



Mike Thompson <mike@openhwgroup.org>

Meeting Minutes: SiLabs Debug Verif Kick-off

1 message

Mike Thompson <mike@openhwgroup.org>

Wed, Apr 15, 2020 at 12:17 PM

To: Davide Schiavone <davide@openhwgroup.org>, Oivind Ekelund <oivind.Ekelund@silabs.com>, Paul Zavalney <Paul.Zavalney@silabs.com>, Sebastian Ahmed <sebastian.ahmed@silabs.com>, Steve Richmond <steve.richmond@silabs.com>, Arjan Bink <arjan.bink@silabs.com>

Cc: Rick O'Connor <rickoco@openhwgroup.org>, Jim Parisien <jim@openhwgroup.org>

Attendees:

OpenHW: Davide Schiavone, Mike Thompson

SiLabs: Oivind Ekelund, Paul Zavalney, Sebastian Ahmed, Steve Richmon, Arjan Bink

Actions: Mike, David, Wajid, Paul, Sebastian.

Slides available on GitHub at: <https://github.com/openhwgroup/core-v-docs/tree/master/verif/Common/Presentations>

Agreed that we should adopt the PULP-Platform "riscv-debug" (<https://github.com/pulp-platform/riscv-dbg>) as the DM and DTM implementation for at least CV32E40P, CV32E40 and probably CV64A.

- Arjan has reverse-engineered the riscv-debug and it supports the functional sub-blocks and interfaces shown in Figure 1 of the OBI specification (<https://github.com/openhwgroup/core-v-docs/blob/master/cores/cv32e40p/OBI-v1.0.pdf>).
- It is believed that this is the DM/DTM being used by lowRISC ibex.
ACTION: **Mike** to confirm
- Rumour has it that this IP is being verified by Google.
ACTION: **Davide** to confirm and inquire about projected completion.

Agreed that primary verification of debug should be done at the CORE level, not Subsystem level.

- Mike would still like to have the ability to verify debug at both the core and sub-system levels, but agreed with the goal to verify it first at the core level.
ACTION: **Mike** to illustrate a strategy for supporting both Core-level and Subsystem-level verification in a single UVM environment.
- Verification environment for debug will be the UVM environment (uvmt_cv32), not the "dm" testbench inherited from RI5CY.
ACTION: **Wajid** to review Ibex core-level debug verification implementation.

Documentation:

- Paul had previously created a [pull-request](#) to update Debug and Trace features in the user_manual.
ACTION: **Davide** and **Paul** to push that through.
- Mike stupidly admitted that he is working to create a restructured text version of the user manual.
ACTION: **Mike**, get it done and committed to GitHub.
ACTION: **Paul** buys a bottle opener for the wine Davide will owe Mike.
- Need to get started on the debug Vplan.
ACTION: **Wajid** owns this (Paul agreed to contribute)

Tracking:

- No strong comments/opinions about using GitHub's "per-repository projects", so Mike will publish tasks as GitHub issues on the [CV32E40P Debug Verification](#) project.
- Agreed to hold weekly meetings.
ACTION: **Sebastian** to suggest convenient time for Austin and Oslo (we can assume these are also convenient for Ottawa and Zurick).

Cheers,
---mike