

JavaScript In IoT

基础业务组

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Internet of Things

WIKIPEDIA :

The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction

Why JavaScript ?

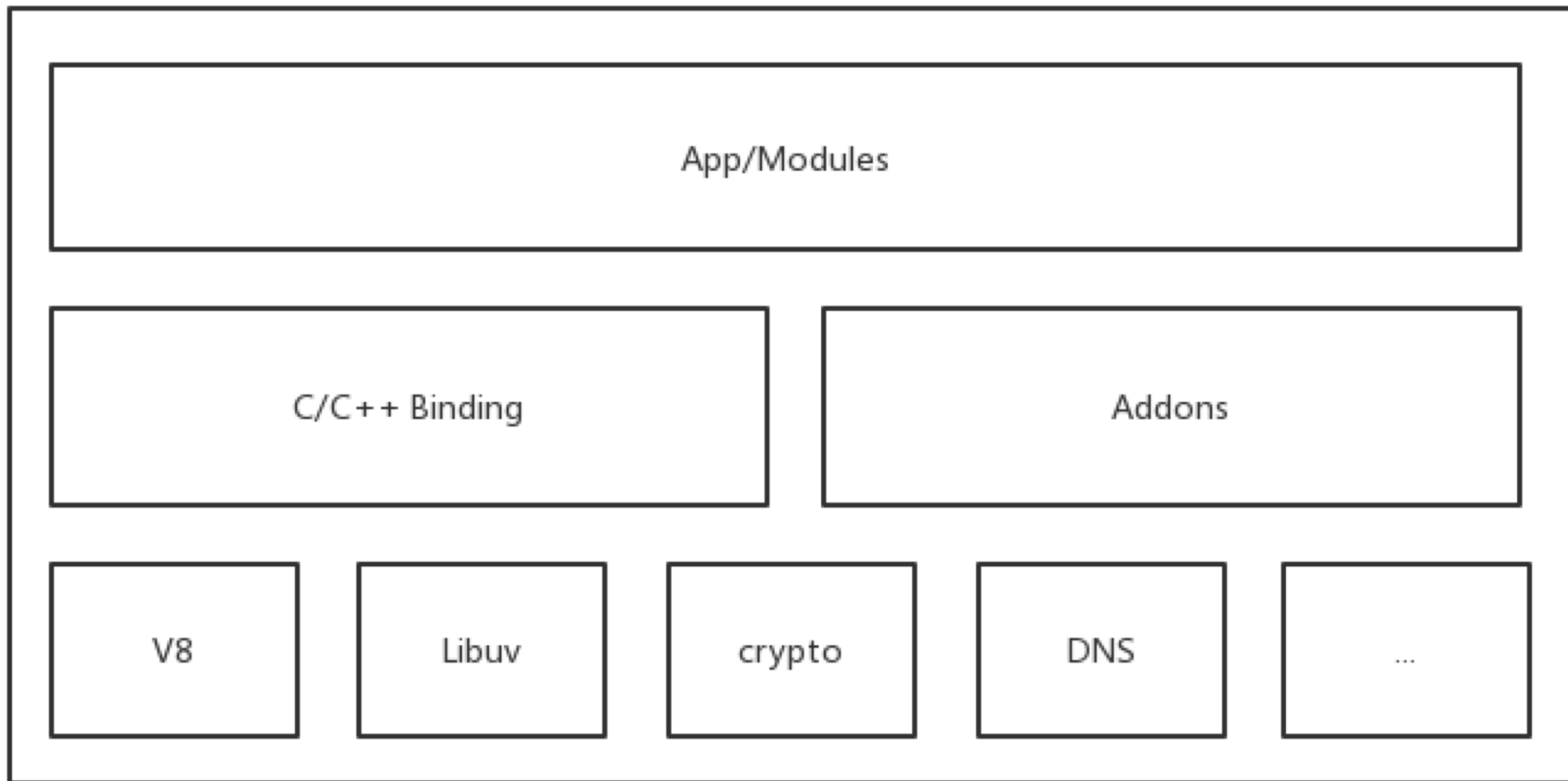
slow ?

inefficient ?

frontend ?

...

