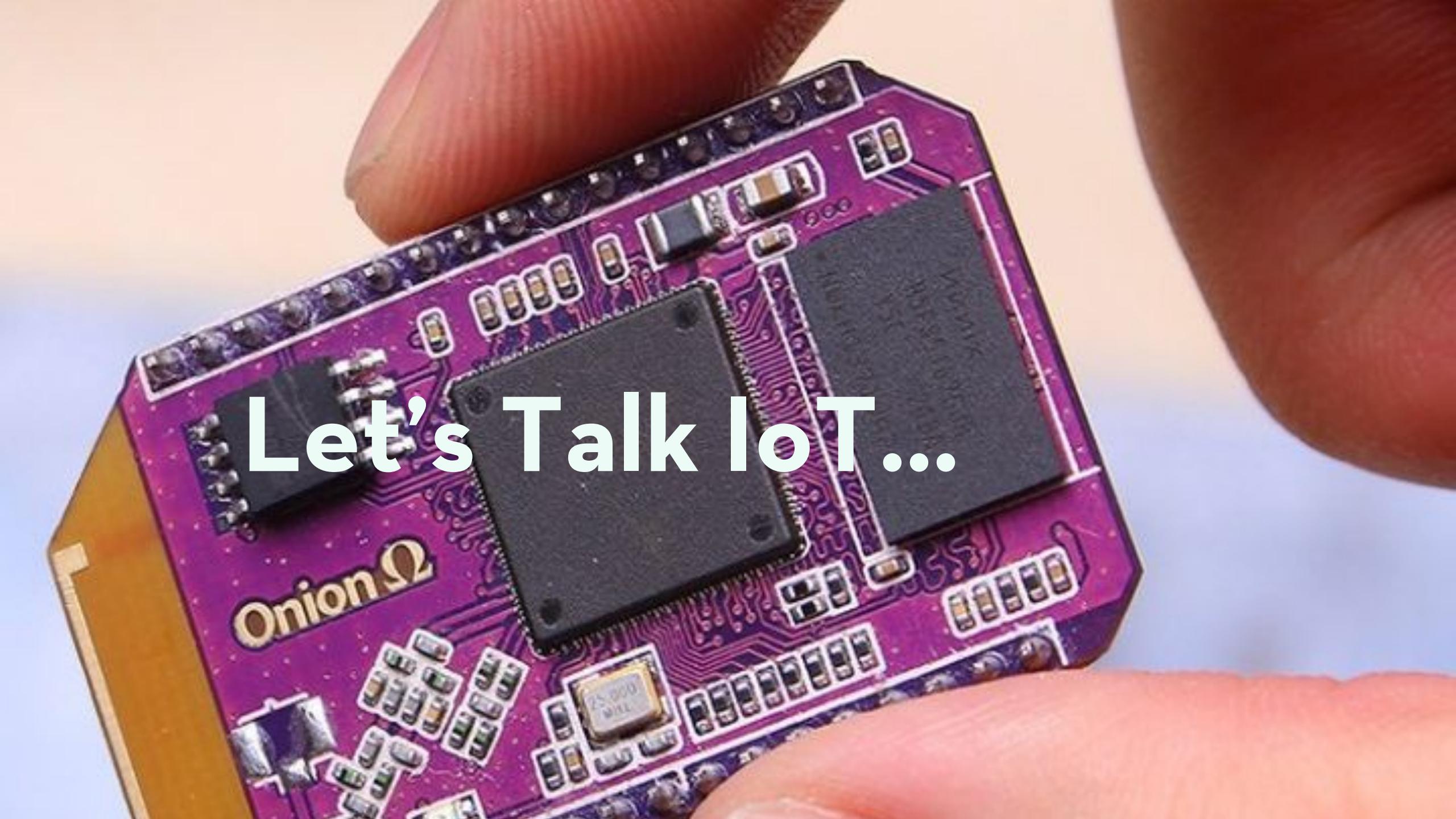
**Starting Conversations...**



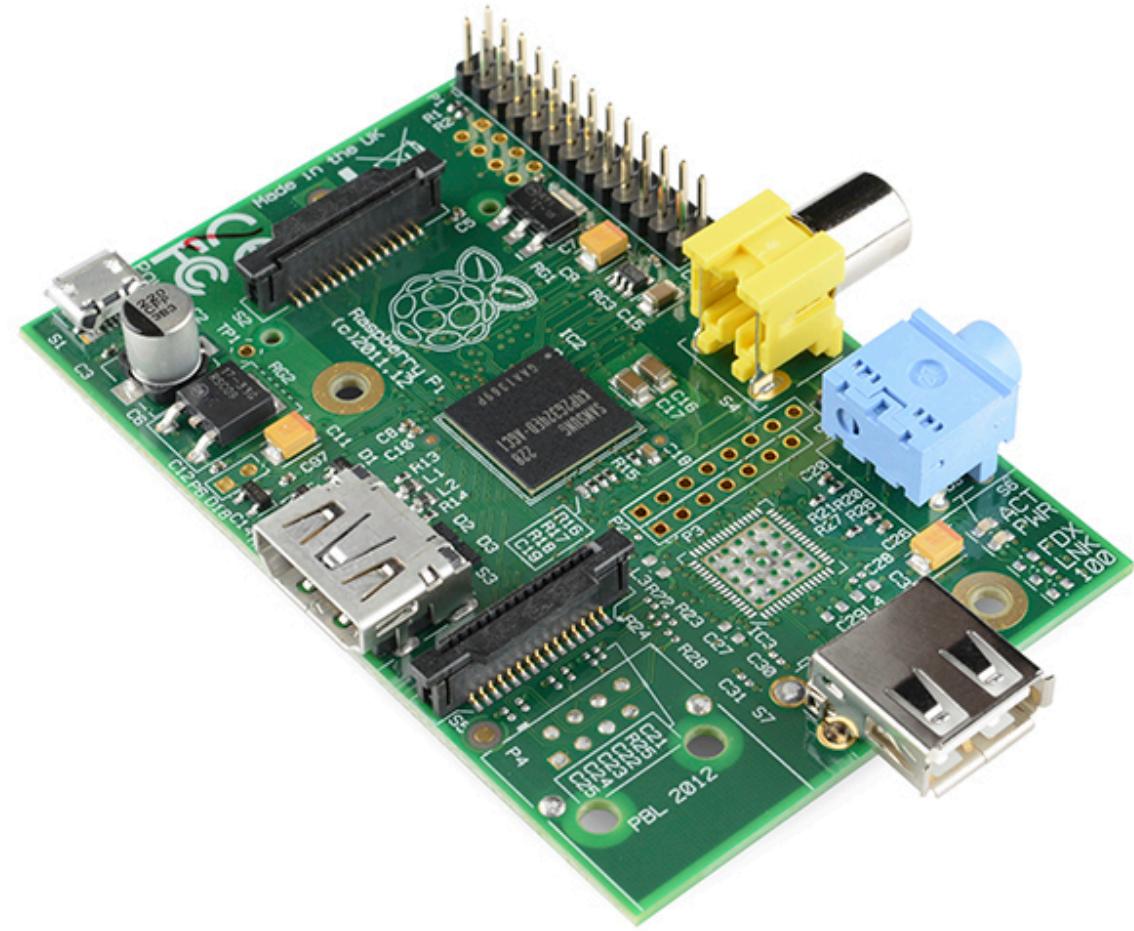
# RobotsConf



CascadiaJS  
2012

A close-up photograph of a purple Onion Omega IoT development board. The board features a central black microcontroller chip and several smaller components. The text "Onion Omega" is printed on the board. A hand is visible, holding the board from the top and bottom, providing a sense of scale. The background is a warm, out-of-focus indoor setting.

Let's Talk IoT...



The Things Are Everywhere...



**But the most important “thing” is...**

**Let's take on big challenges...**





Re-invent manufacturing...

# Improve lives through communication...





**Help in times of crisis...**

A photograph of a female journalist standing in front of a military vehicle. She is wearing a black t-shirt with "PRESS" printed on it in large white letters. She is smiling and looking towards the camera. Behind her is a green military vehicle, possibly a humvee, with a mounted machine gun on top. The vehicle has a roll cage and a large cylindrical container on top. The background shows a hilly landscape under a clear sky.

