MPI 3.1 is done – What's Next?

Technical, Logistics and Strategic Discussion

June 2015

(with updates based on discussions at the meeting)

Topics

- MPI Chair
  - Continue activities towards MPI 4.0?
  - Coordinate new activities for MPI 4+X? Too early?
  - Think about the addition (and role) of a Vice Chair
- Meeting Locations and Logistics
- Document/Repository Management
- MPI related events
- MPI 4.0
  - Topics / Gating Topics?
  - Timeline?
- Beyond MPI 4.0
  - Major topics that we can see now?
  - How to start the discussion?

Meeting Logistics CY 2016

- Frequency / Locations
  - Keep at 4x per year?
  - Keep at 3x US plus 1x EuroMPI?
- Next meetings
  - September: Bordeaux
    - NEW DATES: Thu/Fri 9/24-9/25
  - December: San Jose (Cisco) 12/7-12/10
- Dates and Locations discussed at the forum
  - Chicago: 2/29-3/3 –OR– 3/7-3/10
  - Seattle: 6/6-6/9
  - At EuroMPI – Edinburgh: Forum dates 9/21 (Wed) – 9/23 (Fri) (dates fixed)
  - Dallas: 12/5-12/8
- Please check conflicts!

Locations Discussed during Meetig

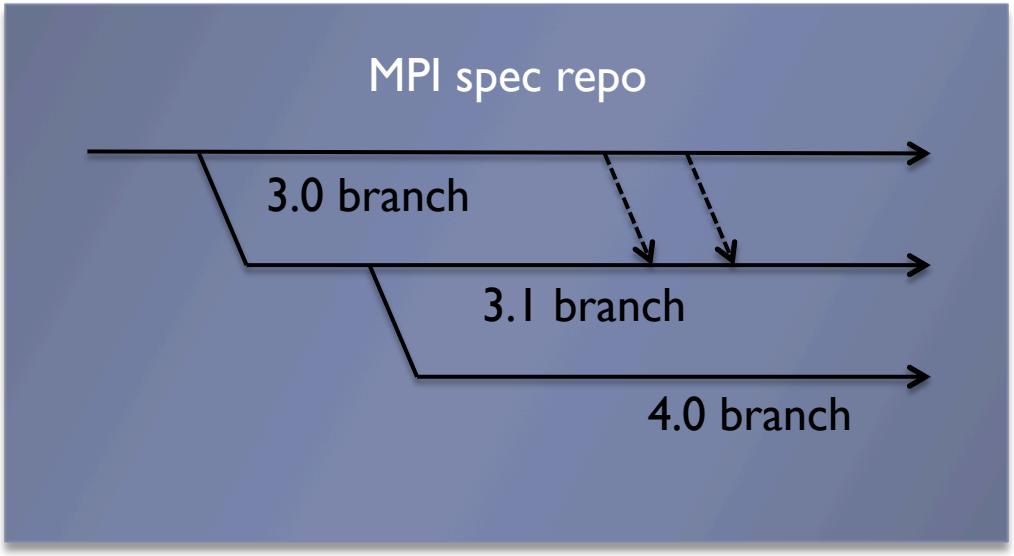
- The traditional locations
  - Chicago (Microsoft) – let's avoid June (or carefully pick the week)
    - Thanks, Anh!
  - San Jose (Cisco)
    - Thanks, Jeff!
- Other offers
  - Seattle downtown, Portland, Bellevue (Microsoft)
    - Thanks, Anh!
  - Raleigh (Lenovo)
    - Thanks, Chulho!
  - Austin (IBM)
    - Thanks, Sameh!
- Other suggestions
  - Dallas (March)
  - Free space, close to major airports, good weather, …

