MPI 2.1
at
MPI Forum
Chicago, March 10-12, 2008
Version 2.1 – Combined Document

Rolf Rabenseifner

rabenseifner@hlrs.de

(Chairman of MPI 2.1 Task)

University of Stuttgart

High-Performance Computing-Center Stuttgart (HLRS)

www.hlrs.de

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MPI-2.1 – Working Plan

Monday:

- All reviewer are asked
  - to check whether all editor's decisions about their review
    are okay:

    **OK   = Obvious, typo, correction must be done, ...
    or good idea, correction should be done, ...**

    ?   = should be decided by the MPI Forum

    **22   = should be deferred to MPI-2.2.
    It is mainly a suggestion to the content of MPI and not
    to the merging of MPI-1.1 with MPI-2.**

    Q?   = Question & answer only, no need for corrections

    -   = Comment, can be ignored

    NO = Correction must or should not be done

  - OK-items = same opinion of editor and reviewer (~100 items)
    → expectation: no discussion need → should be okay for the forum
  - Especially the *NO* and "?" must be checked and discussed,
    probably off-line

Tuesday: Remaining "?" must be decided by the Forum, see **review.txt**

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Open topics on the path to a fully merged MPI-2.1 (1)

- Chap. 1 – Intro chapter
  - Responsible: Bill Gropp (together with Rusty Lusk)
- Chap. Collectives – Intro Chapter
  - Responsible: Adam Moody
- Move MPI_LONG_LONG, MPI_WCHAR, … into the original text Remove the additional MPI-2 sections.
  - Responsible: Rolf Rabenseifner
- Move all deprecated functions into an Annex B
  - Responsible: Rolf Rabenseifner
- Remake the type_ub / type_lb stuff (text is needed, only functions are deprecated)
  - Responsible: Rolf Rabenseifner

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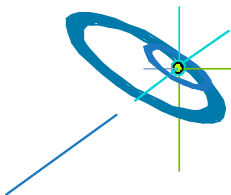
Open topics on the path to a fully merged MPI-2.1 (2)

- Producing C++ interfaces that can be included into the chapters
  - Responsible: Jeff Squyres
- Including them into the chapters:
  - Responsible: Rolf Rabenseifner
- Merge of all Language Binding Annexes to one Annex A
  - Responsible: Alexander Supalov
- Extracting Const Index from current total Index
  - Responsible: Rolf Rabenseifner
- Extracting Typedef Index from current total Index
  - Responsible: Rolf Rabenseifner
- Extracting Function Index from current total Index
  - Responsible: Rolf Rabenseifner

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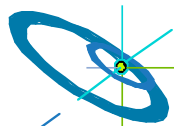
Open topics on the path to a fully merged MPI-2.1 (3)

- Producing List of Figures and List of Tables
  - Responsible: Rolf Rabenseifner (trivial)
- Producing List of Examples
  - Responsible: Rainer Keller
- Include Ballots 1-4 into MPI-2.1
  - Responsible: Rolf Rabenseifner
- Include all the OK-marked items from the MPI-2.1 reviews into MPI-2.1
  - Responsible: Rolf Rabenseifner
- Change-Log
  - Responsible: Rolf Rabenseifner (Ballot 1-4)

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Open topics on the path to a fully merged MPI-2.1 (4)

- Correcting the Examples – substituting deprecated functions
    - Responsible for examples in Fortran: David Solt
    - Additional Volunteers: Bill Gropp (Datatype)
    - Responsible for examples in C: George Bosilca
    - Additional Volunteers: Pavan Balati (Datatypes)
- Adding a full acknowledgement list in the Frontmatter:
    - Currently MPI-2.1
    - Will be extended to MPI-2.2 and MPI-3.0
    - For MPI 2.2: all institutions and persons who have contributed to January and March 2008 meetings
    - All persons who have contributed to the email lists in the Ballots 1-4 and the review 1.3 and 2.1 process
    - Responsible: Richard Graham

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Timescale – MPI-2.1 – Goals

- I would like to have finished all in the next week or two?

- Now:
  - Open Review 2.1 items – see review.txt "?"

