

# IoT.js Progress Report

April 25th, 2016

Software Center

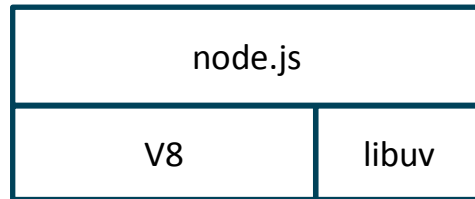
Samsung Electronics

# What is IoT.js?

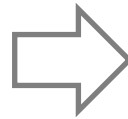
- JavaScript powered IoT application/service platform.
- Simply say, downsized version of node.js
  - Most famous platform in web developer community
- Site Links
  - <https://github.com/Samsung/iotjs>
- Demo Video
  - <https://youtu.be/FLnT129j64c>
  - <https://goo.gl/0vOsmY> - Tetris

# What?

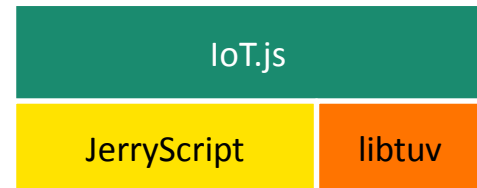
Node.js  
for Web ecosystem



~20MB



IoT.js  
for IoT ecosystem



~512KB

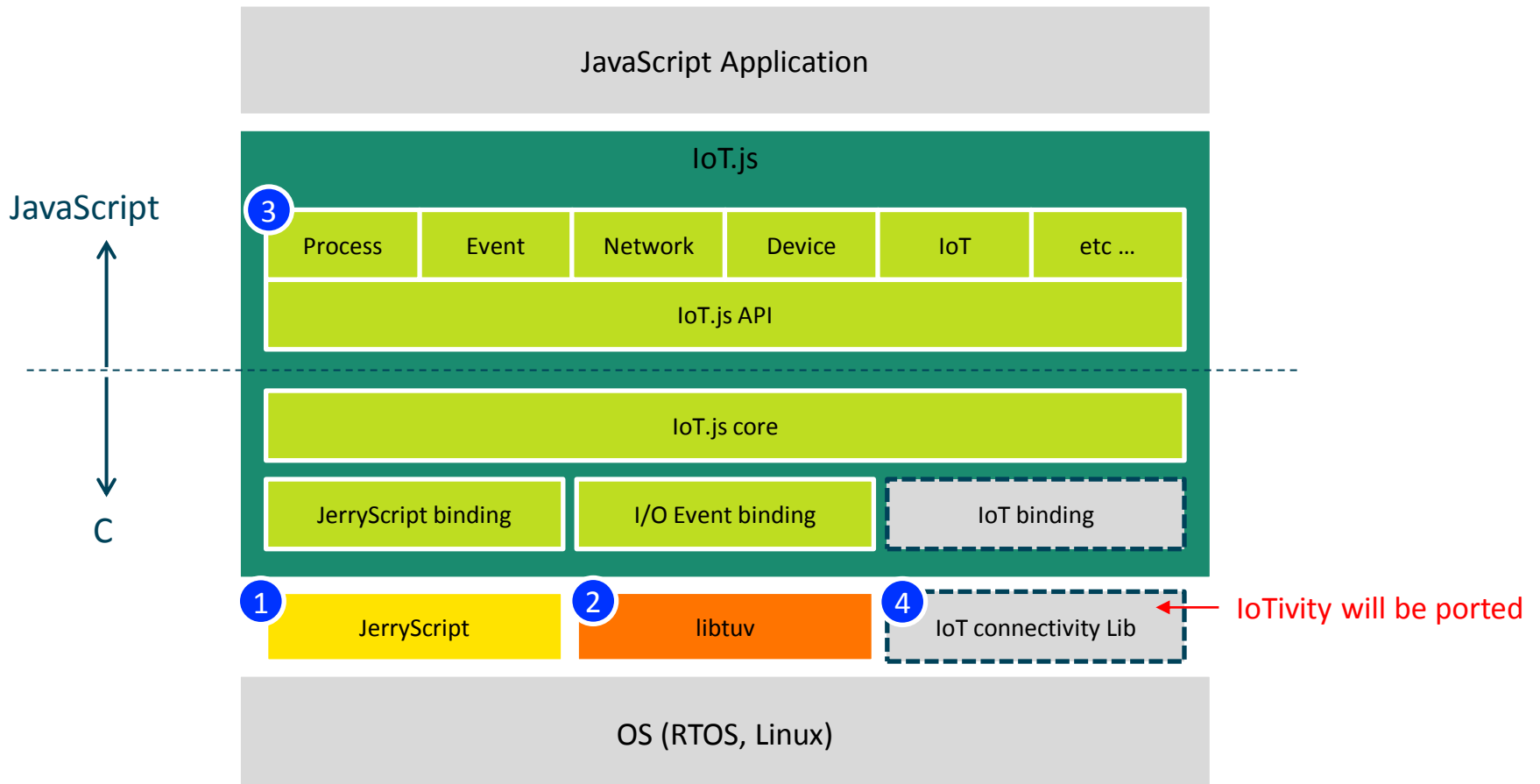
# What is this for?

