Spanning the IoT Developer Chasm

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The Developer Chasm in IoT

- Microcontrollers / Small Devices
- Edge Devices
- Server / Cloud / Client
Crossing the Chasm

Microcontrollers / Small Devices

Edge Devices

Server / Cloud / Client

JS
Crossing the Chasm

• Client side application developers are already translating their skills to the server via Node.js

• Same opportunities are presenting themselves in the IoT space

• JavaScript is becoming a unifying language across the entire software platform in IoT
Why JavaScript?

MOST POPULAR TECHNOLOGY

62,588

TOP TECHNOLOGIES

119,287

TOP TECHNOLOGIES*


* Combined JavaScript tags include: JavaScript, jQuery, AngularJS, Node.js, JSON
Innovate **Together**

**Community**
- A center of gravity for open source JavaScript
- Crossing domain, technology and business sectors

**Collaboration**
- Provide a location and mechanisms for the community to work together
- Guidelines and principles for growing large, diverse contributor bases

**Continuity**
- A large, collaborative community increases innovation while providing for long-term sustainability
Why JavaScript?

jQuery still runs on 80% of top million websites and >18% of the entire internet
Why JavaScript?

The jQuery CDN (code.jquery.com) averages ~15k requests/second which translates to >36 Billion downloads/month and transfers of >1.6 PB/month
Community

23 open source projects spanning multiple segments of the JavaScript ecosystem
Why JavaScript?

Aggregate project downloads from npm are ~80 million/month!
Community

Lo  ES  Clock  Mocha  Cube  Pig

Require.js  Umbrella  Circle  JS  Slice  Arrow  Jed

Dōjō Toolkit  Qu  Ring  Duo  PEP  Circle
JS Foundation in IoT
JerryScript is the lightweight JavaScript engine intended to run on a very constrained devices such as microcontrollers:

- Only few kilobytes of RAM available to the engine (<64 KB RAM)
- Constrained ROM space for the code of the engine (<200 KB ROM)

The engine supports on-device compilation, execution and provides access to peripherals from JavaScript.
Node-RED is a tool for wiring together hardware devices, APIs and online services in new and interesting ways.

- Browser-based flow editor for creating flows and one-click deployment
- Built on Node.js
- Flows can be exported and shared individually or via flow.nodered.org
- Ships on every Raspberry Pi
Demo
Our Members

- IBM
- Samsung
- bocoup
- ripple
- SauceLabs
- sense tecnic
- Sitepen
- StackPath
- WebsiteSetup

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Support the projects and initiatives your organizations depend on
- https://js.foundation/members/
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