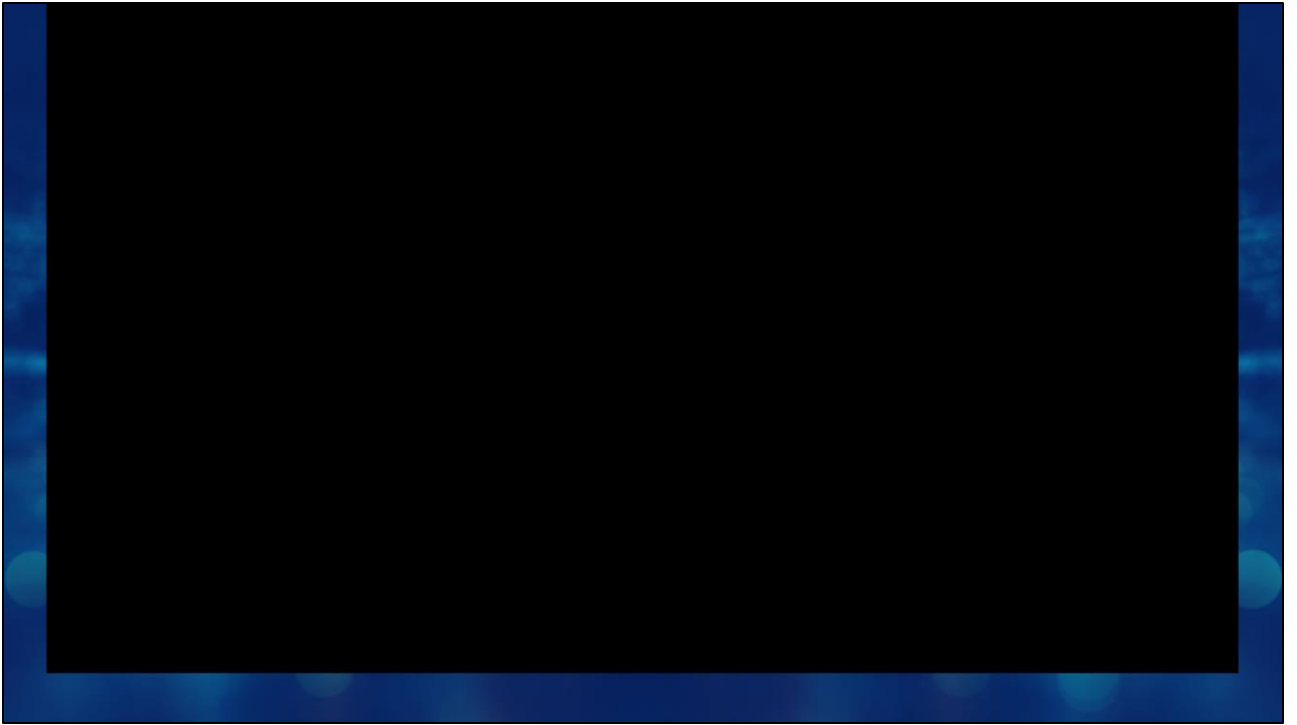




DTPM SIG E-Trace-Encap TG














06/14/2023

Meeting minutes are in the speaker notes for the relevant slide



Agenda

- Disclosures
- eTrace packet encapsulation
- Competitive Analysis
- Gap Analysis Summary(no change)
- Maintenance(no change)
- AOB

PD	Paul Donahue (Ventana) (Me)	 
IR	Iain Robertson (Siemens)	 
RC	Robert Chyla (SiFive)	 
AJ	Amit Jain (Qualcomm)	 
BS	Beeman Strong (Rivos)	 
BA	Bruce Ableidinger (SiFive)	 
MS	Michael Schleinkofer(Lauterbach)	



Attendees: see screenshot on the agenda slide

eTrace Packet Encapsulation

- TG formed as there is no fast-track process for non-ISA
- Acting chair: Iain Robertson, acting vice-chair: Paul Donahue
- Reflector: tech-e-trace-encap@lists.riscv.org
- github: <https://github.com/riscv-admin/e-trace-encap>
- DTPM SIG and ETraceEncap meetings will co-exist

Prelim charter:

The E-Trace Encapsulation TG will define how trace packet payloads shall be encapsulated.

In line with the original charter, the ratified Enhanced Trace for RISC-V standard defines packet payloads for instruction and data trace but does not fully define how this should be encapsulated. Chapter 7 gives some illustrative examples but this is insufficiently detailed and informative only.

The E-Trace Encapsulation TG will deliver a normative trace encapsulation specification that:

- Applies to Enhanced Trace for RISC-V packets but which is not restricted to that standard

To achieve its goals, the E-Trace Encapsulation TG, will interact with the following groups: SoC HC, DTPM SIG.



- A TG was formed at Mark's suggestion because there's no fast track process for non-ISA specs
- Will keep it low-overhead. Same meetings for DTPM and this new TG.
- MS: Is there a reason that the TG is limited to encapsulation? e.g. Common control interface is confusing.
- IR: Question still exists about maintenance of existing ETrace spec. This will be a standalone document from ETrace, although some believe it should be a chapter of the ETrace spec.
- RC: How to combine control with ETrace or converting ETrace to adoc.

- IR: ETrace spec will need to include references to the common control spec. Still need to understand process for changing a ratified spec. That conversation/process should be independent of encapsulation TG.
- Need to convert the spec from email to a proper spec. If it's a chapter then it needs to be LaTeX. If it's a separate document then it needs to be adoc.
- Nobody in the meeting objects to it being a chapter in the existing spec.

Competitive Analysis

- Template spreadsheet created (format stolen from Beeman):
 - Located in *for risc-v members/Workgroups/Debug Trace Performance Monitoring* RVI Google Drive
 - <https://docs.google.com/spreadsheets/d/1l0N-E-hTjFj3jkPrsLitso4hACDajayNwh35F4KUfs/edit#gid=0>
- Updated with details from preliminary gap analysis, which is now superseded
- Need input from others with knowledge of other architectures
 - volunteers?



- Looking for volunteers in the group to fill in the spreadsheet. Without volunteers, it won't happen. This shouldn't take much time or effort.

Maintenance (E-Trace)

- Clarification on push/pop support for data trace
 - Examples added to section 4.3 and pull request made
 - No functional change
 - Need to determine approval process for updating the spec given that it is ratified.
- Proposal to change description of tail call itypes to 'jumps'
 - Beeman to generated pull request
- Typo spotted in data trace packets: *index_width_p* should be *lrid_width_p*
 - Iain will generate pull request in due course
- Update control section to reference common control document
 - Not started yet
- Need clarification on process for making updates to ratified spec



- Process? Unpriv and priv specs just get clarifications all the time. Simply approved by Andrew with no other process. CMO spec went from 1.0 to 1.0.1 after a minor clarification.
- Several corrections or clarifications. There are pull requests but they won't be merged until the process is clear.

Future Meetings / AOB

- 2nd Wednesday of each month
- AOB



- BS: Would like to see a single trace spec that contains ETrace, NTrace, control, etc. as separate chapters.
- The problem is format: adoc vs. LaTeX. It will take a while before ETrace is converted to adoc.
- Discussion ensued about the pros and cons of a single document vs. separate specialized documents, jumping back and forth between specs in PDF vs. HTML, etc.
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Thank You