- Additional text-merge round with dedicated chapter authors.
  Goal:
  - **Remove references to MPI-1 and MPI-2.**
  - **Substitute by MPI.**
  - **Necessary modifications to achieve this goal.**
 - Responsible authors – see next slide

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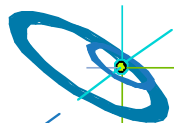
We need reviewers for: (**bold=large**) : (red=responsible chapter author) (Reviewer, green=@meeting)

Frontmatter		**Bill Gropp, Rusty Lusk**
Chap. 1:	**Introduction to MPI**	**Bill Gropp, Rusty Lusk, Karl Feind, Adam Moody, Traeff**
Chap. 2:	MPI-2 Terms and Conventions	**Tony Skjellum**, **Bill Gropp, Richard Barrett, Traeff**
Chap. 3:	**Point-to-Point Communication** (incl. sections from MPI-2 Misc. + 8.9)	**Rich Graham**, **Jespar Larsson Traeff, George Bosilca, Steve Poole, Kannan Narasimhan, David Solt, B. Gropp Matt Koop, Adam Moody**
Chap. 4:	**Collective Communication** (incl. sections from MPI-2 Ext. Collect.)	**Adam Moody,** Steven Ericsson-Zenith, **Edgar Gabriel, R. Thakur, B. Gropp, G. Bosilca, Th. Hoefler, J. Traeff**
Chap. 5:	**Groups, Context, and Communicators** (incl. sections from MPI-2 Ext.Col. + 8.8)	**Richard Treumann** Steven Ericsson-Zenith, **Edgar Gabriel, Tony Skjellum, Bill Gropp, G. Bosilca, Robert Blackmore**
Chap. 6:	Process Topologies	**Jesper L. Traeff, Rusty Lusk, Bill Gropp, Richard Barrett**
Chap. 7:	**MPI Environmental Management** (incl. sections from MPI-2 Misc.)	**George Bosilca**, **Rich Graham, Jespar Larsson Traeff, Steve Poole, Kannan Narasimhan, David Solt, B. Gropp**
Chap. 8:	Miscellany	**Jesper L. Traeff**, **Rich Graham, George Bosilca, Steve Poole, Kannan Narasimhan, B. Gropp**
Chap. 9:	Process Creation and Management	**David Solt,** Dries Kimpe, **Rusty Lusk, George Bosilca, Bill Gropp, Kalem Karian,**
Chap. 10:	One-Sided Communication	**Jespar Larsson Traeff**, Ericsson-Zenith, Martin Schulz, **Bill Gropp, Darius Buntinas,**
Chap. 11:	External Interfaces	**Bronis de Supinski, Bill Gropp, Rainer Keller**
Chap. 12:	I/O	**Rajeev Thakur**, Joachim Worringen, **Bill Gropp, Koziol**
Chap. 13:	**Language Bindings**	**Jeff Squyres, Steve Poole, Purushotham Bangalore, Bill Gropp, Erez Haba, Alexander Supalov**
Chap. 14:	Profiling Interface	**Bronis de Supinski, Bill Gropp, Jeff Brown**
Chap. 15:	Deprecated Functions	**Rolf Rabenseifner**
Bibliography		**Bill Gropp, Rusty Lusk**
Annex A	Language Bindings	**A. Supalov, J. Squyres, St. Poole, P. Bangalore, B. Gropp**

Annex: Slides from Jan. 2008 meeting
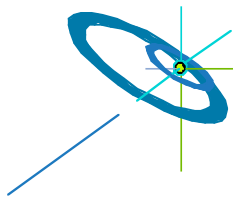
MPI 2.1 Goals

Scope of Effort:

- 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.

Working plan:

- MPI 1.1 **+** Chap. 3 of MPI-2 (Version 1.2 of MPI) + some errata will be combined to
  → **MPI 1.3**

- MPI 1.2.1 **+** rest of MPI-2 (MPI 2.0) will be combined to
  → **MPI 2.1 draft (without clarifications)**

- adopted MPI 2.1 Ballots 1&2 **+** new MPI 2.1 ballots 3&4 are combined to the
  → **Ballot 1-4 of MPI 2.1 adopted errata**
  (with references still based on MPI 1.1 and MPI-2 documents)

- MPI 2.1 draft **+** MPI 2.1 adopted errata
  → **MPI 2.1**

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Höchstleistungsrechenzentrum Stuttgart

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Why combined documents?

The goals behind this combining of the documents have been already expressed in the MPI-1.1 standard:

"Sect. 1.2 Who should use this standard?
This standard is intended for use by all those who want to write portable message-passing programs in Fortran 77 and C.
This includes individual application programmers, developers of software designed to run on parallel machines, and creators of environments and tools. ..."

It is more efficient that the MPI Forum combines the documents once than every user of the MPI documents has to do this in his/her daily work based on the combination of MPI-1.1 and the several updating documents, i.e., MPI-2, and the future updates 2.1, 2.2, ...

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Schedule based on official rules

Rules and Procedures

1. Here is a reminder of the traditional MPI voting rules, which have served us well. These rules have been extended to the email discussion of MPI erratas and have been applied to the errata ballots. We expect to adapt these rules, preserving their spirit, as we go forward.
2. One vote per organization
3. To vote, an organization must have been present at the last two MPI Forum meetings.
4. **Votes are taken twice, at separate meetings. Votes are preceded by a reading at an earlier meeting, to familiarize everyone with the issues.**
5. Measures pass on a simple majority.
6. Only items consistent with the charter can be considered.