- JavaScript developers who become makers
  - World's largest software developer pool today
- Fast prototyping solution for independent IoT developers
  - Makers build projects with less hassle
  - Product designers prototyping IoT applications with easy
  - Developing IoT solutions with JavaScript, such like developing web applications
  - Even production with highly optimized solutions
- Competitive solution for IoT chip vendors
  - Exclusive, essential solution for strengthen the product competitiveness

→ Become a standard platform in IoT world!!!  
Integrating device and service with single language!!!

# Architecture

- ① JerryScript engine + ② Async. I/O event library + ③ App Framework + ④ IoT Connectivity



# IoT.js API candidate - December 2015

## ■ Basic API

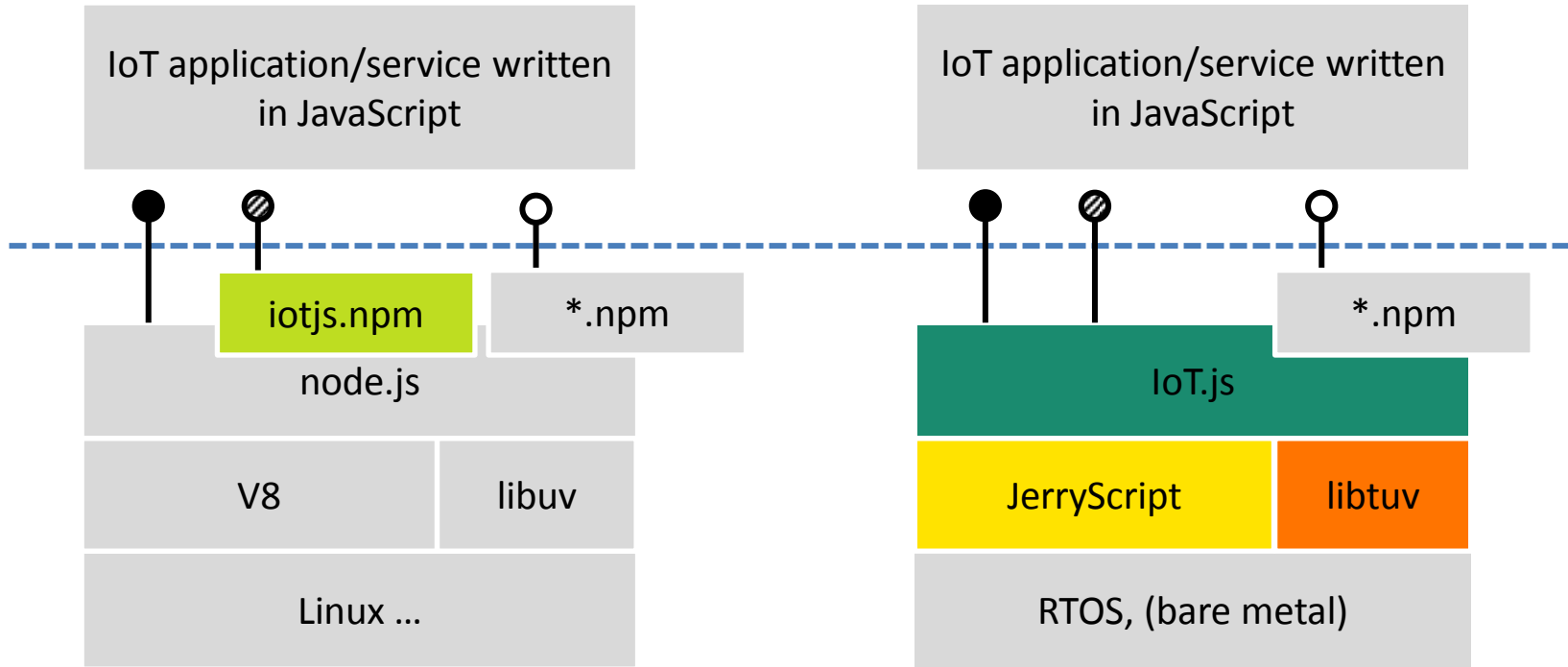
- Assert
- Buffer
- DNS
- Events
- File System
- HTTP
- Modules
- Net
- Process
- Stream
- Timers
- (GPIO)

## ■ Extended API

- CoAP
- Console
- Encoding
- REPL
- UDP/Datagram
- URL
- (I2C)
- (SPI)

# How to keep compatible?

- node.js API
- ◌ IoT.js API
- Other API



Node.js

(11MB FLASH + 8MB RAM)

IoT.js

(256KB FLASH + 256KB RAM)

# Progress

- Not much progress after 2<sup>nd</sup> workshop
  - Merge libtuv as base async I/O library
  - Enable LTO
  - Improving document registration process
  
  - Try to make IoT.js use CCM memory on STM32F4
  - Porting to mbed
  - Porting to ARTIK-1
  - ...
- Business collaboration request
  - Intel
  - Baidu & ARM
  - Other companies ...