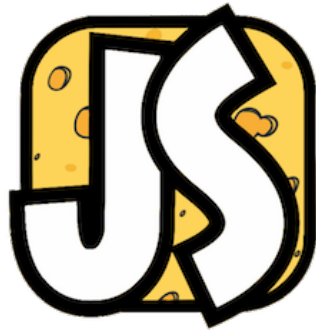




# Status of JerryScript



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University of Szeged

Szeged, HU, Sept 14, 2017

# Overview

- ▶ Previous workshop was at 26 April, 2016 in Staines, UK
- ▶ 18 attendees
- ▶ Details and slides are available on the GitHub wiki
  - <https://github.com/jerryscript-project/jerryscript/wiki/JerryScriptWorkshopApril2016>
- ▶ Main topics
  - Optimizations
  - ES2015 features implementation
  - Improve user experience
  - Debugger support



# Overview

- ▶ Contributions
- ▶ New key features
- ▶ Memory consumption
- ▶ Performance
- ▶ Binary size

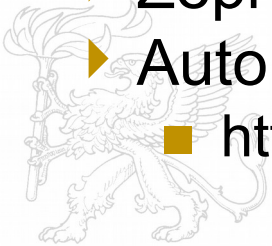




# Contributions

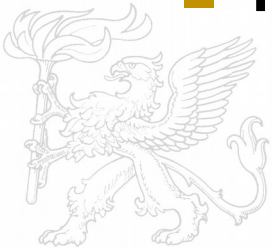
# New Key Features

- ▶ ArrayBuffer (Intel)
- ▶ TypedArray (Intel)
- ▶ Promise (Intel)
- ▶ Argument parsing and module extensions (Intel)
- ▶ Debugger (ARM, Samsung and University of Szeged)
- ▶ mbed OS5 support (ARM)
- ▶ Zephyr support (Intel)
- ▶ Automated test system (Samsung)
  - <https://jerryscript-project.github.io/jerryscript-test-results/>



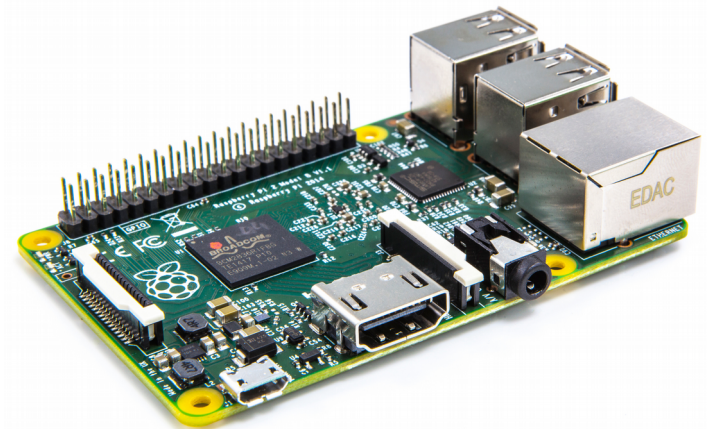
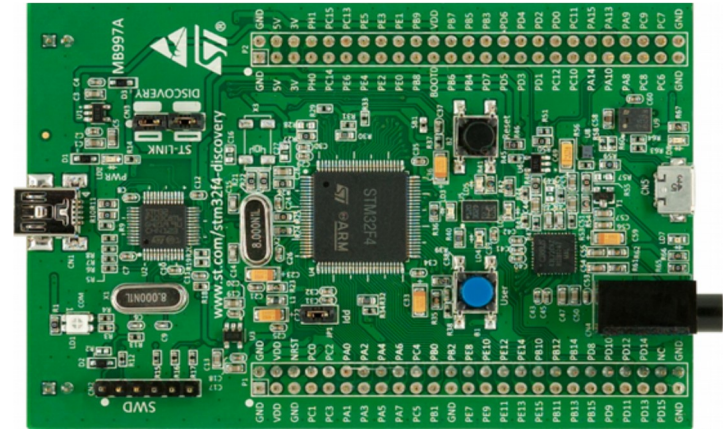
# Contributions