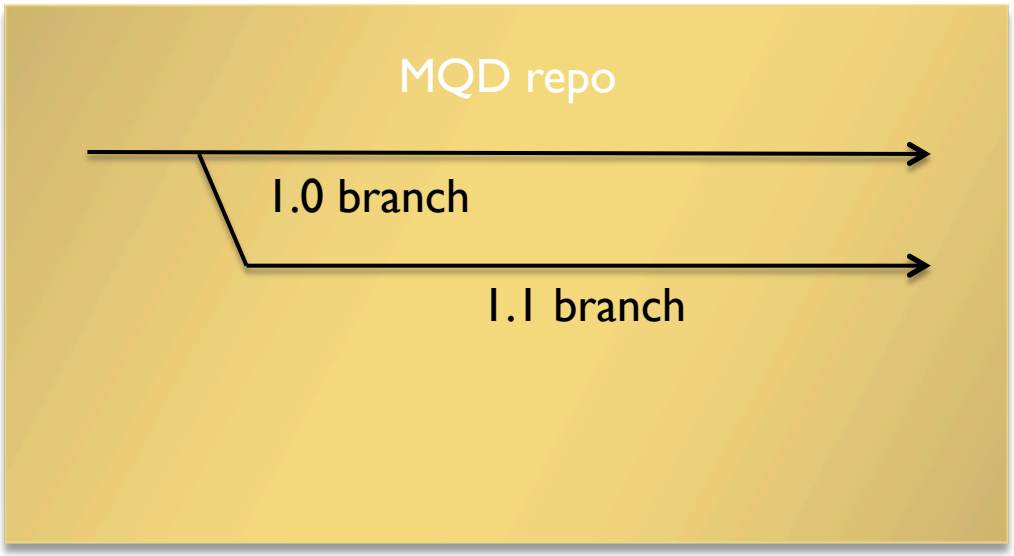
MPI Related Events

- MPI BoF at ISC
  - Accepted BoF at ISC in Frankfurt
    - Advertise MPI 3.1 and its changes
    - Update on WG (will ask WG chairs) and major topics
    - Encourage forum participation
    - Other suggestions
  - Volunteers to participate
- MPI BoF at SC
  - Plan to submit BoF
  - Similar agenda
  - Please let me know if you are interested in participating
- Should we target other events?

Document Management System

- Current system (SVN) is a bit outdated
  - Hard for WGs to fork / work in parallel
  - SVN merges are… tricky and slow
- Proposal: switch to git
  - Each document (MPI, MPIR, mpqd, …) has its own git repository
  - Editor (or designee) manages any master repository
  - Each version is on its own branch (as we work)
  - Ratified versions get tagged
  - Integration after successful votes through pull requests
    - Either by chapter author or signed-off by chapter authors
    - Can/Should be done after tickets/changes are accepted
  - Ticket system would have to be moved to a pull request system
    - How to make/keep this visible for everyone?
    - (Good) consequence: every ticket will have text
  - Strawvote: Git 22, SVN 0, abstain 3
- Hosting options: github, bitbucket, gitlab
  - Public vs. private
  - Chapter committees and working groups maintain forks/clones
  - Strawvote: make public 9, keep private 11, abstain 5


MPI spec repo
3.0 branch
3.1 branch
4.0 branch


MQD repo
1.0 branch
1.1 branch

Topics for MPI 4.0

- Topics with active tickets
  - Persistent Collectives
  - Assertions/Hints
  - ULFM
  - Endpoints
  - RMA (incl. big ones – shared memory)
- Other open topics
  - Additional FT abstractions
  - Streaming messaging
  - Rework of the MPI profiling interface
  - Extensions to MPI_T
  - Generalized requests
  - Active messages
  - Hybrid MPI+X (esp. CAF)
  - Send cancelation
  - Attribute callback (volunteer wanted)
  - Large count
- New tool side documents (handles, DLL)
- We should define goals listed (now, at some point, …)?
  - Define later on criticality (perhaps with a vote?)
  - Having a story on FT
- Should we decide/fix an estimated timeline now?
  - Suggestion (based on history and useful intervals): 2018

Beyond MPI 4 – Towards MPI 4+X

- Scope of MPI 4.0
  - Pretty much well defined topics/extensions
  - Fit well into the overall concepts
- Where do we want to go beyond that?
  - And How?