And save lives...

PRESS

CONGRESS SHALL MAKE NO LAW respecting  
*an establishment of religion, or prohibiting the free  
exercise thereof; or abridging the freedom of speech,  
or of the press; or the right of the people peaceably  
to assemble, and to petition the Government for a  
redress of grievances.*



## **THE FIRST AMENDMENT TO THE U.S. CONSTITUTION**

**15 DECEMBER 1791**



PRIVACY  
IS NOT  
A CRIME

*“Technical identity systems must only reveal information identifying a user with the user’s consent.”*

Kim Cameron’s Law # 1

*“The solution that discloses the least amount of identifying information and best limits its use is the most stable long-term solution.”*

**Kim Cameron’s Law # 2**

*“Digital identity systems must be designed so the disclosure of identifying information is limited to parties having a necessary and justifiable place in a given identity relationship.”*

Kim Cameron’s Law # 3

*“A universal identity system must support both “omni-directional” identifiers for use by public entities and “unidirectional” identifiers for use by private entities, thus facilitating discovery while preventing unnecessary release of correlation handles.”*

**Kim Cameron’s Law # 4**

*“A universal identity system must channel and enable the inter-working of multiple identity technologies run by multiple identity providers.”*

Kim Cameron’s Law # 5

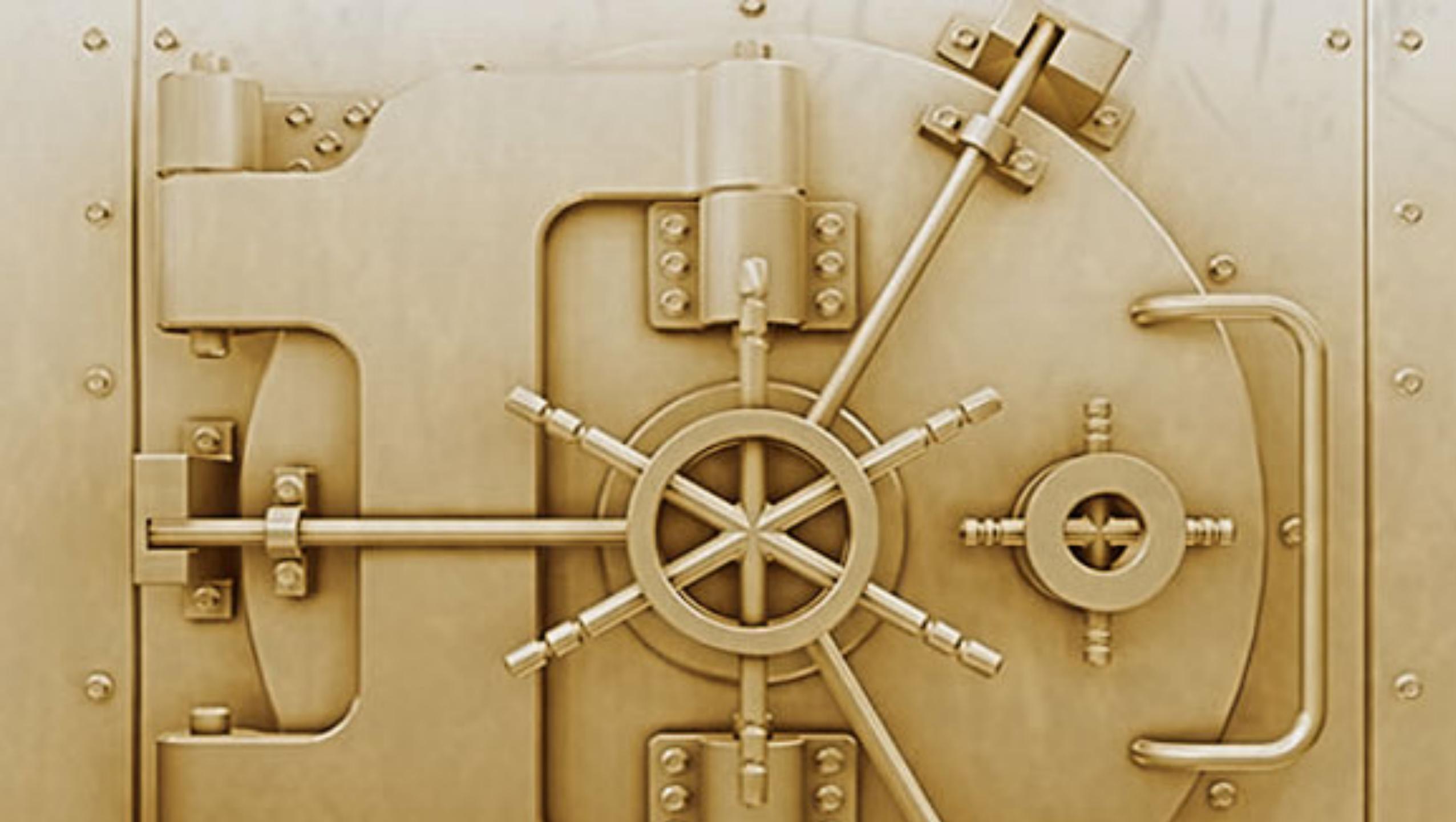
*“The universal identity metasystem must define the human user to be a component of the distributed system integrated through unambiguous human-machine communication mechanisms offering protection against identity attacks.”*