From **http://www.mpi-forum.org/mpi2_1/index.htm**

For **MPI x.x combined documents**:
This reading at the MPI Forum meetings will be substituted by a review report through a review group. Each Forum member can be part of this group.
With the 1st official vote on a combined document (at next meeting), this modification of the voting rules is accept for that document.

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MPI 2.1 Review Procedure (Voting plan) – Step 1

action point

- Straw **vote** on the working plan (see 4 steps on previous slide)

action point

- MPI 1.1 **+** Chap. 3 of MPI-2 (Version 1.2 of MPI) + some errata will be combined to → **MPI 1.3**

  - Jan.08 meeting:
    Short discussion and **defining a review group** who is reviewing
    the **MPI 1.3 merging plan** (printed copies available)
    and the **MPI 1.3 combined document**

  - See e-mail: From: Rainer Keller, Subject: Re: [mpi-21] Documents
                 Date: Mon, 7 Jan 2008 12:13:14 +0100

  - Reporting by e-mail on mpi-21 reflector

  - Corrections if necessary (until Jan. 31, 2008)
    → final version of **MPI 1.3 merging plan** and **MPI 1.3**

  - Final report of the reviewers at March 2008 meeting (=substitutes the **reading**)

  - **1st vote** by the MPI Forum at April 2008 meeting

  - **2nd (final) vote** by the MPI Forum at June 2008 meeting

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Höchstleistungsrechenzentrum Stuttgart

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MPI 2.1 Review Procedure (Voting plan) – Step 2

- MPI 1.3 combined document **+** rest of MPI-2 (MPI 2.0) will be combined to
  → **MPI 2.1 draft**

  action point

  - **Discussion of the 11 major merging decisions** and finishing them with **straw votes** (**Jan.2008** meeting) based on the distributed text (printed copies available)

  action point

  - **Defining a review group** (**Jan.2008** meeting)

  - First draft of combined document (Feb 22, 2008, to be done by Rolf Rabenseifner)

  - Reviewing process and report of the reviewers (until March 10-12, 2008 meeting)

  - Discussion and further corrections if necessary (March 2008 meeting)

  - All necessary straw votes should be done at end of March 2008 meeting.

  - April 1, 2008, the final document should be available for twice voting.

  - Final report of the reviewers at April 2008 meeting (=substitutes the **reading**)

  - **1st vote** by the MPI Forum at June 2008 meeting

 - **2nd (final) vote** by the MPI Forum at Sep. 2008 meeting

MPI 2.1 Review Procedure (Voting plan) – Step 3

- adopted MPI 2.1 Ballots 1&2 **+** new MPI 2.1 ballots 3&4 are combined to the
  → **MPI 2.1 adopted errata**
  (with references still based on MPI 1.1 and MPI-2 documents)
  - Ballots 1&2 are done (Chapter 1, Errata for MPI-2, May 15, 2002)
    http://www.mpi-forum.org/docs/errata-20-2.pdf
  - Ballot 3
    http://www.cs.uiuc.edu/homes/wgropp/projects/parallel/MPI/mpi-errata/index.html
    http://www.cs.uiuc.edu/homes/wgropp/projects/parallel/MPI/mpi-errata/ballot3.html

  - **Official Reading** and straw votes (Jan. 14, 2008)
    Re-reading if modifications are necessary (Jan. 15 or 16, 2008)

  - **First official vote** (on all topics with positive straw votes) (March, 2008)

  - Ballot 4 at March 2008 meeting with official reading (1st day and next days).
    Unresolved items are moved to MPI 2.2.

  - → **Final text of Ballot 3+4 is available at end of March meeting,**
    i.e., it can be already included into MPI 2.1 combined document.

  - April 2008: Ballot 3: 2nd vote; Ballot 4: 1st vote

  - June 2008: Ballot 4: 2nd vote (all second votes are based on text in the
    combined documents) → **MPI 2.1 adopted errata** finished

