MPI 2.1
at
MPI Forum
Chicago, June 30 – July 2, 2008

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Monday:
1:00 pm - 1:10 pm: MPI 2.1 - Current status
5:00 pm - 5:20 pm: MPI 2.1 - Working plan and preparation for votes

Tuesday:
9:00 am - 9:30 am: MPI 2.1 - Ballot 4: 2nd vote
MPI-1.3 (May 30, 2008) 1st vote
MPI-2.1 (June 23, 2008) 1st vote

Wednesday:
9:00 am - 9:30 am: MPI 2.1 - Implementation schedule and wrap up
MPI-2.1 – Current Status

- All ballot and review discussions are done (except 2ⁿᵈ vote of Ballot 4)
- MPI-1.3 (May 30, 2008) and
- MPI-2.1 (June 23, 2008)
  - Finished
  - Official reading was April 28-30, 2008
  - Printed books are available at this meeting
    - 2 x MPI-1.3 (dark yellow / gold)
    - 2 x MPI-2.1 (draft June 13, 2008) – Part I (light yellow) + Part II (orange)
    - 2 x MPI-2.1 (June 23, 2008) – Part I (light yellow) + Part II (orange)
      - One pair black/white version,
      - the other pair colored version (marking the merging and review process)
  - 1ˢᵗ official vote at this meeting, 2ⁿᵈ vote in Dublin, Sep. 3-5, 2008
- Problems
  - A few additional minor bugs detected and fixed in
    MPI-2.1 (draft June 13, 2008) and MPI-2.1 (June 23, 2008),
    i.e., they were missing in the official reading
  - Will be discussed in 5pm-slot today
MPI-2.1 – Working Plan

- Finishing the official reading
- Voting
  - By institution
  - Each institution has 3 votes:
    - Ballot 4 (2nd vote) // MPI-1.3 (1st vote) // MPI-2.1 (1st vote)
      - You can vote 3 times the same, or making 3 individual decisions
- Open issues → MPI-2.2
  - Categories
    - A: Significant enhancement or modification that should be discussed in the MPI-2.2 process
    - B: Maybe nice to have or maybe already solved. Handed over to the originators of the items.
      - Each reviewer gets his own list of items
      - Electronically back to Bill Gropp & Rajeev Thakur
- Offline discussions
  - How to handle MPI-2.2 and MPI-3.0 documents
  - Impression from MPI-2.1: Only Forum members should be authors of Latex text
Finishing the MPI-2.1 Official Reading

- 3 Typo corrections

- In the tables in Annex A.1.1, the C++ type declarations of the constants was removed during the merging process.
  - My apologies for not detecting this bug earlier.
  - I recovered these declarations according to
    - MPI-2.0, Annex B, MPI-1 C++ Language Binding
    - Ballot 2, Item 15-17:
      const MPI::Datatype \rightarrow MPI::Datatype
    - Ballot 3, Item 12:
      const void * MPI::BOTTOM \rightarrow void * const MPI::BOTTOM
Finishing the MPI-2.1 Official Reading - continued

- I removed the predefined “null”-callbacks
  MPI_{COMM | TYPE | WIN}_{NULL_COPY | DUP | NULL_DELETE}_FN
  from Appendix A.4.4 (C++ binding for Chap. …Caching),
  because:
  - Sect. 6.7.3, 6.7.4, and 6.7.5 tell “same name in C, Fortran, and C++”.
  - In Annex A.1.1:
    - MPI-2.1 (Draft June 13, 2008) page 499
      and MPI-2.1 (June 23, 2008) page 497, lines 15-17
    - MPI::{NULL_COPY | DUP | NULL_DELETE}_FN are defined for
      deprecated functions
    - Senseless routines, because the C++ routines, where they can be
      used as IN function-argument, do not exist,
    - C++ naming as usual with MPI::
      - I moved this problem to MPI-2.2
All official votes together

Each institution is asked for three votes:
- Ballot 4: 2nd vote
- MPI-1.3 (May 30, 2008): 1st vote
- MPI-2.1 (June 23, 2008): 1st vote

You can vote
- 3 times the same,
- or making 3 individual decisions.

| Ballot 4: Yes: 22; No: 0; Abstain: 0 |
| MPI-1.3: Yes: 22; No: 0; Abstain: 0 |
| MPI-2.1: Yes: 22; No: 0; Abstain: 0 |

Number of institutions: 22
(at this meeting)
Not in the room: 0
(while voting)
Implementation of MPI-2.1

- Do you expect that your company/organization is able to implement the 33 issues of MPI-2.1 (see Annex B, Change-Log) until EuroPVM/MPI 2008 (Sep. 7-10, 2008)?
- If no, please can you give an estimate.

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Wednesday 9:00 am
MPI-2.1 – ½-Year Project – a Statistical Summary

- MPI 1.3 + 2.0, merging 335 distinguished parts
- Ballot 1+2 40 items implemented
- Ballot 3 14 items / 12 accepted + implemented
- Ballot 4 22 items / 20 accepted + implemented
  + a lot of e-mails by MPI Forum members
- Review items 24 also implemented in MPI-1.3
  analyzed and … 26 still open questions → MPI-2.2
  (814 items)
  19 handed over to chapter authors
  77 done by MPI-2.1 chapter authors
  101 deferred to MPI-2.2
  14 question & answer only
  68 rejected (reasons communicated to the authors)
  485 items implemented by myself (253 since last meeting)

- Total summary 1225 items
- 14 chapter authors 21 chapters / annexes / frontm. / bibl. / index
  ( x 2 weeks/author) read and corrected
- 20 meeting hours Dec.07 telco: 0.5h + Jan.08: 5 h +
  ( x 40 members) Mar.08: 7 h + Apr.08: 6.5 h + June 08: 1 h

Work months
16
Published Files

- **Normal Version with colored links (for online usage or colored printing):**

- **Normal Version with colored links (for colored printing only):**
  mpi-report-2.1-2008-06-23.ps

- **Normal Version with black links (for black/white printing only):**
  mpi-report-2.1-2008-06-23-black.ps

- **Version with colors showing the development of MPI-2.1**
  (only for reviewing/history purpose):
  mpi-report-2.1-2008-06-23-reviewcolors.ps

- **BLUE:** Separately compiled (i.e., six files = six independent Latex runs)
- **ORANGE:** Additional files for convenient printing (based on .ps → published shell script)
- ***) with correct cross references for Acrobat reader (table of content, citations, index)
- **) used for printed books at the Forum meeting

Discussion:
Do we need more / other?
All okay as it is?
Yes: 24
No: 1
Abstain: 0
Follow-Up: Next Steps

- Ballot 3 → was done at last meeting
- Ballot 4 → is done at this meeting
- MPI-1.3 → Sep’08 2nd vote = done
- MPI-2.1 → Sep’08 2nd vote = done
- Libraries:
  First Implementations until EuroPVM/MPI 2008 is feasible