Kim Cameron’s Law # 6

*“The unifying identity metasystem must guarantee its users a simple, consistent experience while enabling separation of contexts through multiple operators and technologies.”*

Kim Cameron’s Law # 7

**Isn't this privacy stuff  
a bit of nonsense?**





@ThaliProject

<http://thaliproject.org>

<http://github.com/thaliproject>



**How do we build it?**

Always Bet on **JS**



**Your device as a server...**

# JXcore

We want Node to run on **EVERY** device...

# WiFi Shoplist

By Oguz Bastemur

Open iTunes to buy and download apps.



[View in iTunes](#)

+ This app is designed for both iPhone and iPad

Free

Category: Productivity

Released: Jul 31, 2015

Version: 0.0.2

Size: 18.9 MB

Language: English

Seller: Oguz Bastemur

[View More by This Developer](#)

## Description

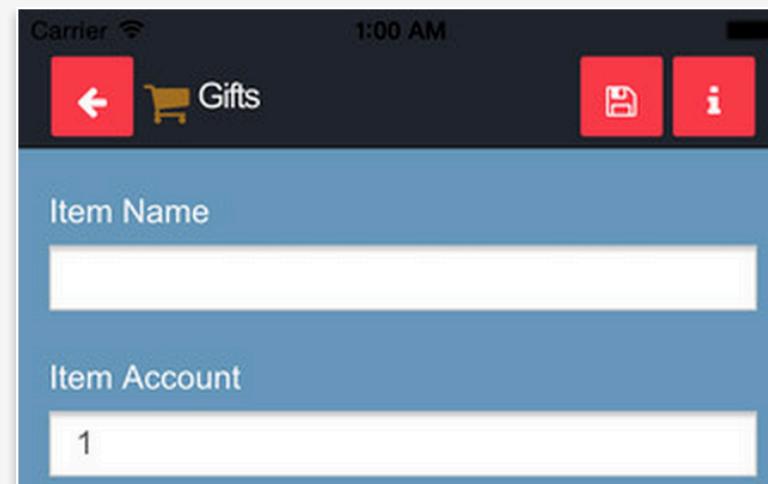
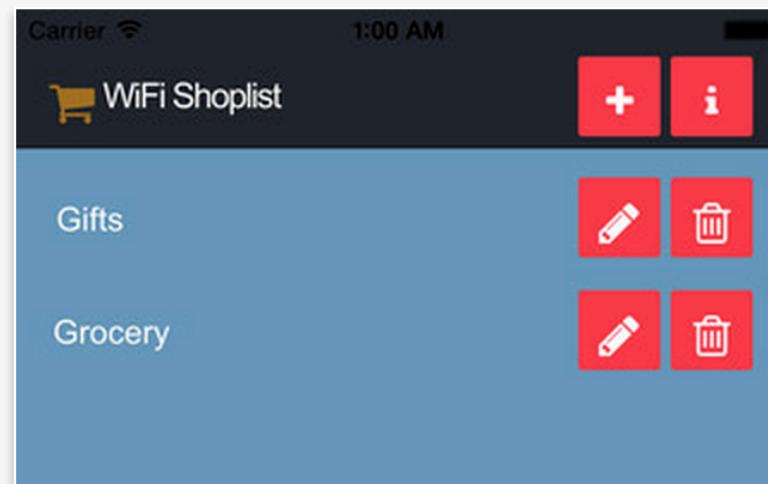
This application makes your shopping list available over WiFi. So, others can contribute to your shopping list from the devices with browser support.