action point
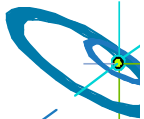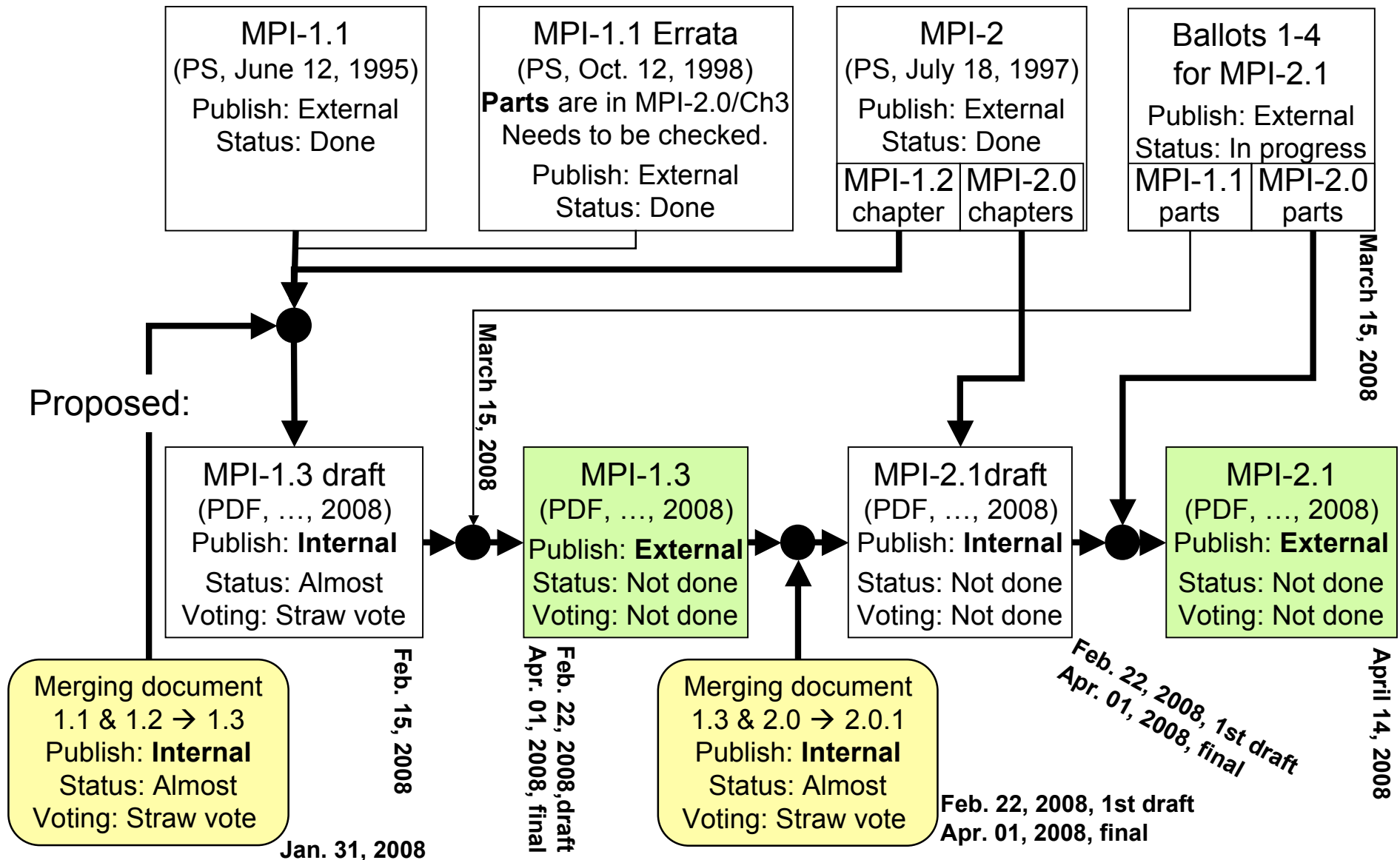
MPI 2.1 Review Procedure (Voting plan) – Step 4

- MPI 2.1 draft **+** MPI 2.1 adopted errata
  → **MPI 2.1 combined document**

  – The MPI 2.1 Ballots 1-4 (as after final reading on April 2008 meeting)
  are included into the MPI 2.1 draft (from April 1, 2008)
  (as prepared for final review/reading at April 2008 meeting)
  → MPI 2.1 combined document (April 14, 2008)

  – Defining the reviewing group (on March 2008 meeting)
  (may be smaller as for the MPI2.1 draft)

  – Reporting by e-mail on mpi-21 reflector until April 18, 2008

  – Corrections if necessary until April 23, 2008

  – Final report of the reviewers at April 2008 meeting (=substitutes the **reading**)