- ▶ **44** Contributors
  - ARM, Intel, Samsung, University of Szeged, TI
- ▶ **115244** line insertions
- ▶ **74359** line deletions
- ▶ **676** merged pull requests
- ▶ **231** GitHub issues opened
  - **198** (86%) fixed



# Measurement Setup

- ▶ STM32F4 Discovery board
  - 32 bit ARM Cortex M4 core (168 MHz)
  - 128+64 KB RAM memory
  - 1MB Flash memory
- ▶ Raspberry Pi 2
  - 900MHz quad-core ARM Cortex-A7 CPU
  - 1GB RAM
- ▶ SunSpider 1.0.2
  - 15 of 26 tests fit into 80 KB memory (the rest is reserved for system)
  - Note: all tests run on a Raspberry Pi correctly (thanks to more memory)

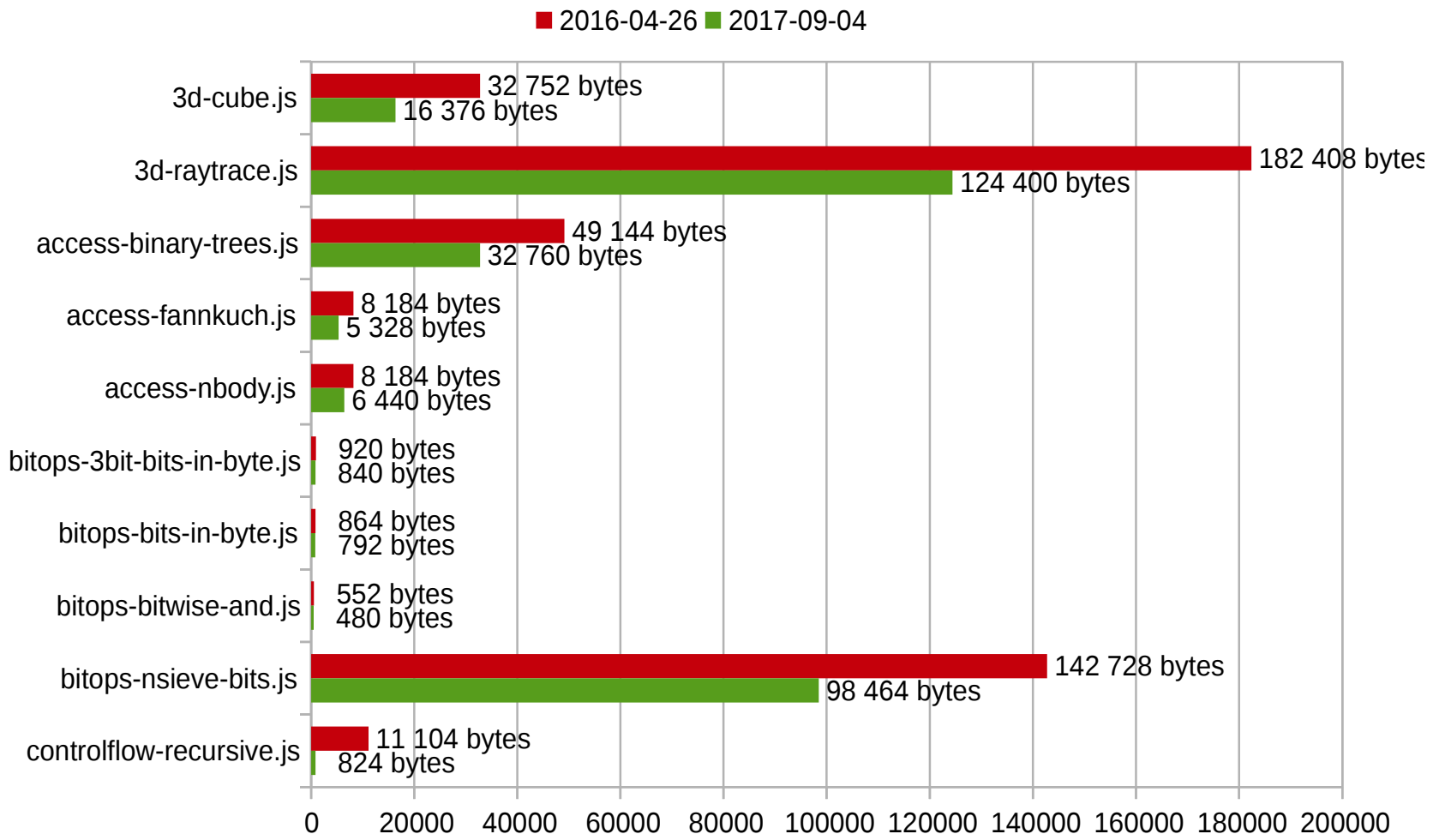