[WiFi Shoplist Support ▾](#)

[...More](#)

## Screenshots

[iPhone](#) | [iPad](#)



<https://itunes.apple.com/us/app/wifi-shoplist/id1022813783>



# WiFi Shoplist

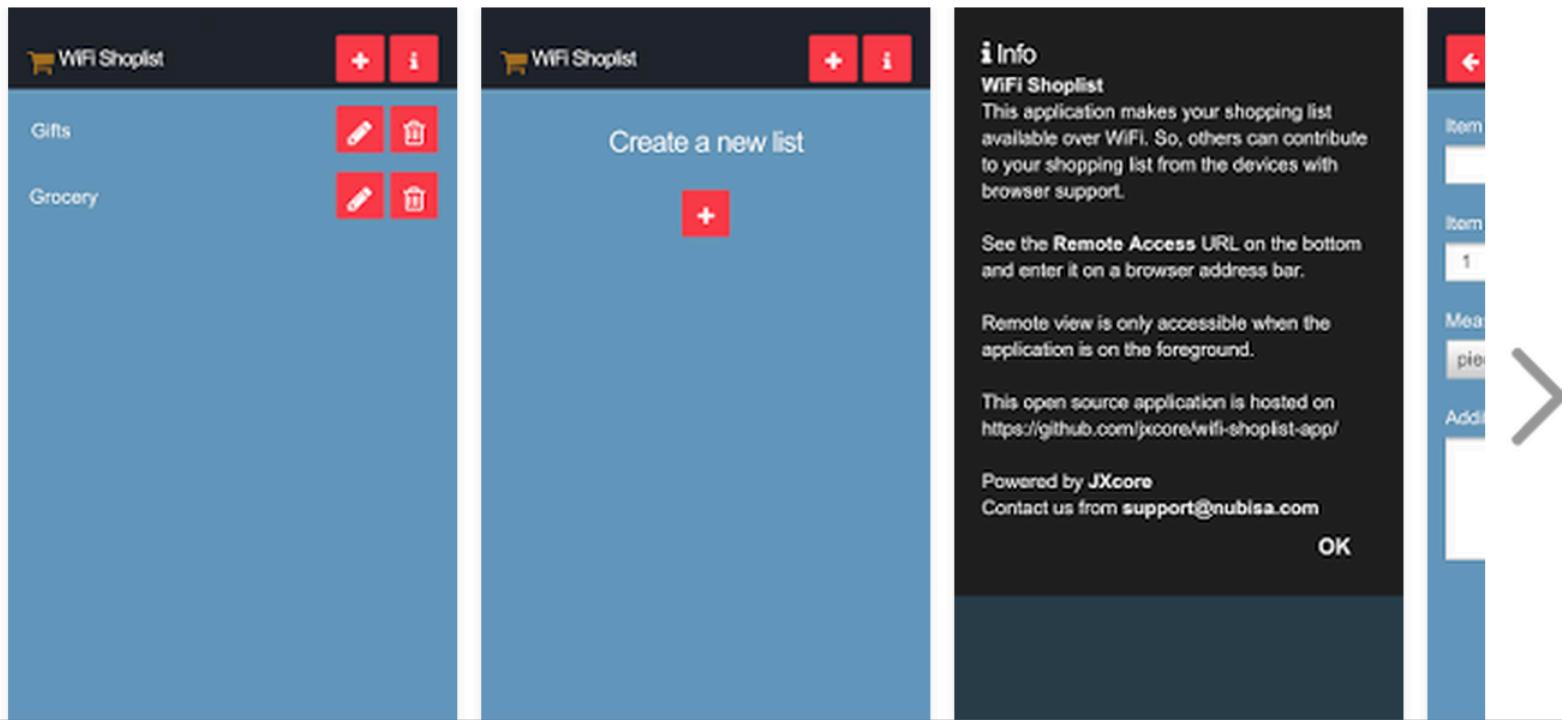
Oguz Bastemur   Productivity

Everyone

This app is compatible with all of your devices.