  – **First vote** on June 2008 meeting

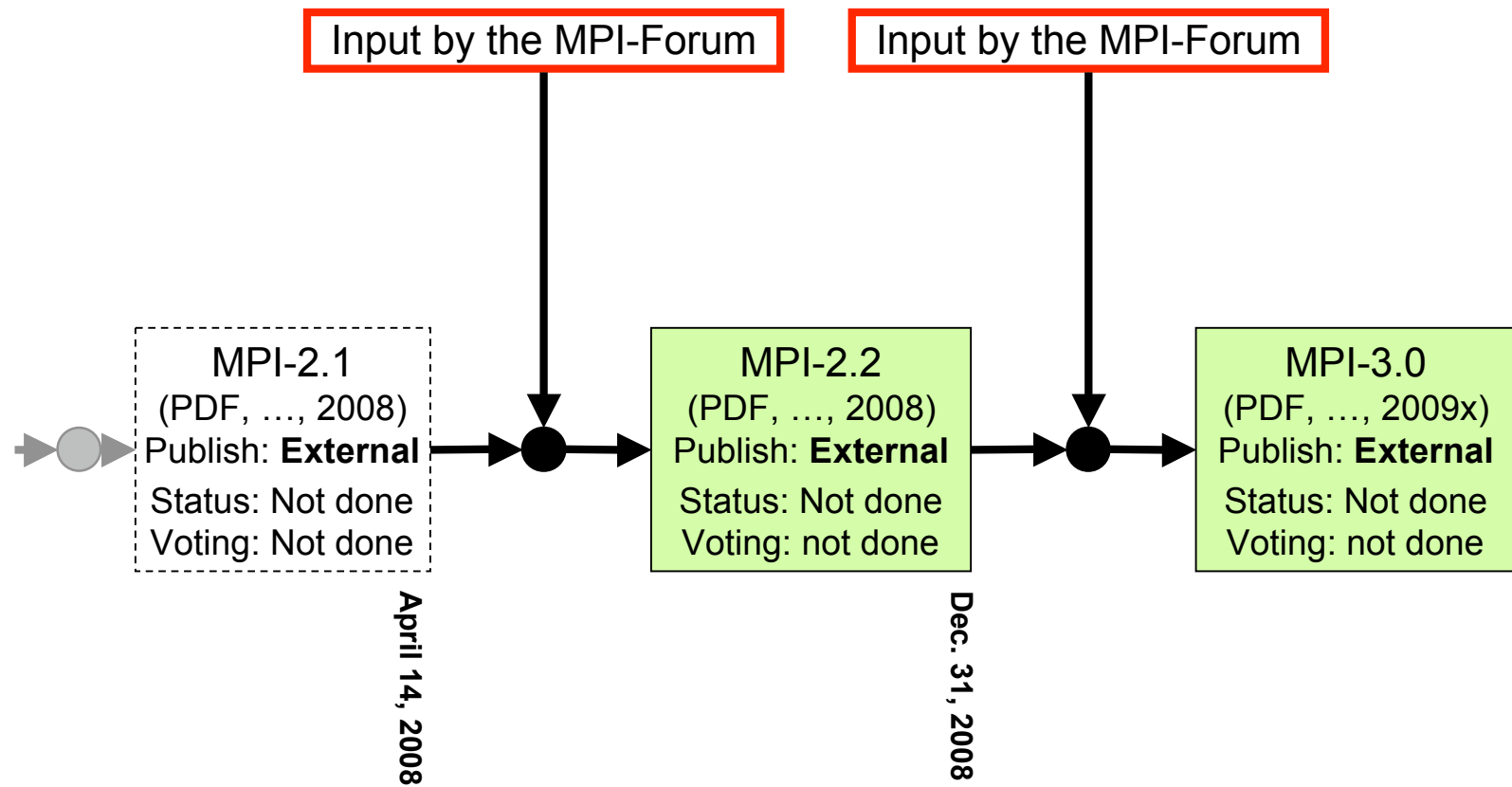 – **Second (final) vote** on Sep. 2008 meeting

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MPI Standards document plan

Existing and in progress:

MPI-1.1 (PS, June 12, 1995)	MPI-1.1 Errata (PS, Oct. 12, 1998)	MPI-2 (PS, July 18, 1997)	Ballots 1-4 for MPI-2.1
Publish: External Status: Done	**Parts** are in MPI-2.0/Ch3 Needs to be checked. Publish: External Status: Done	Publish: External Status: Done	Publish: External Status: In progress
		MPI-1.2 chapter / MPI-2.0 chapters	MPI-1.1 parts / MPI-2.0 parts

March 15, 2008

Proposed:

March 15, 2008

MPI-1.3 draft (PDF, …, 2008) Publish: **Internal** Status: Almost Voting: Straw vote	MPI-1.3 (PDF, …, 2008) Publish: **External** Status: Not done Voting: Not done	MPI-2.1 draft (PDF, …, 2008) Publish: **Internal** Status: Not done Voting: Not done	MPI-2.1 (PDF, …, 2008) Publish: **External** Status: Not done Voting: Not done

Merging document
1.1 & 1.2 → 1.3
Publish: **Internal**
Status: Almost
Voting: Straw vote

Jan. 31, 2008

Feb. 15, 2008

Feb. 22, 2008, draft
Apr. 01, 2008, final

Merging document
1.3 & 2.0 → 2.0.1
Publish: **Internal**
Status: Almost
Voting: Straw vote