V8 / Libuv / Node.js



JerryScript

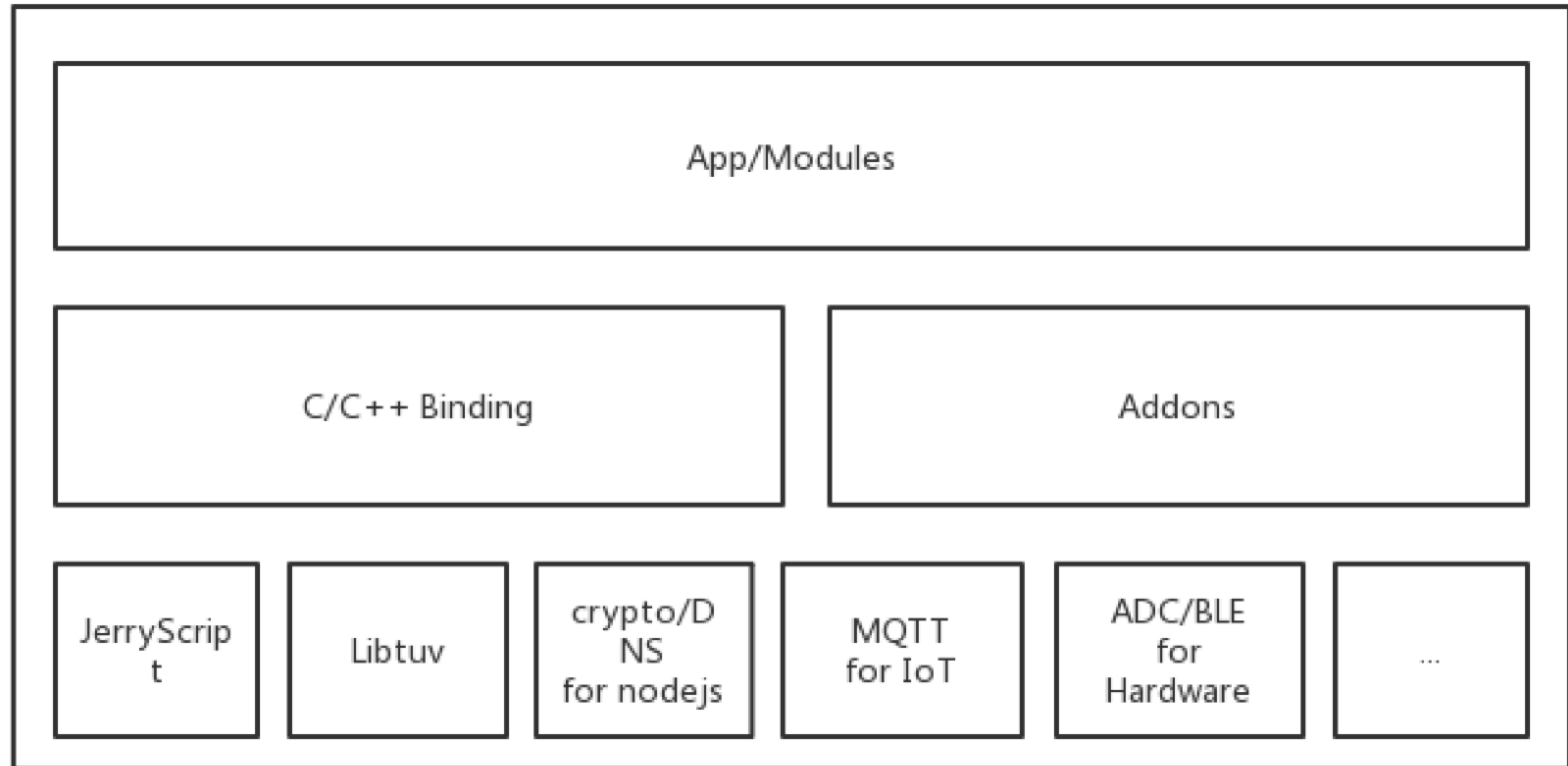
JerryScript is the lightweight JavaScript engine intended to run on a very constrained devices such as microcontrollers:

- 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.

	Low-end	Medium-end	Smart phone
RAM / ROM	Tens of kb ~ 4MB	Hundreds of MB	GB+
Processor	1 Core	1 – 4 Core	4 Core+
OS	RTOS	Linux	Android / iOS

JerryScript / Libtuv / IoT.js



IoT.js not support:

Class

Promise

Debug

...

Development Experience ? ? ?

ShadowNode

Native Support

Class

Promise

WebSocket

N-API

Most of Node API

...

MQTT MQTT.js

D-Bus

Support Platform

Linux / (Docker)

MacOS

Raspberry Pi

Kamino18 / (Amlogic/a113) / Hi3561

NuttX / TizenRT

...

NPM
not support !!!

global 'node_modules'
semi-private mechanism
performance testing and review

Hardware Interfaces

ADC

BLE

GPIO

...

Community and Commercial

YodaOS

YodaRT(Yoda.js/VUI)

rt-node

...

Links:

[IoT wikipedia](https://en.wikipedia.org/wiki/Internet_of_things)

[JerryScript](https://jerryscript.net/)

[JerryScript GitHub](https://github.com/jerryscript-project/jerryscript)

[JerryScript Env by Docker](https://hub.docker.com/r/txiaozhe/jerry-builder)

[IoT.js](http://www.iotjs.net/)

[IoT.js GitHub](https://github.com/jerryscript-project/iotjs)

[ShadowNode GitHub](https://github.com/yodaos-project/ShadowNode)

[YodaOS GitHub](https://github.com/yodaos-project/yodaos)

[yoda.js GitHub](https://github.com/yodaos-project/yoda.js)

[rt-node GitHub](https://github.com/yodaos-project/rt-node)

THANKS!