Add to Wishlist

Install



<http://play.google.com/store/apps/details?id=com.nubisa.WiFiShoplist>



APACHE

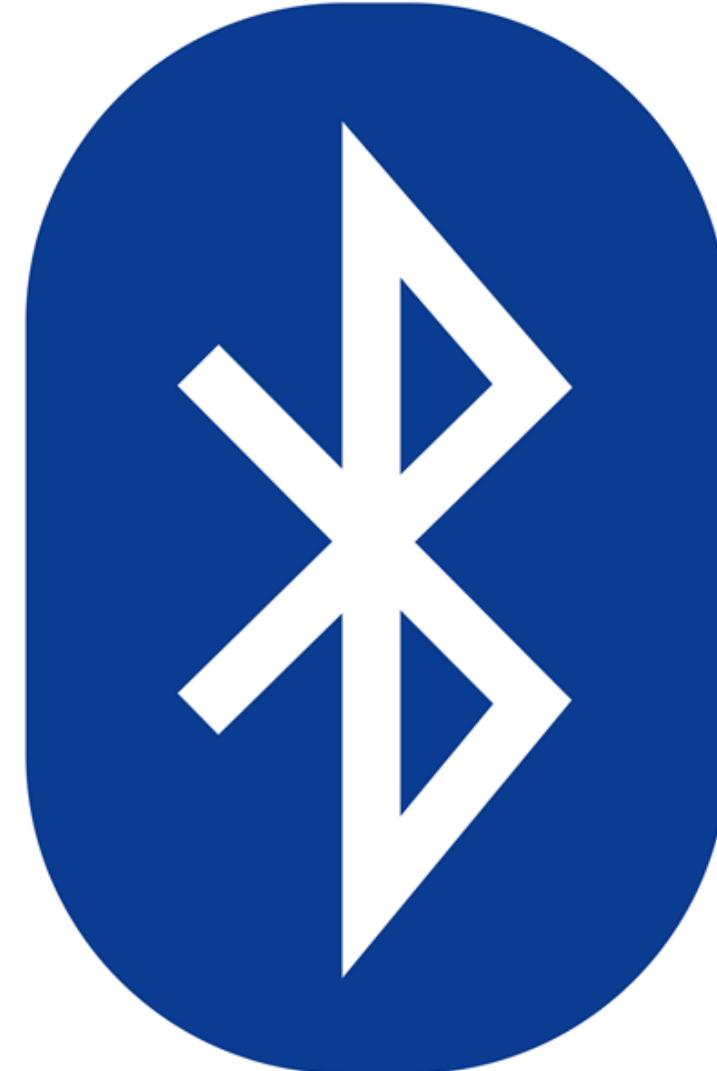
CORDOVA™

We can easily deploy it...



**pouchdb**

**Keep Data in Sync...**



**Enabling Communication...**

**AUTHORIZED  
PERSONNEL ONLY**

**Security? TLS + Public Keys...**

# How do we exchange identities without making our users hate us?

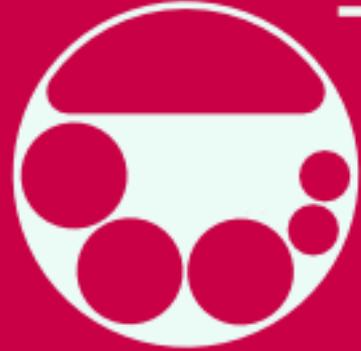


<http://www.goland.org/coinflippingforthali/>





Live or Die by CI



# Thali

```
$ jx npm install thali
```

**#MakeThePeerWebGreatAgain**