MCU Driver HAL and CI working group

1st July 2021

Note: This is a PUBLIC meeting recorded as usual

Advanced draft

Agenda

- Proposal on contribution guidelines
- Proposal on legacy and new documentation
- Project review
  - MCU-Driver-HAL, update
  - CI and Tests, update
  - Plans for upcoming weeks

Proposal on contribution guidelines

Work in progress:

- Pull request template
- Merging strategy
- Developer's Certificate of Origin + Signed-off-by tag on commits
- Roles
  - Maintainers
  - Reviewers (Codeowners)
  - Teams and individual contributors
- Pull request workflow
- Coding style
- Green pull request policy

Proposal on legacy and new documentation (I)

- Move documentation from shadowfax-architecture (excluding prototype) to the new repo:

```
MCU-Driver-HAL
└── docs
    ├── adr(*)       // Relevant ADRs for HAL
    ├── design(*)    // All design docs + API-design-guidelines + driver-implementation-guidelines
    ├── user         // All user guides
    ├── porting      // All porting guides
    ├── Personas.md  // Personas from shadowfax-architecture wiki
    └── Glossary.md  // Recommended terminology from shadowfax-architecture
```

(*) documents for new architecture should be placed on separate branch

Proposal on legacy and new documentation (II)

- GitHub issues
  - User stories from shadowfax-architecture are not imported as GitHub issues
    - Use MCU-Driver-HAL/docs/user-stories
  - Software tasks from shadowfax-architecture are not imported (tasks are tracked in JIRA)
- GitHub discussions
  - Waiting for partners's approval before we move the following HAL discussions:
    - https://github.com/ARMmbed/shadowfax-architecture/discussions/211 RTOS awareness of Shadowfax HAL
    - https://github.com/ARMmbed/shadowfax-architecture/discussions/198 Process Dataflow and Async model
    - https://github.com/ARMmbed/shadowfax-architecture/discussions/201 Basic bootstrap/peripheral initialization
    - https://github.com/ARMmbed/shadowfax-architecture/discussions/192 API versioning
    - https://github.com/ARMmbed/shadowfax-architecture/discussions/181 Event propagation & Async model
  - Testing & Mixed discussions don't need to be moved. Info captured in design docs

Linaro

Status of MCU-Driver-HAL, update

- Greentea tests enabled - https://github.com/MCU-Driver-HAL/MCU-Driver-HAL/pull/6/
  - usTicker
    - Verifies that the microsecond ticker frequency and the microsecond ticker counter width are within a correct range
  - us_ticker_lp_ticker_common
    - Verifies the defined behaviour of the microsecond ticker (see docs)
  - us_ticker_lp_ticker_frequency
    - Verifies y that the microsecond ticker is operating at the frequency it specifies
  - Porting guide and test instructions updated

- Verified tests on ST Disco L475 board
  - https://github.com/MCU-Driver-HAL/MCU-Driver-ST/pull/3

CI and Tests, update

Design Documents for Review:

- CI architecture overview and CI MVP design
  - https://github.com/ARMmbed/shadowfax-architecture/pull/222
  - Will be merged soon if no objections

- Hardware Farm Management (LAVA) design documentation
  - https://github.com/ARMmbed/shadowfax-architecture/pull/223
  - Open for review

CI for publishing Doxygen documents

- Doxygen available on Github Pages:
https://mcu-driver-hal.github.io/MCU-Driver-HAL/doxygen/html/index.html

- README:
https://github.com/MCU-Driver-HAL/MCU-Driver-HAL/tree/main/docs/doxygen

- PR: https://github.com/MCU-Driver-HAL/MCU-Driver-HAL/pull/11
  - PR-Doxygen-Check workflow
  - PM-Doxygen-Publish workflow

Linaro

CI for License Validation

Tools

- scancode toolkit : https://scancode-toolkit.readthedocs.io/
  - Python based open-source tools
  - Scans your entire repository and detected licenses and copyright for each individual file
  - Report the results in the formats of your choice (JSON, SPDX, HTML etc.)

License Validation Rules:

- Yaml format based, increase readability
- Customizable for each repository
- Prototype: <link URL>

CI:

- Including scancode-toolkit into test env docker image
- Provide a script/plugin, checks scan output against the pre-defined rules

Summary of plans for upcoming weeks

Week	Topics / Tasks
21wk26 (today)	Proposal on maintenance processes Proposal on legacy and new documentation Enable Greentea tests in MCU-Driver HAL Enable Github Actions for CI tests (Doxygen, License) Create LAVA design documents for review
21wk27	Proposal on maintenance processes Evolution of Serial HAP API Enable Greentea tests in MCU-Driver HAL Enable Github Actions for CI tests (License, Coding style)
21wk28	MCU-Driver-HAL implementation of Corstone-300
21wk29	
21wk30	

Next call: Thursday 8th July

Please send agenda items for next call by next Monday

Thank you