



DTPM SIG

17-Sept-2024

**Meeting minutes are in the speaker notes for the relevant slide**



# Disclosures

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# Agenda

- Disclosures
- Summit: Room booked for members' day in-person meeting
  - Next scheduled call is 15-Oct. Cancel?
- HTI fast track status
- Self-Hosted Trace TG status
- E-Trace maintenance
  - Several open issues for minor clarifications
  - Add references to E-Trace Encap
- Event Trace next steps
- AOB

|    |                                   |
|----|-----------------------------------|
| PD | Paul Donahue (Ventana) (Me)       |
| IR | Iain Robertson (Siemens)          |
| BS | Beeman Strong (Rivos)             |
| BA | Bruce Ableidinger (SiFive)        |
| RC | Robert Chyla (MIPS)               |
| AY | Alan Young (Qualcomm)             |
| MS | Michael Schleinkofer (Lauterbach) |



- A room is booked for members' day. May cancel the regular meeting that's scheduled the previous week (15-Oct) unless Bruce has something to share (see later point).
- Self-hosted trace group is approved but there is no github repo yet. Beeman will check with Jeff about setting that up. The charter does need to be approved but that's probably a formality since it has already had so much input from the group.
- There are several minor clarifications to the E-Trace spec that are pending.
- Event trace:
  - The initial event trace proposal has been

released. SiFive wants this to be a standard RISC-V extension rather than just a custom extension. SiFive supports this through Freedom Studio at a minimal level. It would be nice to have support from additional tool vendors which is why it's being proposed as a standard.

- The word "donate" is not correct. SiFive did not donate the event trace spec to RVI.
- It is currently described relative to N-Trace but it should be compatible with both N-Trace and E-Trace. Three aspects: Control layer (common), N-Trace implementation, E-Trace implementation.
- It's not appropriate to take the existing spec and just approve it. It's just the basis from which we start. Discussion about whether it's appropriate to rubber-stamp something that's donated by one company without going through a more collaborative process. There's consensus that it's not rubber stamping and that the initial proposal is just a proof of concept that still needs to go through the process of gathering more input.
- Iain: Is there an urgent need for event trace? Do we set up a TG right now given the bandwidth of the people who are likely

to be involved? Do we wait?

- Beeman: Doesn't seem urgent. This group sets strategy. This might seem good to hardware people but do software people have bandwidth to support it? What do other architectures have?
- Robert: Seems like a useful donation but ratification may take a long time.
- Bruce: What do customers want/need?
- Iain: It may not exist in other architectures because nobody wants it. Siemens has something similar and there's not much customer interest.
- You can use this for basic call/return tracing. Or just tracing ecalls and interrupts. Discussion about whether this takes more bandwidth than normal trace. This is primarily a profiling tool for performance analysis without instrumenting the code. From Lauterbach's perspective, this is not useful for traditional debugging. Debugging performance is also debugging. Lauterbach customers don't want this.
- Discussion about whether people prefer self-hosted trace vs. external trace. This is more relevant in the context of a self

hosted trace environment.

- Perhaps the priority of event trace is higher once we have self-hosted trace further along. Because the same people will be involved, do we want to do event trace in addition to everything else? Such a TG would do: control, what is traced, how does it get encoded in N-Trace/E-Trace.
- We need a case to be made for its value. We can do it at our November meeting. The perf analysis group should also be invited. We could do it at the 15-October meeting if Bruce is ready. We can decide later.
- The in-person meeting at summit will likely be very broad and have people who don't know what the group does. Therefore, there's no specific agenda.

# Future Meetings / AOB

- From May, meetings will be 60mins at 10am Pacific every 4<sup>th</sup> Tuesday, starting Jan 9<sup>th</sup>
  - Next meeting is 15-Oct at 10am Pacific (17:00 UTC)
- AOB



# Thank You

