

The MPI Forum: Getting Started

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Outline

- Forum Structure
- Schedules
- Introductions
- Scope
- Voting Rules
- Committee Rules

Structure

- Chairman and Convener: Rich Graham
- Secretary: Jeff Squyres
- Treasurer:
- Web Master: Bill Gropp
- Document management:

Structure - Cont'd

Steering committee:

Jack Dongarra
Al Geist
Rich Graham
Bill Gropp
Andrew Lumsdaine
Rusty Lusk
Rolf Rabenseifner

Face-To-Face Meetings

- Jan 14-16, 2008
- March 10-12, 2008
- April 28-30
- June 30 - July 2, 2008
- Sept 3-5, 2008 Dublin, Ireland (Euro PVM/MPI is Sept 7-10, 2008 in Dublin)
- October 20-22, 2008
- December 15-17, 2008

Face-To-Face Meetings - Cont'd

- US meetings: Chicago Marriott O'Hare
- Ireland meeting: TBD (University College Dublin - ?)
- Starting 1st day at 1PM
- Ending 3rd day at 12pm

Telcons

- Feb 11-13, 2008
- April 7-8, 2008
- May 26-28, 2008
- August 4-6, 2008
- Sept 29-Oct 1, 2008
- Nov 24-26, 2008

Report due back to Forum Chairman/Secretary
(part of the permanent record)

Agenda for this meeting

Monday 1/14/2008

- 1:00pm - 2:00pm : Welcome, overall introduction (Rich)
- 2:00pm - 2:15pm : Items from the floor (Rich)
- 2:15pm - 3:15pm : MPI 2.1 Introduction (Rolf)
- 3:15pm - 3:30pm : Break
- 3:30pm - 5:00pm : Ballot 3 (Rolf)
- 5:00pm - 6:30pm : Break for dinner (in airport area)
- 6:30pm - 8:00pm : MPI 2.2 Introduction (Bill)
- 8:00pm - 8:15pm : MPI 2.2 committee signup

Agenda for this meeting - Cont'd

Tuesday 1/15/2008

- 9:00am - 9:30am: Discussion and straw vote on ballot #3 (Rolf)
- 9:30am - 11:00 am: MPI 2.2 committee 1 and 2 meeting
- 11:00am - 11:15am : Break
- 11:15am - 11:50am : Introduction to MPI 3.0 (Rich)
- 11:50am - 12:00pm : Overview of Dynamic Process/Fault Tolerance committee (Rich)
- 12:00pm - 12:10pm : Overview of Generalized Requests committee (George)
- 12:10pm - 12:20pm : Overview of Non-Blocking Collectives committee (Andrew)
- 12:20pm - 12:30pm : Overview of One-Sided Communications committee (Bill/Rajeev)

Agenda for this meeting - Cont'd

- 12:30pm - 1:30pm : Lunch (3.0 committee signup)
- 1:30pm - 2:30pm :
 - Dynamic Processes/Fault Tolerance committee meeting (Rich)
- 2:30pm - 3:30pm :
 - Generalized Requests committee meeting (George)
 - Non-Blocking Collectives committee meeting (Andrew)
- 3:30pm - 3:45 pm: Break
- 3:45pm - 5:00pm :
 - MPI 2.2 committee meetings (Bill)
- 5:00pm - 8:00pm : Dinner (down town ?)
- 8:00pm -9:00pm :
 - One-Sided Communications committee meeting (Bill/Rajeev)

Agenda for this meeting - Cont'd

Wed, 1/16/2008

9:00am - 10:30am : First reading of MPI 2.1 Ballot #3 (Rolf)

10:30am - 11:50am : Report Back from Committees:

MPI 2.1 (Rolf)

MPI 2.2 (Bill)

Dynamic Processes/Fault Tolerance (Rich)

Generalized Requests (George)

Non-Blocking Collectives (Andrew)

One-Sided Communications (Bill/Rajeev)

11:50am : 12:00pm : Wrap up and adjourn (Rich)

Fee

- \$125 / meeting / person
- Shall we continue reserving block of rooms ?

Introductions

- Name
- Organization representing
- Technical background
- Forum interests

Scope of the MPI Form

What is MPI ?

- A standard
- A library
- Provides communications primitives (network and file-system)
- Provides some process control capabilities
- O/S agnostic
- H/W agnostic
- Aimed at
 - HPC and ?
 - Clusters
 - SMP's

Changes to MPI ?

Consistent with MPI's goals

MPI 2.1

Scope : Clarification to the MPI standards document, resulting in a single document describing the full MPI 2.1 standard. This includes merging of documents, text corrections, and added clarifying text.

MPI 2.1 Primary Author: Rolf Rabenseifner

MPI 2.2

Scope: Small changes to the standard. A small change is defined as one that does not break existing user code - either by interface changes or semantic changes - and does not require large implementation changes.

MPI 2.2 Primary Author: Bill Gropp

MPI 3.0

Scope: Additions to the standard that are needed for better platform and application support. These are to be consistent with MPI being a library providing of parallel process management and data exchange. This includes, but is not limited to, issues associated with scalability (performance and robustness), multi-core support, cluster support, and application support.

MPI 3.0 - Initial Chapter Authors

- Fault Tolerance/Dynamic Process Control: Rich Graham
- Generalized Requests (progress): George Bosilca
- Improved One-sided Communications: Bill Gropp/Rajeev Thakur
- Non-Blocking Collectives: Andrew Lumsdaine

Voting Rules

- There is one vote per organization, which must be present at the meeting when the vote is taken.
- To vote, an organization must have been present at two of the last three meetings.
- Votes are taken twice, at separate meetings. Votes are preceded by a “reading” at an earlier meeting, at which straw votes may be taken.
- Measures pass on simple majority.
- Only items consistent with the charter can be considered.

Bringing Items To A Vote

- Working group is established in meeting N (may be folded into a larger working group)
- Working groups is opened up to all
- Working group brings specific proposal to discussion before the full forum in subsequent meeting
 - Schedule with me at least 4 weeks prior to next face-to-face meeting
 - Provide Chairman and Secretary draft proposal in LaTeX format
- Straw vote taken after discussion in the full Forum
- Formal voting process proceeds, if/when working group is ready to bring this for vote.

Committee Rules

- Any one may propose a committee
- Must submit proposal in electronic form to the secretary
- Must be consistent with the Charter and Scope
- Need a minimum of 4 organizations supporting the proposal
- Semantics before API
- Need prototype implementation, with source code, for a given proposed feature. Ideally, this would be in one of the widely used Open Source implementations, such as MPICH and/or Open MPI.

General Etiquette

- Separate mailing lists for the 2.1, 2.2, and 3.0, and specific chapters
- One technical subject per e-mail
- If interfaces are changed, consider other desired changes at the same time, to minimize number of changes