Feb. 22, 2008, 1st draft
Apr. 01, 2008, final

Feb. 22, 2008, 1st draft
Apr. 01, 2008, final

April 14, 2008

MPI Standards document plan

```
                    ┌─────────────────────┐   ┌─────────────────────┐
                    │ Input by the MPI-Forum │   │ Input by the MPI-Forum │
                    └──────────┬──────────┘   └──────────┬──────────┘
                               │                         │
                               ▼                         ▼
```

┌ ─ ─ ─ ─ ─ ─ ─ ─ ─┐   ●   ┌──────────────────┐   ●   ┌──────────────────┐
   MPI-2.1   │ **MPI-2.2** │   │ **MPI-3.0** │

MPI-2.1
(PDF, …, 2008)
Publish: **External**
Status: Not done
Voting: Not done

MPI-2.2
(PDF, …, 2008)
Publish: **External**
Status: Not done
Voting: not done

MPI-3.0
(PDF, …, 2009x)
Publish: **External**
Status: Not done
Voting: not done

April 14, 2008

Dec. 31, 2008

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Change-Log as Annex

- Who wants in MPI 2.1 an Annex telling effective (user and implementors visible) mods between MPI 2.0 and MPI 2.1?
- Yes: all=43
- No: 0
- Abstain: 0

- Should we keep old such histories in future standards?
- Yes: 8
- No: 13
- Abstain: 43-8-13=22

- Changbars for all in the final combined document?
- Yes: 1
- No: 28
- Abstain: 43-28-1=14

MPI 2.0 combined document

- There are 11 topics that must be decided or confirmed by the MPI Forum → next slides

- For further details we need a review group → slide at the end
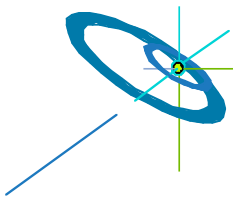
MPI 2.0 merging decisions

1.) The title of the combined document:

   MPI: A Message-Passing Interface Standard

   Version 2.1
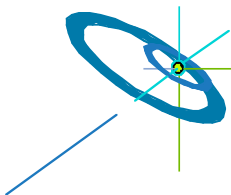
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MPI 2.0 merging decisions

2.) The date of the merged document is fixed when it is released (in 2008).

3.) Ackno on the title page:

"This work was supported in part by ARPA, NSF and DARPA under grant ASC-9310330, the National Science Foundation Science and Technology Center Cooperative Agreement No. CCR-8809615, and the NSF contract CDA-9115428, and by the Commission of the European Community through Esprit project P6643 and under project HPC Standards (21111)."

4.) **Do we add on 2.1 already new supporters? Yes – offline per e-mail**   Still TODO !

MPI 2.0 merging decisions

4.) Abstract

"**This document describes the MPI standard version 2.1 in one combined document. This document combines the content from the previous standards** "*MPI: A Message-Passing Interface Standard, June 12, 1995*" **(MPI-1.1) and** "*MPI-2: Extensions to the Message-Passing Interface, July, 1997*" **(MPI-1.2 and MPI-2.0). The standard MPI-1.1 includes point-to-point message passing, collective communications, group and communicator concepts, process topologies, environmental management, and a profiling interface. Language bindings for C and Fortran are defined. The MPI-1.2 part of the MPI-2 document contains clarifications and corrections to the MPI-1.1 standard and defines MPI-1.2. The MPI-2 part of the MPI-2 document describes additions to the MPI-1 standard and defines the MPI standard version 2.0. These include miscellaneous topics, process creation and management, one-sided communications, extended collective operations, external interfaces, I/O, and additional language bindings (C++). Additional clarifications and errata corrections are included.**"

➔ offline e-mail : be specific on errata doc. And include MPI 1.3

Still TODO !

Question:

The MPI 2.0 combined document abstract should be as stated here?

Yes:

No:

Abstain:

MPI 2.0 merging decisions

5.) Copyright years

    1993, 1994, 1995, 1996, 1997, 2008

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MPI 2.0 merging decisions

Still TODO !

Version 2.1: <date>, 2008.   This document combines the previous documents MPI 1.3 (????, 2008) and MPI-2.0 (July 18, 1997). Certain parts of MPI 2.0, such as some sections of Chapter 4, Miscellany, and Chapter 7, Extended Collective Operations have been merged into the Chapters of MPI 1.3. Additional errata and clarifications collected by the MPI Forum are also included in this document.

Version 1.3: <date>, 2008.   This document combines the previous documents MPI 1.1 (June 12, 1995) and the MPI 1.2 Chapter in MPI-2 (July 18, 1997). Additional errata collected by the MPI Forum referring to MPI 1.1 and MPI 1.2 are also included in this document.

