



MPI 2.1 at MPI Forum Dublin, September 3-5, 2008

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MPI 2.1
Slide 1

Höchstleistungsrechenzentrum Stuttgart



MPI-2.1 – Working plan: June 30 – July 2, 2008

Wednesday: 2:00 pm - 2:30 pm : MPI 2.1 - Working plan and preparation for votes

Thursday: 9:00 am - 9:30 am : MPI 2.1 - MPI-1.3 (May 30, 2008) 2nd vote
MPI-2.1 (June 23, 2008) 2nd vote
= final votes

Friday: 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
- MPI-1.3 (May 30, 2008) and
- MPI-2.1 (June 23, 2008)
 - Finished
 - Official reading was April 28-30, 2008
 - First vote was July 1, 2008
 - Printed books are available at this meeting
 - **2 x MPI-1.3 (dark yellow / gold)**
 - **1 x MPI-2.1 (June 23, 2008) – Part I (light yellow) + Part II (orange)**
 - **Colored** version (marking the merging and review process)
 - **N x MPI-2.1 (June 23, 2008) as hardcover book**
 - 2nd vote in Dublin, Sep. 2, 2008
- Errata list is setup (currently 4 entries [state Sep. 1, 2008])
 - <https://svn.mpi-forum.org/trac/mpi-forum-web/wiki/mpi22/mpi21-errata>
- Additional list for missing entries or errata in the Change-Log
 - Currently 1 entry (state Sep. 1, 2008)
 - <https://svn.mpi-forum.org/trac/mpi-forum-web/wiki/mpi22/mpi21-change-log-errata>

Voting
handled by
the MPI-2.2
process

Rules for Errata List

Discussion:

Are these
rules
okay
?

Yes:
28

No:
0

Abstain:
0

- If you detect that some information in MPI-2.1 is wrong compared to the documents MPI-1.1, MPI-2.0, the 4 ballots of MPI-2.1 changes, and the MPI Forum decisions in the MPI-2.1 project, then you should
 - make a new entry in the **list of MPI-2.2 items**, and
 - add the same link to the following MPI-2.1 errata list.
- **The bug must be clearly a bug of the editing process of MPI-2.1.**
Bugs in original MPI-1.1, MPI-2.0, or in the MPI Forum decisions, e.g. in Ballots 1-4, are not handled as an MPI-2.1 errata.
Those bugs are treated as part of MPI-2.2.
- **If you are an implementer of MPI-2.1, you should check the MPI-2.1 errata list.**
- All MPI-2.1 errata items are part of the MPI-2.2 process and should be amended in version 2.2 of the MPI standard.
- **Formally voted MPI-2.1 errata items can be viewed also as an integral part of MPI-2.1.**
- **The MPI Forum may make exceptions.**



Errata (→ discussed in MPI-2.2 slots)

- **MPI-2.1 Errata MPI::F_DOUBLE_COMPLEX (page 495 line 11)**
 - At MPI-2.1 p495.11, substitute "MPI::DOUBLE_COMPLEX" by "MPI::F_DOUBLE_COMPLEX"
- **MPI-2.1 Errata MPI_MAX_OBJECT_NAME (page 237 lines 1+3, page 563, lines 18+20)**
 - At MPI-2.1 p237.1, p237.3, p563.18 (*), and p563.20 (*), substitute "MPI_MAX_OBJECT" by "MPI_MAX_OBJECT_NAME"
 - Remove MPI_MAX_OBJECT from the Index of MPI Constants and Predefined Handles (pg 576)
- **MPI_REPLACE in MPI_Accumulate** *[was Ballot 2 Item 7]*
 - pg 332, ln 16: delete ", like the other predefined operations," because the other predefined operations *are* defined for derived datatypes.
 - pg 332: For the same reason, the Rationale on lines 19-22 is incorrect. It needs to be replaced with whatever was the real rationale for making this exception for MPI_REPLACE in 2.1.
- **Typo in MPI_Cart_rank**
 - Last line of pg 250: "coord is not significant" should be "coords is not significant". The variable name is coords.

