MPI FORUM

Administrative Discussions

Agenda

- **Introductions**

- **WG Updates**

- **New HW-Topology WG**

- **Rule changes**
  - Dealing with MPI Companion Documents
  - Working group renewals
  - Minutues
  - Adding the option for phone meetings
  - Publishing draft Standards

- **Discussion on upcoming phone meetings (tomorrow)**
  - Available topics

NEW HW TOPOLOGY WG

HW Topology WG

- **Chair: Guillaume Mercier**

- **Charter:**

  The main question this Working Group proposes to address is the following: how can hardware resources (I/O, cores, caches, I/O proxies, etc.) be discovered, queried upon and distributed between execution flows? Indeed, MPI processes are bound to span multiple cores and no portable primitives exist outside, nor inside, MPI to explore and take advantage of the hardware topology either at the node or that is made available at the process level.

- **Institutions supporting WG creation**
  - Atos/BULL, CEA, Inria, Paratools SAS, UTK

RULE CHANGES

Dangers Discussed Last Time

- **MPI is seen as stagnant**
  - No new versions for a long time
  - Not addressing new developments in other areas

- **Helps perpetuate the image that MPI doesn't change**
  - Can never be ready for new challenges
  - Can't change to meet new needs

- **Reduced motivation**
  - We are doing this "on the side"
  - Slow process can be frustrating

- **Long time between discussions reduces efficiency**
  - If you only deal with a topic every three months, progress is hard
  - Changing people in the room makes it even harder
  - We have too many failed readings

Recap: How to Move Forward?

- **Get folks from new areas involved**
  - Direct / Personal contacts
  - Give them a voice and listen to their needs

- **Increased meeting schedule**
  - Add phone meetings to push forward proposals
  - Goal 1: reduce number of failed readings
  - Goal 2: get bigger topics through faster

- **Topics during phone meetings**
  - At least readings and general discussions
  - Anything else needs change of voting eligibility
  - Allow "smaller" items like errata?

- **Increase WG schedule**
  - Suggested interval weekly
  - Encourage better documentation

Recap: How to Move Forward?

- Does it make sense to have more meetings?   **YES**
  - Especially if some of them don't require travel?   **YES**

- If so, does this require changing voting eligibility rules   **DEPENDS**
  - Based on dues?   **PROBABLY NOT**
  - Based on dues + physical attendance?   **MAYBE …?**
  - Other ways to reach a stable quorum?   **CARRY FORWARD?**

- Do we allow voting at non-physical meetings?   **DEPENDS**
  - If so, what do we allow voting on?   **ERRATA (?), SD(?)**
  - If not, how do we get people to attend?   **Suggestions?**

- Weekly WG meetings   **DEPENDS**

(v2.2) Side Documents

- **So far only rules to pass a document**
  - Same as regular tickets
  - Updates and responsibilities unclear
  - Need to be light weight

- **Proposal**
  - Side documents require versioning
  - New documents start with v1.0
    - Associated with a WG
  - Minor updates
    - Errata process
  - Major updates
    - Full proposals

(v2.2) Side Documents - Text

2.2.5 MPI Companion Document Proposals and Publication

MPI Companion Documents (such as the MPIR specification) follow a leaner process than the MPI Standard Document. They are generally maintained by a working group, which is identified as part of the initial proposal process.

New MPI Companion Documents follow the same process as general text proposals. Once a proposal for a new MPI Companion Document is voted in by the MPI Forum, the document is immediately published with version 1.0 and the date of the ballot.

Updates to an existing MPI Companion Document must be proposed with a new, monotonically increasing version number and follow one of the two following procedures:

- Updates to MPI Companion Documents that are proposed with a new major version number follow the same process as general text proposals.

- Updates to MPI Companion Documents that are proposed with only a new minor version number follow the same process as errata proposals.

Once an update to an MPI Companion Document is voted in by the MPI Forum, the updated document is immediately published with its new version number and the date of latest ballot.

(v3.0/1) Working Group Renewal

- **We have too many dead working groups**
  - No ability to dissolve WGs
  - Confusing from the outside

- **Proposal: require renewal every year**
  - Pushed out if no quorum

- **Working Group:** Group of people working on individual, possibly cross-cutting topics that can lead to proposed changes for the MPI Standard Document. Working groups can be established at MPI Forum meetings once at least four IMOVE organizations indicate support for that proposed Working Group. Working groups must be re-established annually by the same mechanism. This can be delayed if the meeting where the working group would be re-established does not establish quorum.

Straw-Poll

- **Option 1: regular vote to keep: 15**

- **Option 2: regular vote to dissolve: 3**

- **Option 3: destruct by chair: 4**

- **Abstain: 1**

(v3.0/2) Taking Minutes

- **Need for more transparency**
  - Enable people not at meetings to follow

- **Let's try a simple option**

3.3 Minutes

During all official MPI Forum plenary meetings, a member of the Forum should take minutes to assist those who cannot attend or need to refer to previous meetings notes' for clarification. The leader of a particular plenary item is responsible for selecting a note taker for that session (with the intent being that the workload is spread around to ease the burden on any individual). For physical meetings, the role should change for each plenary item. For virtual meetings, a single note taker should cover the entire call.

(v3.0/3) Virtual/Phone Meetings

- **Goal: speed up discussion on reoccuring topics**

3.2 Virtual MPI Forum Meeting

A virtual MPI Forum meeting is intended to allow the Forum to make progress on proposals that are not yet ready for a reading between physical MPI Forum meetings. The schedule for virtual meetings will be determined at the preceding physical meeting (regardless of quorum) and published on the MPI Forum website. A teleconference bridge will be set up by a member of the MPI Forum and published on the MPI Forum mailing list.

No voting or official readings take place during virtual meetings. Instead, the Forum can discuss topics to prepare for upcoming physical meetings. The intent is to allow the Forum to increase the pace of progress, particularly on large proposals that need feedback more often than only at physical meetings.

While not required, it is highly encouraged that the Forum use a teleconference system that allows attendees to use video to improve the quality of the discussion, particularly for those actively participating in the discussion.

While there is no requirement to attend virtual meetings (voting eligibility is not determined by virtual attendance), lack of attendance decreases the productivity of such meetings and all who attend physical meetings are strongly encouraged to attend virtual meetings as well.

Schedule for Virtual Meetings

- **Need to define a process**

- **Candidate topics?**

- **Pickup tomorrow**

(v3.0/4) Draft Standards

- **Goal: keep community informed**
  - Allow feedback
  - Encourage early evaluations

- **Draft Specification:** An unofficial version of the MPI Standard to be released annually. The draft specification contains everything the MPI Forum has voted into the next version of the MPI Standard. This following official version of the MPI Standard is not guaranteed to remain backward compatible with any draft specifications that preceded it, but is intended to allow implementors and users an opportunity to investigate new features before the next full version of the MPI Standard is available. The draft specification does not require an additional ratification vote by the MPI Forum (the votes to include a proposal in the MPI Standard are considered sufficient).

- **Timing for first draft?**