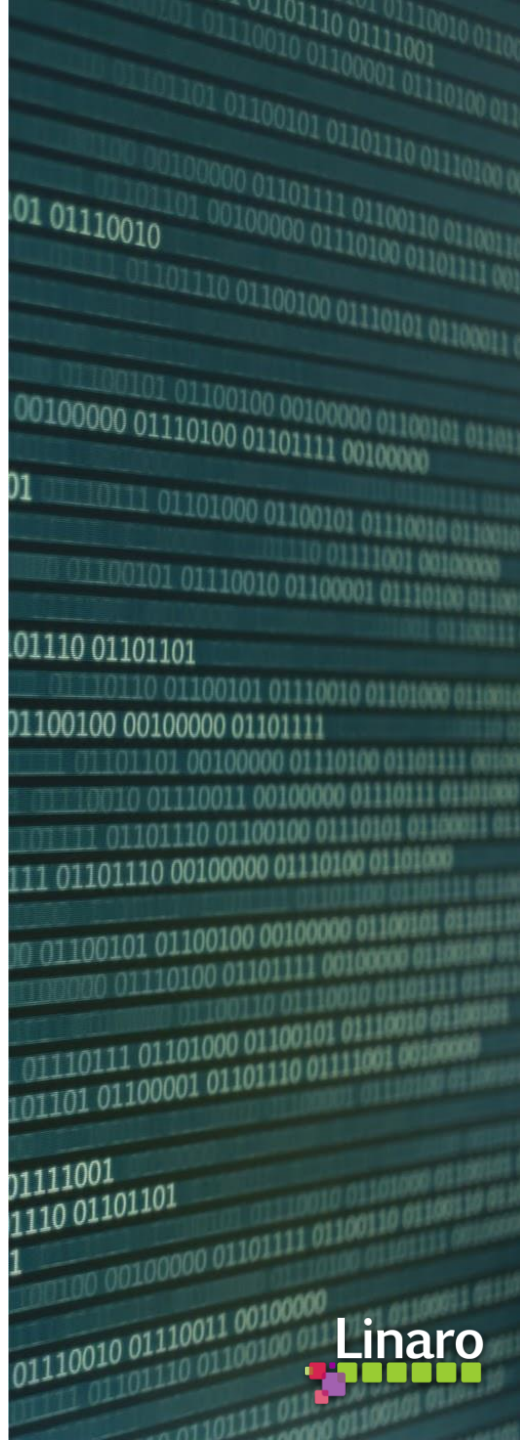
Open-CMSIS-Pack

Technical Project Meeting 2023-08-22

This meeting is recorded !

Agenda

- Welcome back
- Project Boards
- Issues to Review
- Discussion: Pack consistency across the industry
- Wrap Up



Boards:

- Open-CMSIS-Pack Specification Change Board
  - Re-running generators and dry-run mode #206 (done)
  - [spec] adding XOR like condition #240 (proposal)
  - Adding `image` as child element of `part` #246 (new)

- CMSIS-Toolbox 2.1 Project Board
  - See progress and issues in scope for version 2.1.0
  - Please review and provide feedback in case you see topics missing
  - Add issues or comment on existing issues that you think should be added to 2.1.0

Issues to Review

- CMakeLists Proposal (Daniel) - leave comments and feedback in #1044
- LicenseSet information from pdsc files added to cbuild.yml files #1064 (done)
  - [cpackget] add support for LicenseSets #199 (todo)
- [csolution] create *.cbuild.resolved.yml variant with absolute paths #PR975
- [YAML input] Allow additional properties in project schemas #PR1090

Issues found in CMSIS-Toolbox 2.0.0

- [cpackget] `--concurrent-downloads` (default 5) corrupts downloaded *.pdsc files #197 => workaround: `cpackget update-index -a -C 0`
- [cbuildgen] Single ArmCompiler armasm syntax file project fails to link #69

Generator

- Define $pack_id and $generator_id for generator arguments (spec: #PR238, devtools #PR1007)
- Scope: generator's ***id*** attribute is restricted to references within *.pdsc file
- Generator invocation today is by generatorID without specifying pack_id:
  - Must be fixed: csolution run -p <pack_id> -g <generator_id>
  - Must avoid common generators directories
- Global Generator ID?
  - Provision: Gvendor::Gtool@Gversion
  - Uniqueness controlled by vendor like devices and boards
  - Generator Support Pack - GSP vs. generator in $PATH like toolchains (e.g. vcpkg)
  - GSP Pack needs to be installed / listed in YAML input
- Use cases?
  - components from different packs must not share generator with same ID string

Generator (cont'd)

Extend cbuild.yml file when generated by `csolution run` command

```
build:
  generated-by: csolution version 2.1.0-dev0
  generator-pack: Keil::STM32H7xx_DFP@3.1.1
  generator-id: STM32CubeMX
  solution: Blinky.csolution.yaml
  project: Blinky.cproject.yaml
  context: Blinky+Debug
  compiler: AC6
  device: STM32H743XIHx
```

Discussion: Pack consistency across the industry

Now several new pack vendors are active, but there is some consistency missing.
We should ensure that software packs can be re-used across the industry.
But what is the right approach?

- Should we review these packs collectively?
- Should we start a working group?
- How do we organize taxonomy?

Wrap Up

Is anyone preparing/working on a topic to present and discuss in the coming weeks?

- Please contact Joachim.Krech@arm.com ahead of the meeting

Next Open-CMSIS-Pack meeting: 29nd Aug 2023 @ 16:00 CET (15:00 UK)

Linaro

Thank you