# Memory Consumption

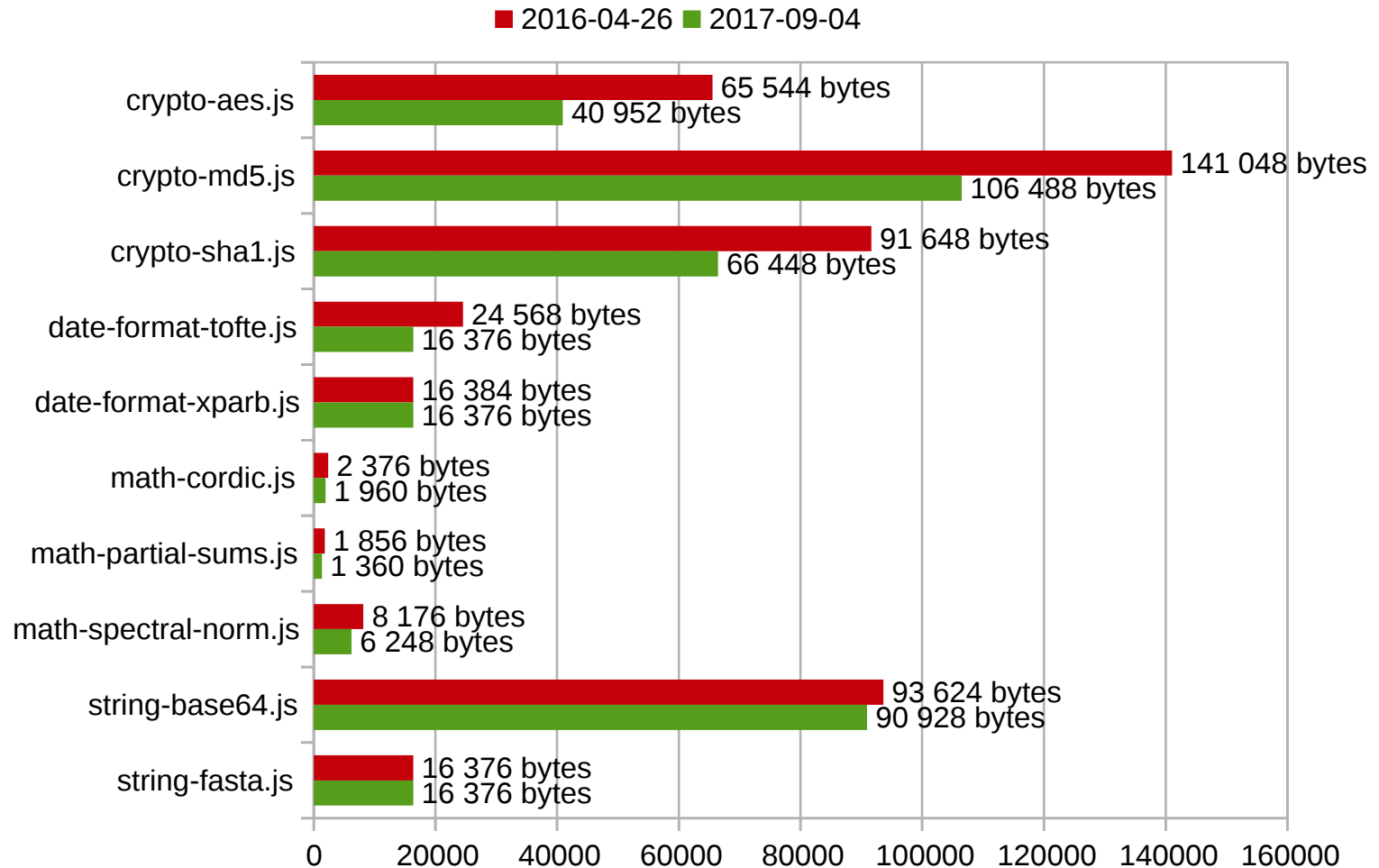


# Sunspider heap memory consumptions on RPi2 in bytes



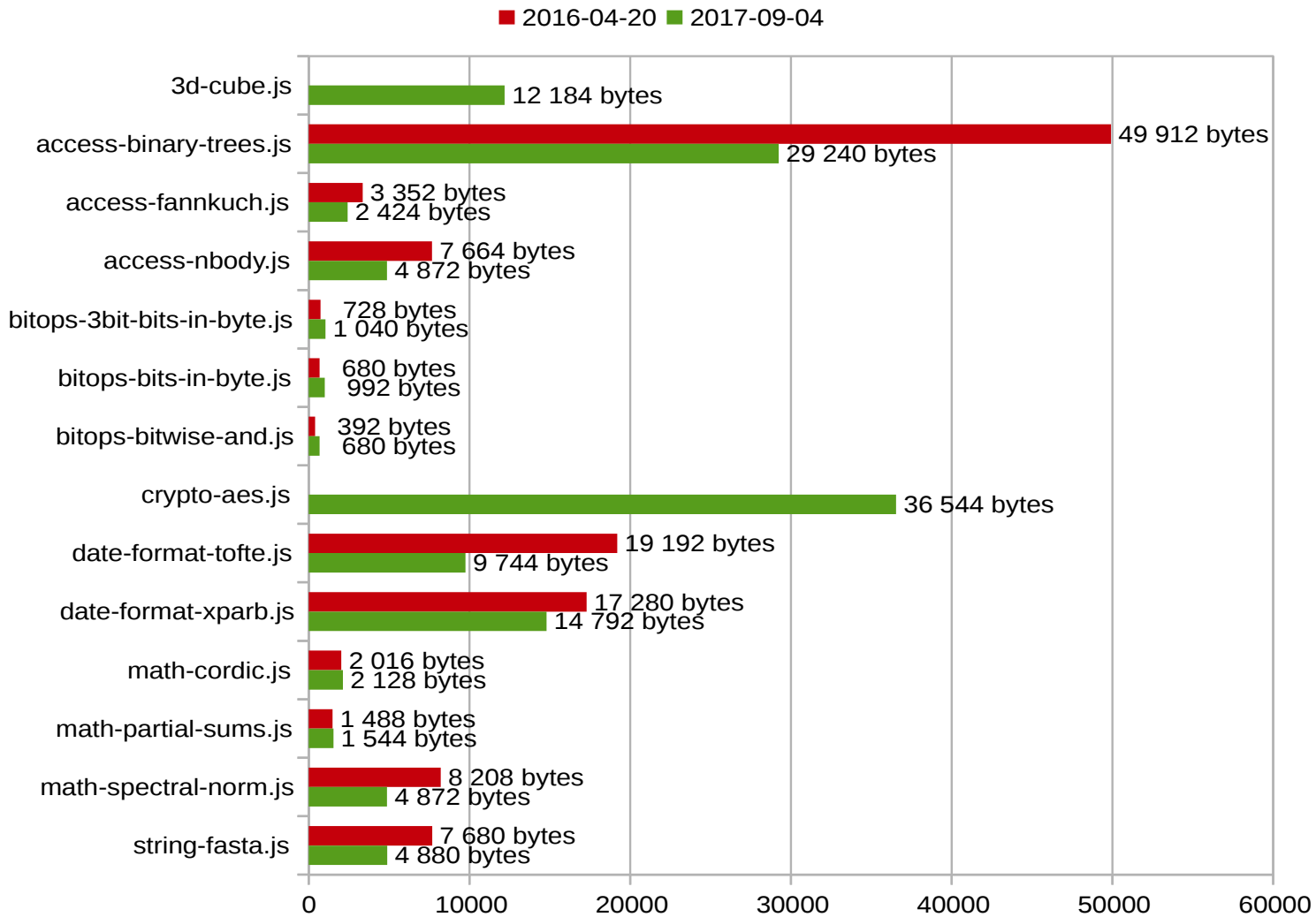


# Sunspider heap memory consumptions on RPi2 in bytes