Published Files – already on www.mpi-forum.org/docs/

- Normal Version with colored links (for online usage or colored printing):
[mpi-report-2.1-2008-06-23.pdf](#) *)
- Normal Version with colored links (for colored printing only):
[mpi-report-2.1-2008-06-23.ps](#)
[mpi-report-2.1-2008-06-23-small.pdf](#)
[mpi-report-2.1-2008-06-23-twice.pdf](#)
[mpi-report-2.1-2008-06-23-split-book-A5.pdf](#)
- Normal Version with black links (for black/white printing only):
[mpi-report-2.1-2008-06-23-black.pdf](#) *) **)
[mpi-report-2.1-2008-06-23-black.ps](#)
[mpi-report-2.1-2008-06-23-black-split-book-A5.pdf](#)
[mpi-report-2.1-2008-06-23-black-twice-part1.pdf](#)
[mpi-report-2.1-2008-06-23-black-twice-part2.pdf](#)
- Version with colors showing the development of MPI-2.1 (only for reviewing/history purpose):
[mpi-report-2.1-2008-06-23-reviewcolors.pdf](#) *)
[mpi-report-2.1-2008-06-23-reviewcolors.ps](#)
[mpi-report-2.1-2008-06-23-reviewcolors-split-book-A5.pdf](#)
- **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 hardcover book

MPI-2.1 as Hardcover Book

Goal:

- Appropriate publishing of MPI-2.1 at EuroPVM/MPI'08

Idea:

- A printed book?

Problems:

- With 608 pages, books with cheap binding do not work
- Sewn binding is necessary
- Printing shops cannot handle this in 3 days
- Short lifetime of MPI-2.1 → commercial publisher don't like?
- It should be cheap

Decision

- HLRS has printed MPI-2.1 and selling it (at costs) for 17 €
- As a service for the MPI community

Drawbacks

- We knew the risk that the MPI Forum may vote “NO” as 2nd vote
- I discussed it only with the MPI steering committee
- I'm sorry, that I did not discuss it with the whole MPI-Forum



All official votes together

Each institution is asked for two votes:

- MPI-1.3 (May 30, 2008): 2nd vote
- MPI-2.1 (June 23, 2008): 2nd vote
- 2nd vote = final vote

You can vote

- 2 times the same,
- or making 2 individual decisions.

Official vote:

Do you accept

- MPI-1.3 (May 30, 2008), and
- MPI-2.1 (June 23, 2008) ?

MPI-1.3: Yes: 22 ; No: 1 ; Abstain: 0

MPI-2.1: Yes: 23 ; No: 0 ; Abstain: 0

Number of institutions: 23
(at this meeting)

Not in the room:
(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**.

Library	Yes mm/yy	asked
MPICH2	YES alpha	Rajeev Thakur
Open MPI (in V1.3)	YES upcoming	Jeff Squyres
IBM	12/ 2008	Dick Treumann
Sun Microsystems	YES (OpenMPI)	Rolf Vandevaart
Microsoft	12/ 2008	Erez Haba
Fujitsu	6/ 2009	Sueyasu, Naoki

Library	Yes mm/yy	asked
Bull		Yann Kalemkarian
HP	12/ 2008	David Solt
Cray	Q1 2009	Mark Pagel
NEC	YES	Hubert Ritzdorf, Jesper Traeff
Intel	2009	Alexander Supalov, Keith Underwood
SiCortex	YES	David Gingold

Follow-Up: Next Steps

- MPI-2.1 task is done
- Thank you for your strong support
 - during all the meetings
 - and in the e-mail discussions in the past 8 month



Appendix

- Additional slides from previous meeting



MPI 2.1
Slide 11

Rolf Rabenseifner
Höchstleistungsrechenzentrum Stuttgart

H L R I S 

MPI-2.1 – ½-Year Project – a Statistical Summary

1st telephone conference, December 21, 2007 – Final MPI-2.1, June 23, 2008

Work
months

- MPI 1.3 + 2.0, merging 335 distinguished parts 1
- Ballot 1+2 40 items implemented
- Ballot 3 14 items / 12 accepted + implemented
- Ballot 4 22 items / 20 accepted + implemented 1
+ a lot of e-mails by MPI Forum members 1
- 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) 1
- Total summary 1225 items
- 14 chapter authors 21 chapters / annexes / frontm. / bibl. / index 7
(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** 5

16

months

