

Use Case Evaluation of the Proposed MPIT Configuration and Performance Interface

- **MPI 3.0 / Tools Support Working Group:**
An additional interface for querying MPI library internal information like performance counters and configuration variables
- **The MPIT Interface:** (→ Draft, April 2010)

```

MPIT_Config_query()
MPIT_Config_info()
MPIT_Config_get()
MPIT_Config_set()

```

...

- **Use Case:**

A tool to adjust protocol thresholds like
SHORT → EAGER and EAGER → RNDV

- **Prototyping the MPIT Interface:**

Extending MP-MPICH by some MPIT-related
 configuration and performance parameters:

MPID_RNDV_THRESHOLDS
 MPID_EAGER_THRESHOLDS

...

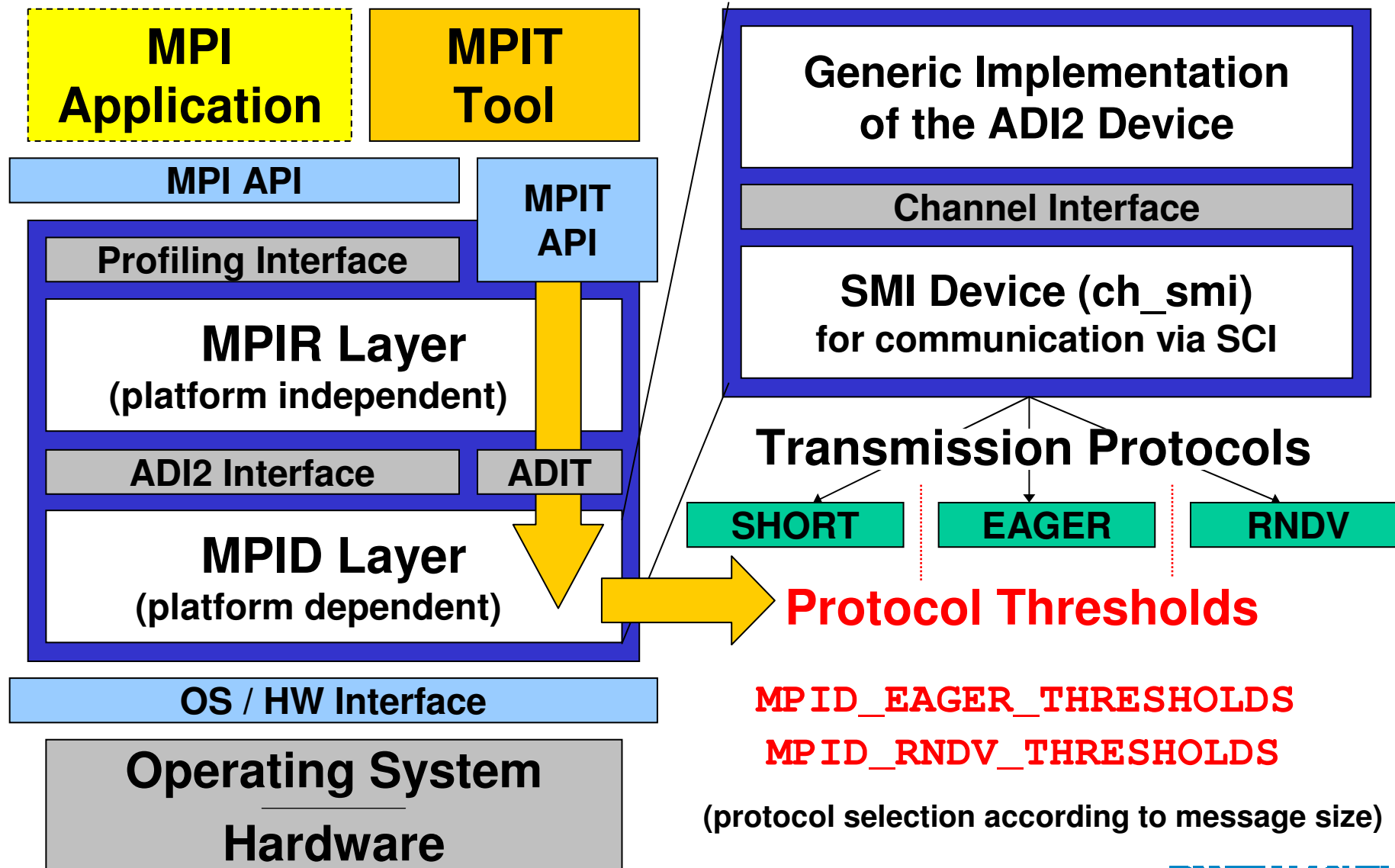
MPID_MSGS_SENT
 MPID_MSGS_RECEIVED
 MPID_MSGS_UNEXPECTED

...

