Meeting minutes are in the speaker notes for the relevant slide


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Agenda

- Disclosures
- Status
  - HTI fast track status
    - Awaiting ARC approval
  - E-Trace maintenance
    - Most PRs approved. A couple of new ones still to address.
- Instrumentation Trace
  - Charter discussion
- AOB

PD Paul Donahue (Ventana) (Me)

IR Iain Robertson (Siemens)

JG Jay Gamoneda (NXP)

BS Beeman Strong (Rivos)

BG Bo Gan (Individual)

BA Bruce Ableidinger (MIPS)

 Carsten Gosvig (SiFive)

MS Michael Schleinkofer (Lauterbach)

 Rafael Sene (RISC-V)

RC Robert Chyla (MIPS)

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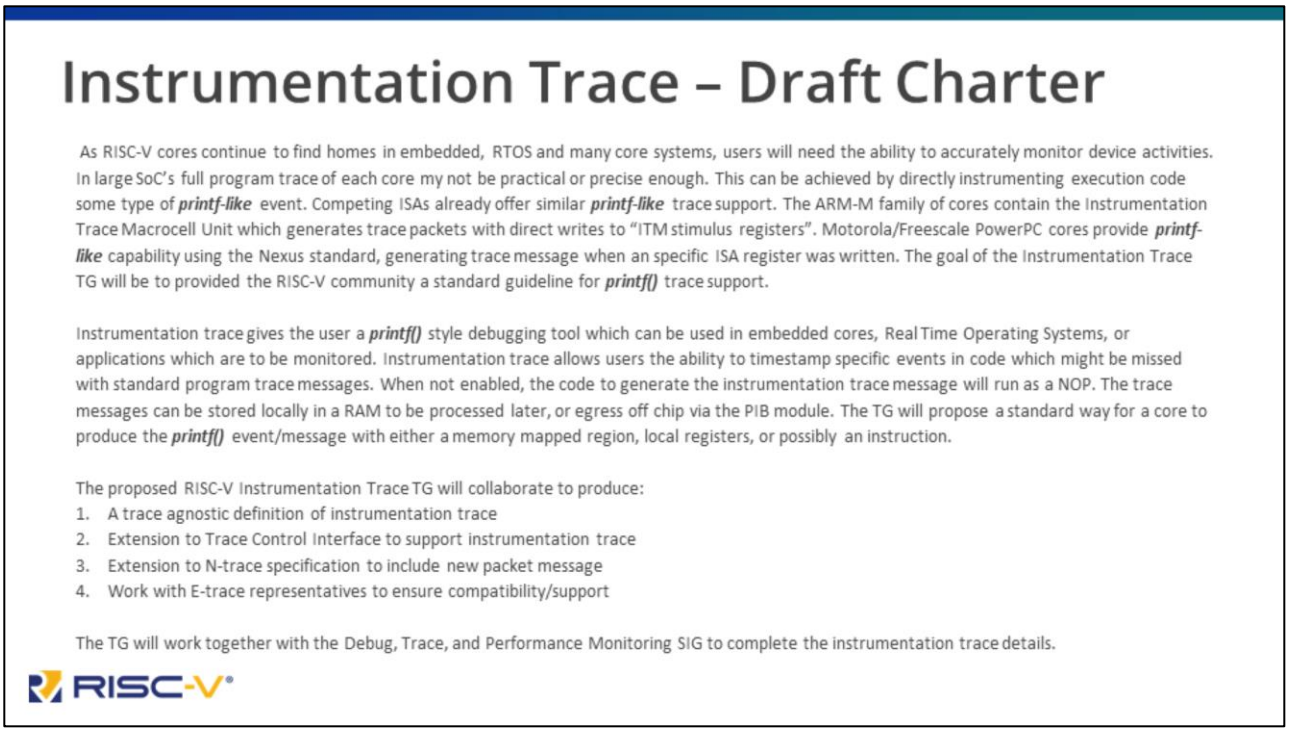

Instrumentation trace charter discussion:

printf is one use case but is too prominent in the draft charter. Also, mentioning other ISAs may be inappropriate.

We may not be able to make this a fast-track if the scope is not narrow. Ultimately, it's not up to us. Let's figure out what we want to do and then we'll let the appropriate people decide whether this is eligible for fast-track.

If we do the MMIO store then it's not really a NOP if it's disabled. It still does the store but it's a NOP

with respect to trace. Advantages of MMIO is that there's no change to the hart at all. This capability can be added to existing harts. Having an instruction would allow it to be non-intrusive and pass data to the trace encoder without going through the memory subsystem. Other than PTWRITE, the industry seems to favor MMIO.

Consensus that we should define both ways.

If we're extending N-Trace then we also need to extend E-Trace as more than an afterthought. We're talking about adding a new packet definition for E-Trace encapsulation, not E-Trace itself.

Instrumentation trace:

Power Architecture Data Acquisition: two SPRs are defined. One has an 8b tag and the other initiates the message (using the tag from the first register). For RISC-V, we had talked about MMIO and special instructions but this is a third way: CSRs. The CSRs could be implemented in the encoder or in the hart (which then sends info to the encoder as necessary).

Siemens: Static Instrumentation via a set of MMIO

mailboxes. There are groups of mailboxes where high address bits define which mailbox and low bits enable different features within that mailbox. Standalone block, architecture agnostic, can be shared between multiple harts.

Rafael: There's a new process for creating a TG. It may take up to 5 months because it requires approval all the way up to the RVI board of directors. We should focus on technical content and not worry about bureaucracy.

Future Meetings / AOB

- Next meeting is 4-Feb at 10am Pacific (18:00 UTC)
- AOB

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Thank You
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