Glossary

Motivation

- To promote precise usage of MPI concepts and specialized terms.

- To provide a convenient mechanism to learn MPI nomenclature (especially for new users).

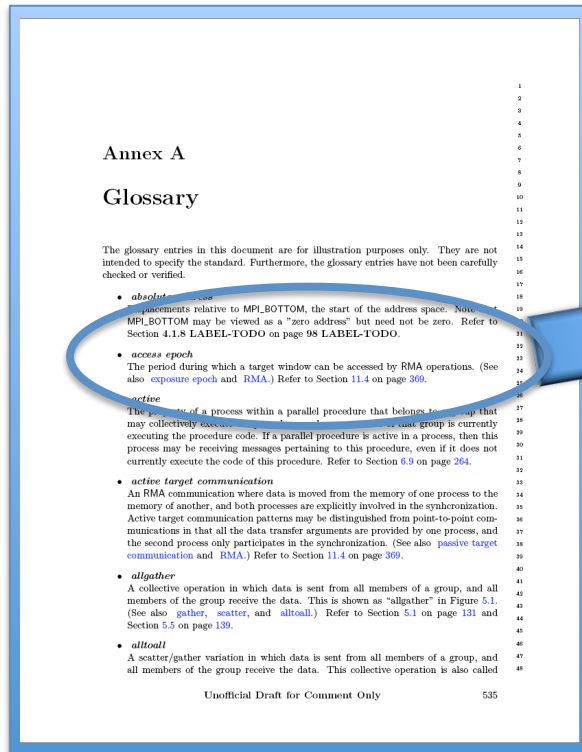- To help ensure consistency in use of functions, operations, etc.

Status

- Terry Jones (trj@ornl.gov) has agreed to be organizer

- Currently 128 words, 19 pages (glossary.4.tex)

- Two files touched:
  - mpi-report.tex (add "\include{glossary}")
  - new glossary.tex file

- Current version due to: Terry Jones, Darius Buntinas, David Solt, Bill Gropp, Torsten Hoefler, Rolf Rabenseifner, Jesper Larsson Traff

Inclusion Criteria

- The term is associated with current MPI-3 version.

- The term is used at least once in the document.

- The term is well defined and has a clear context.

- Terms that are used in different ways in the MPI-3 spec will have multiple entries.

- Restatement of definitions found within the specification are allowed.

- Motivation is included within the definition when helpful.

- General terms used in accordance with the standard definition are included when deemed important to MPI-3 (e.g., thread safe).

Sample Entry

- Definition matches specification

- Hyperlinks to related words

- Hyperlinks to section of specification

Annex A

Glossary

The glossary entries in this document are for illustration purposes only. They are not intended to specify the standard. Furthermore, the glossary entries have not been carefully checked or verified.

- *absolute address*
  ...splacements relative to MPI_BOTTOM, the start of the address space. Note that MPI_BOTTOM may be viewed as a "zero address" but need not be zero. Refer to Section 4.1.8 LABEL-TODO on page 98 LABEL-TODO.

- *access epoch*
  The period during which a target window can be accessed by RMA operations. (See also exposure epoch and RMA.) Refer to Section 11.4 on page 369.

- *active*
  The property of a process within a parallel procedure that belongs to ... ap that may collectively execute ... task group is currently executing the procedure code. If a parallel procedure is active in a process, then this process may be receiving messages pertaining to this procedure, even if it does not currently execute the code of this procedure. Refer to Section 6.9 on page 264.

- *active target communication*
  An RMA communication where data is moved from the memory of one process to the memory of another, and both processes are explicitly involved in the synchronization. Active target communication patterns may be distinguished from point-to-point communications in that all the data transfer arguments are provided by one process, and the second process only participates in the synchronization. (See also passive target communication and RMA.) Refer to Section 11.4 on page 369.

- *allgather*
  A collective operation in which data is sent from all members of a group, and all members of the group receive the data. This is shown as "allgather" in Figure 5.1. (See also gather, scatter, and alltoall.) Refer to Section 5.1 on page 131 and Section 5.5 on page 139.

- *alltoall*
  A scatter/gather variation in which data is sent from all members of a group, and all members of the group receive the data. This collective operation is also called ...

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- *access epoch*
  The period during which a target window can be accessed by RMA operations. (See also exposure epoch and RMA.) Refer to Section 11.4 on page 369.

Issues

- Right Inclusion Criteria?

- Currently "procedure" is used. Would "operation" (or in some cases "function") be preferred?
  - Note: all of these are used in the Standard.

- Some entries provide tutorial-like motivation. Is this desirable? Whatever is decided should be applied consistently.