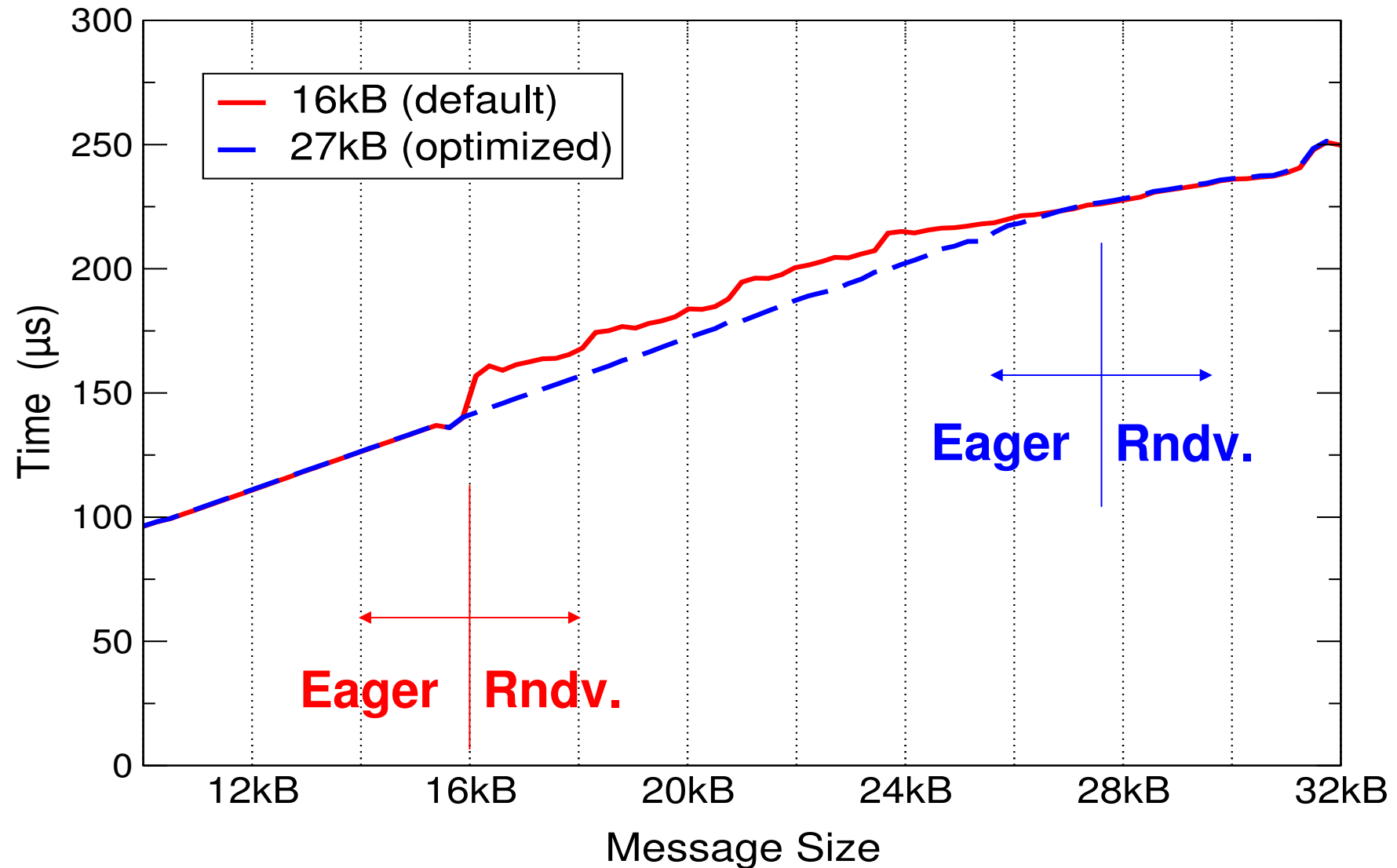
} **Control Variables**

} **Performance
 Counters**

MPIT_Config_set()



Variation of the Eager Buffer Size



Conclusion

We think that the proposed MPIT Interface has the potential to become very a useful extension to MPI for querying library internal information in a standardized manner.

Announcement

We are not part of the MPI 3.0 Tools Working Group, but we are observing the respective standardization process with great interest.