Version 2.0: <date>, 1997.   Beginning after the release of MPI 1.1, the MPI Forum began meeting to consider corrections and extensions. MPI-2 has been focused on process creation and management, one-sided communications, extended collective communications, external interfaces and parallel I/O. A miscellany chapter discusses items that don't fit elsewhere, in particular language interoperability."

Version 1.2: July, 18 1997.   The MPI-2 Forum introduced MPI 1.2 as Chap.3 in the standard "MPI-2: Extensions to the Message-Passing Interface", July 18, 2007." …

Version 1.1: June, 1995.   Beginning in March, 1995, the Message …

Version 1.0: June, 1994.   The Message Passing Interface Forum …

As already voted for MPI 1.2.1

MPI 2.0 merging decisions

7.) The acknowledgment pages of both documents are printed one after the next.

The first list of persons is introduced with the following new line:
"Those who served as primary coordinators in MPI 1.0 and MPI 1.1 are:"
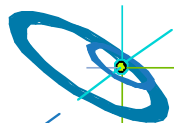
And the MPI-2 list of persons is introduced with:
"Those who served as primary coordinators in MPI 1.2 and MPI 2.0 are:"

For the merging process I would add:
"The editors of the combined documents have been:
-- Rainer Keller (MPI 1.3 - combined document)
-- Rolf Rabenseifner (MPI 2.1 - combined document)"

MPI 2.0 merging decisions

8.) Before the definition of each deprecated interface, the following
  sentence is added:

    "The following function is deprecated

     and is superseded by ……………… in MPI 2.0"

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MPI 2.0 merging decisions

9.) Sequence of all chapters:

- First all MPI-1, except Profiling
- All MPI-2, except Extended Collective (it is fully merged into
  corresponding MPI-1.1 chapters)
- Profiling Chapter
- Only one merged Appendix

The following MPI-2.0 sections are merged into the corresponding
MPI-1.1 sections:

- MPI-2.0 Chap. 4 Miscellany, except
  -- MPI-2.0 Sect. 4.10 (The Info Object)   (Move? Yes:no:abstain)
  -- MPI-2.0 Sect. 4.11 (Memory Allocation) → MPI-1 Env. Manag. (5:2:?)
  -- MPI-2.0 Sect. 4.12 (Language Interoper.) → End of Lang.Bind 10.3 (17:0:?)
  -- MPI-2.0 Sect. 4.17 (Functions and Macros) → Terms & Conven. 2.6.5 (5:0:?)
- MPI-2.0 Chap. 5 Extended Collective Operations
- MPI-2.0 Sect. 8.8 New Attribute Cacching Functions
- MPI-2.0 Sect. 8.9 Duplicating a Datatype
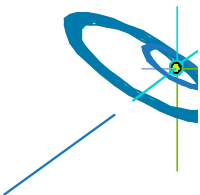
Describe the chapter moving in a change-log

- Describe the chapter moving in a change-log?
    - Yes: all
    - No: 0
    - Abstain: 0
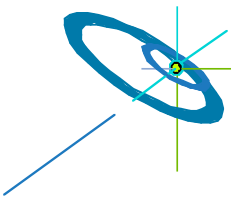
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MPI 2.0 merging decisions

10.) The new "Version Number" section was put at the beginning of the MPI-1.1 Chap. "Environmental Management" (done in MPI 1.2)

The Section "Portable MPI Process Startup" is put at the end of the MPI-1.1 Chapter "Environmental Management".

Okay?

Where to include Section „Memory Allocation"?

7 MPI Environmental Management
    7.1 Implementation information
        7.1.1 Version number
        7.1.2 Environmental Interface

    7.2 Error handling
    7.3 Error codes and classes
    7.4 Timers and synchronization

    7.5 Startup
    7.6 Portable MPI Process Startup

from MPI 1.2

from MPI 2.0

MPI 2.0 merging decisions

11.) The MPI-1.2 C++ interfaces in MPI-2.0 App. B.3 - B.12 are written in a syntax that is different to the syntax used in all other C++ declarations.

For consistency, in B.3 - B.12, the ⟶ **this type of declaration should be used in Annex A**

   "namespace MPI {

   standard-type mpi-routine(standard-type arg1, mpi-type arg2...)

   mpi-type   mpi-routine(standard-type arg1, mpi-type arg2...)

   }"

should be modified into

   "standard-type MPI::mpi-routine(standard-type arg1, MPI::mpi-type arg2...)"

   "MPI::mpi-type MPI::mpi-routine(standard-type arg1, MPI::mpi-type arg2...)„

Examples: static MPI::Intercomm MPI::Comm::Join(const int fd)

   MPI::Intercomm MPI::Intercomm::Create(const Group& group) const

   MPI::Intercomm MPI::Intracomm::Create(const Group& group) const

   void MPI::Comm::Barrier() const = 0

Straw votes okay for merging details?

