Documentation WG

Charter: https://github.com/tock/tock/tree/master/doc/wg/documentation
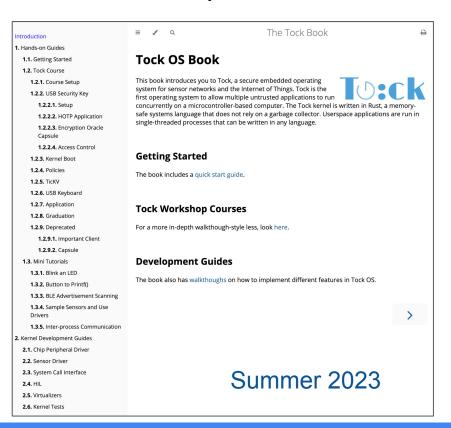
TockWorld 7 | June 2024

Goals

The goals of the Tock Documentation Working Group (DOC) are to:
- Maintain and improve the Tock Book
- Oversee and improve the API docs
- Maintain and improve the informational content on the Tock website
- Review changes to Tock documentation in the doc folder

Members:

- Brad Campbell (Chair)
- Branden Ghena

Tock Book Expansion

The Tock Book

Tock OS Book

This book introduces you to Tock, a secure embedded operating system for sensor networks and the Internet of Things. Tock is the first operating system to allow multiple untrusted applications to run concurrently on a microcontroller-based computer. The Tock kernel is written in Rust, a memory-safe systems language that does not rely on a garbage collector. Userspace applications are run in single-threaded processes that can be written in any language.

Getting Started

The book includes a quick start guide.

Tock Workshop Courses

For a more in-depth walkthough-style less, look here.

Development Guides

The book also has walkthoughs on how to implement different features in Tock OS.

Summer 2023

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Summer 2024

Docs in github.com/tock/tock

- Now focused on:
  - *How* to implement
  - Contributing guidelines
- Majority of content moved to book
  - Make the book the go-to place for finding Tock documentation

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README.md

Tock Documentation

General kernel documentation is in the Tock Book. Information about Tock policies and development practices is here. This folder also contains documentation on syscall interfaces.

For short tutorials and longer courses on how to use Tock, see the Tock OS Book.

Tock Policies

Interface Details

- **Syscall Interfaces** – API between userland and the kernel.
- **Internal Kernel Interfaces** – Hardware Interface Layers (HILs) for kernel components.
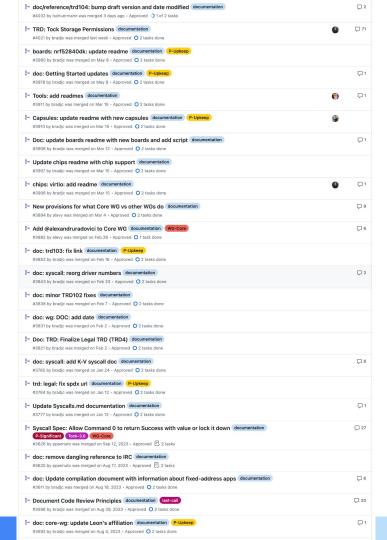
Tock Setup and Development

- **Getting Started** – Installing the Tock toolchain and programming hardware.
- **Repository Structure** – How the tock/ repo is organized.
- **Nested Boards** – How Tock supports nesting board platforms.
- **Out of Tree Boards** – Best practices for maintaining boards not in Tock master.
- **Style** – Stylistic aspects of Tock code.
- **External Dependencies** – Policy for including external dependencies.

Management of Tock

- **Working Groups** – Development groups for specific aspects of Tock.
- **Code Review Process** – Process for pull request reviews.
- **Tock Management** – Management processes for Tock, including releases.

Non-meeting notes PRs

- [Document](#) what we look for during code review
- [Clarify](#) WG roles
- [Check](#) for READMEs in CI

Tock Blog posts (https://tockos.org/blog/)

- Five posts over the past year
    - Key-value store updates
    - Network WG
    - Tock on stable Rust
    - Libtock-c redesign
    - Analyzing code size bloat (cross-post)