# Sunspider heap memory consumptions on STM32F4 board in bytes

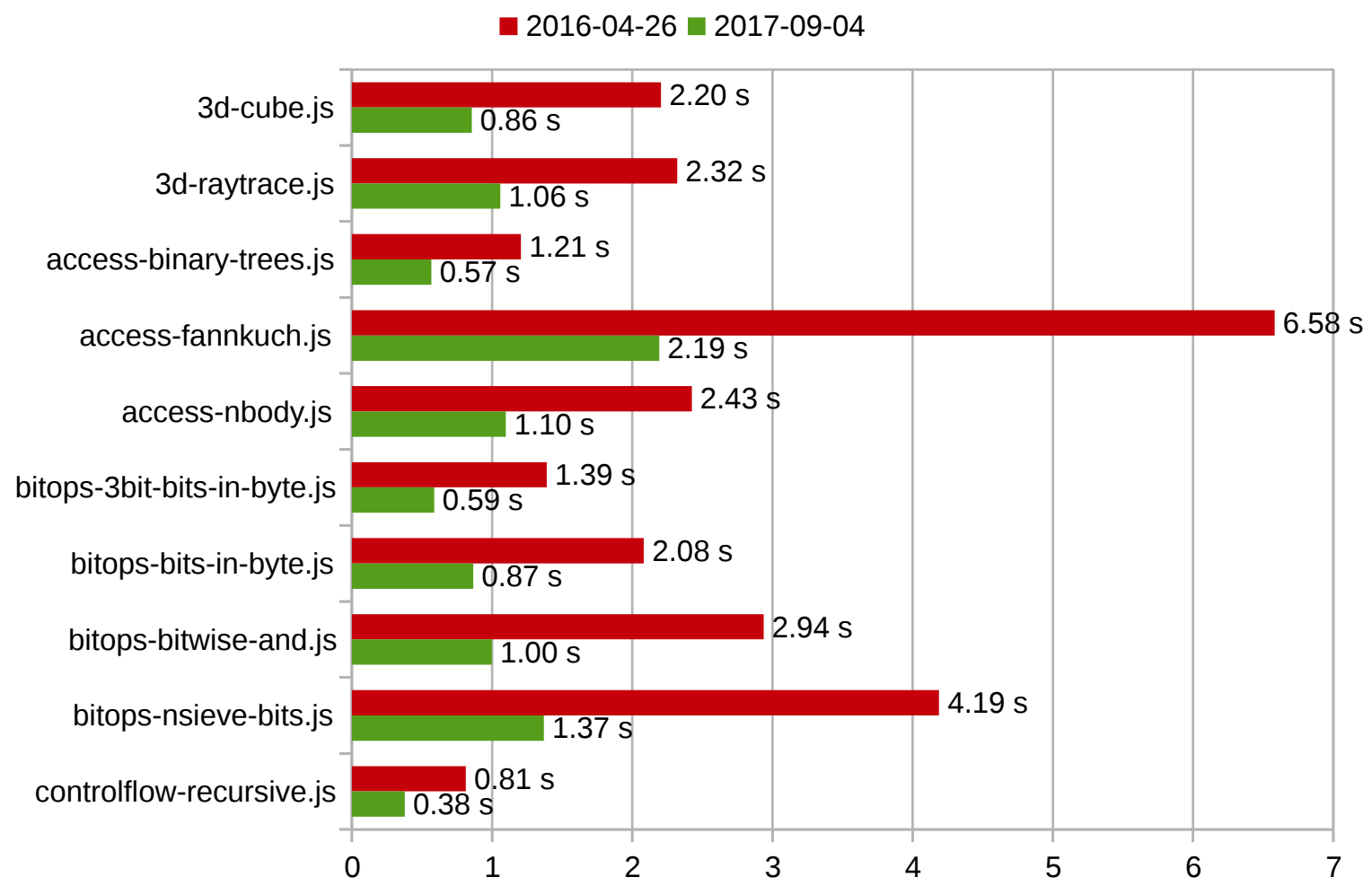




# Performance

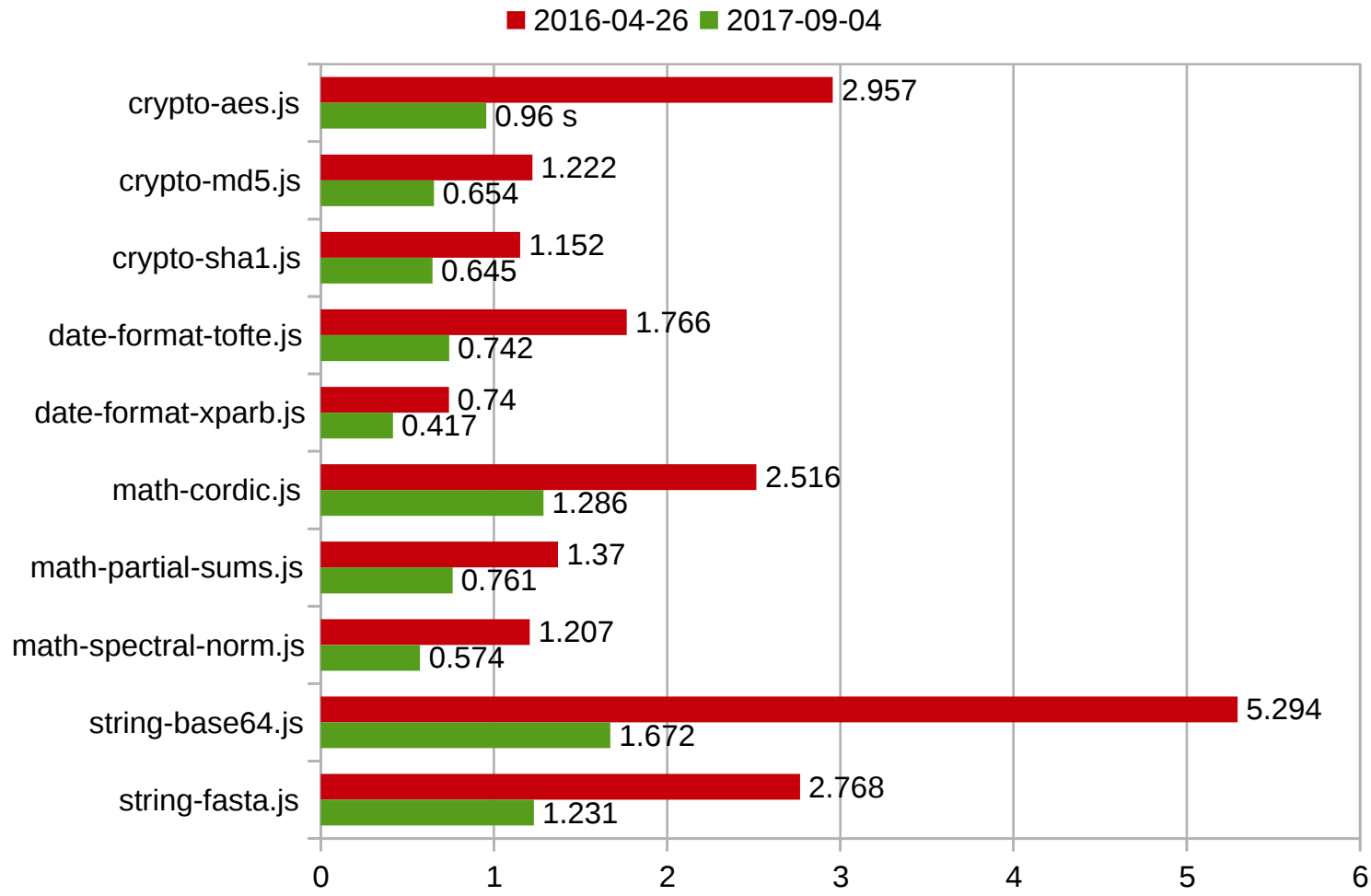


# Sunspider runtimes on RPi2 in secs



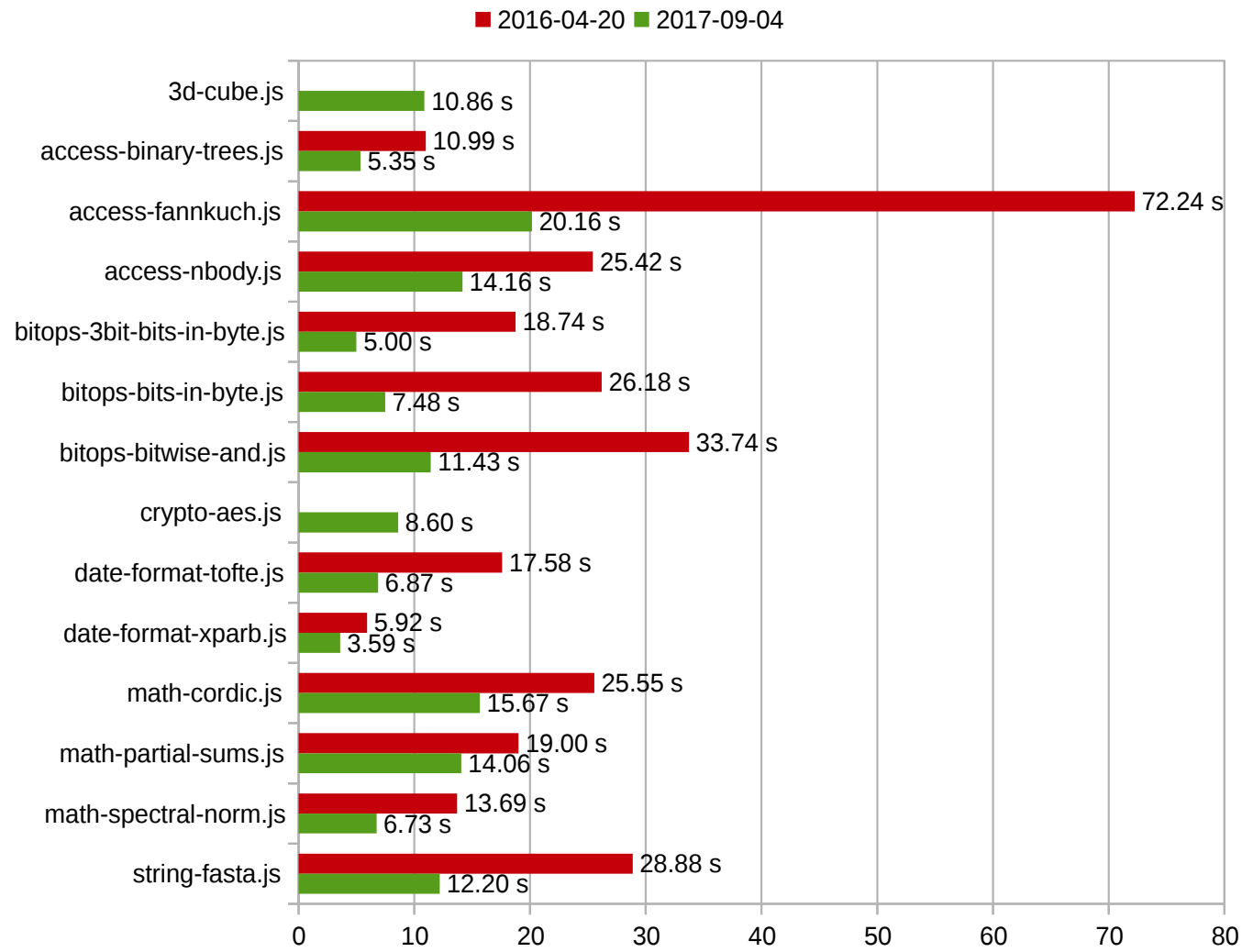