With MPI 1.3 and MPI 2.1 documents:

- Is it okay to have only a final „reading" (=review report) and two official votes, instead of already doing official votes on some details?
  Official (institutional) votes:
  - Yes:
  - No:
  - Abstain:

- Reason: The merging does not modify the standard. Only formatting and editorial wording is rarely modified.
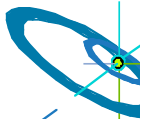
- **(This slide was skipped at January 2008 meeting.)**
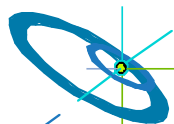
MPI 2.0 Merging Review Group

We need reviewers for: (**bold=large**)   Reviewers: (**next slide**)

- **Frontmatter**   (**large**)
- **Chapter 1: Introduction to MPI**   (**large**)
- Chapter 2: MPI-2 Terms and Conventions   (simple)
- **Chapter 3: Point-to-Point Communication**   (**large**)
- **Chapter 4: Collective Communication**   (**large**)
- **Chapter 5: Groups, Context, and Communicators** (**large**)
- Chapter 6: Process Topologies   (simple)
- **Chapter 7: MPI Environmental Management**   (**large**)
- Chapter 8: Miscellany   (simple)
- Chapter 9: Process Creation and Management   (simple)
- Chapter 10: One-Sided Communication   (simple)
- Chapter 11: External Interfaces   (simple)
- Chapter 12: I/O   (simple)
- **Chapter 13: Language Bindings**   (**large**)
- Chapter 14: Profiling Interface   (simple)
- Bibliography   (simple)
- **Annex A**   (**large**)

We need reviewers for: (**bold=large**)	Reviewers: (**green=@meeting**)
Frontmatter	**Rusty Lusk, Bill Gropp**
Chap. 1: Introduction to MPI	**Rusty Lusk, Bill Gropp, Karl Feind, Adam Moody**
Chap. 2: MPI-2 Terms and Conventions	Tony Skjellum, **Bill Gropp, Richard Barrett**
Chap. 3: Point-to-Point Communication (incl. sections from MPI-2 Misc. + 8.9)	**Rich Graham**, Jespar Larsson Traeff, **George Bosilca**, **Steve Poole, Kannan Narasimhan**, David Solt, **B. Gropp Matt Koop**
Chap. 4: Collective Communication (incl. sections from MPI-2 Ext. Collect.)	Steven Ericsson-Zenith, **Edgar Gabriel, Rajeev Thakur, Bill Gropp, Adam Moody, George Bosilca**
Chap. 5: Groups, Context, and Communicators (incl. sections from MPI-2 Ext.Col. + 8.8)	Steven Ericsson-Zenith, **Edgar Gabriel, Bill Gropp, George Bosilca, Robert Blackmore**
Chap. 6: Process Topologies	**Rusty Lusk, Bill Gropp, Richard Barrett**
Chap. 7: MPI Environmental Management (incl. sections from MPI-2 Misc.)	**Rich Graham**, Jespar Larsson Traeff, **George Bosilca, Steve Poole, Kannan Narasimhan**, David Solt, **B. Gropp**
Chap. 8: Miscellany	**Rich Graham, George Bosilca, Steve Poole, Kannan Narasimhan, B. Gropp**
Chap. 9: Process Creation and Management	Dries Kimpe, **Rusty Lusk, George Bosilca, Bill Gropp, Kalem Karian**
Chap. 10: One-Sided Communication	Ericsson-Zenith, Jespar Larsson Traeff, Martin Schulz, **Bill Gropp, Darius Buntinas**
Chap. 11: External Interfaces	**Bronis de Supinski, Bill Gropp**
Chap. 12: I/O	**Rajeev Thakur**, Joachim Worringen, **Bill Gropp**
Chap. 13: Language Bindings	**Jeff Squyres, Steve Poole, Purushotham Bangalore, Bill Gropp, Erez Haba, Alexander Supalov**
Chap. 14: Profiling Interface	**Bronis de Supinski, Bill Gropp, Jeff Brown**
Bibliography	**Rusty Lusk, Bill Gropp**
Annex A	**Jeff Squyres, Steve Poole, Purushotham Bangalore, Bill Gropp, Alexander Supalov**

MPI 2.1 - Telecon

- I'll not be available on Feb. 11-13 (scheduled dates)
- There is no need because all Ballot 4 work will be done by e-mail
- And MPI 1.3, MPI 2.1 merging and Ballot 3 is done.

- → No telecon for the MPI 2.1 chapter
- Okay?

- (Accepted by the Forum due to the reasons mentioned above)

H L R S

MPI 2.1

- Thank you very much for your strong support on MPI 2.1!