# Sunspider runtimes on RPi2 in secs





# Sunspider runtimes on STM32F4 board in secs





# Binary Size



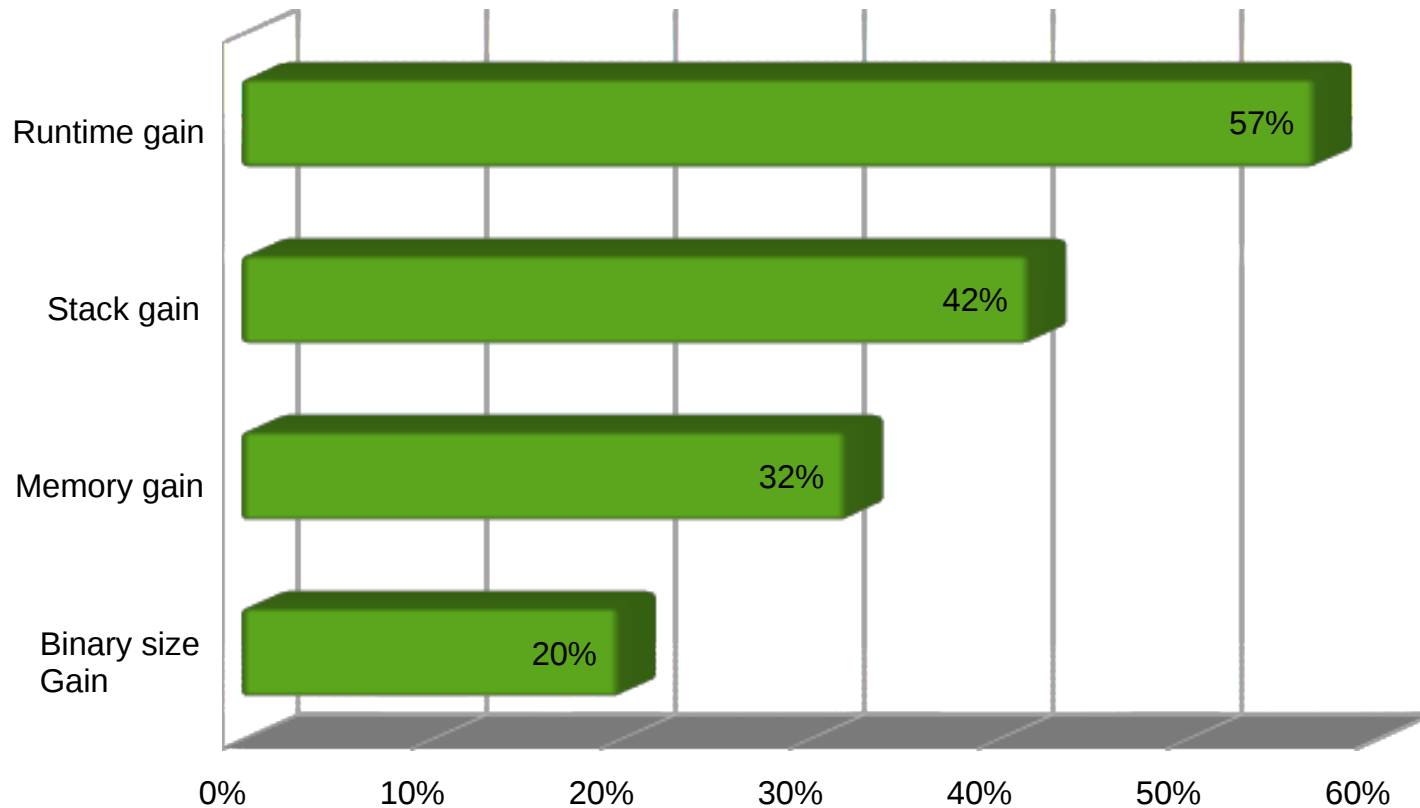
# Binary sizes on RPi2 in bytes

	Minimal	ES5.1	ES2015 subset
2016-04-26	80 924	174 988	N/A
2017-09-05	72 364 (11%)	140 208 (20%)	152 464
2017-09-05 without parser	47 436 (59%)	115 664 (66%)	127 872





## Overall results on Raspberry Pi 2





# Thank you.