

RBR Working Group meeting minutes  
(preliminary, created on 2004Nov05)

November 4, 2004  
2:00 pm - 7:00 pm, Pacific time  
Conference room 103

Fenwick & West LLP  
801 California Street  
Mountain View, CA

Teleconferencing facilities:

Date: Thursday, November 04, 2004  
Start Time: 2:30 p.m. Pacific Std Time  
End Time: 5:25 p.m. Pacific Std Time  
Dial-in Number: 1-702-835-5000 (Las Vegas, Nevada)  
Participant Access Code: 179604

Drinks and chocolates provided.

Attendance:

amer@amernet.net	Khaled Amer
bob@scsi.com	Bob Davis
julian.hammersley@amd.com	Julian Hammersley
dvj@alum.mit.edu	David V. James
tetsu.koyama@NECEL.COM	*Tetsu Koyama
bml@techstartupconnection.org	B. Mitchell Loebel
dlou@pioneer-pra.com	*Dennis Lou
tmathey@concentric.net	Tom Mathey

Notes:

\* via teleconference

Background:

Excellent facilities were provided by our host, including video overhead and audio teleconferencing. Our thanks to Fenwick and West!

Call for patents:

After casual introductions, two IEEE Patent Policy slides (contained in the previously distributed slides) were reviewed.

An IEEE Ethics slide was also presented. The Chair noted that adherence to Ethics is not only a moral commitment, it should make the project enjoyable and improve its completion time.

Informal discussions and introductions occurred before the teleconference starting date.

Agenda:

The following agenda was proposed and accepted:

- 1) Provide overview slides.
- 2) Establish voting rules and meeting schedule.
- 3) Review the more detailed slides.

\*\*\*\*Overview slides\*\*\*\*

Presented with discussion.

Action item:

DVJ to post revised slides shortly after the meeting (done)

\*\*\*\*Voting rights\*\*\*\*

Discussion noted that the LMSC quorum requirements for WG ballots is not an IEEE requirement. As such, pruning the list of eligible voters is less critical to this group.

After considerable discussion, we concluded that:

- 1) Votes require a 2/3 acceptance threshold, to reduce thrashing. There is no distinction between procedural and technical; all are subject to this threshold.
- 2) After the 4th meeting, voting rights are earned by attending three out of the five last meetings (including the current meeting).
- 3) Before the 5th meeting, voting rights are earned by attending more than 50% of the meetings, including the current meeting.
- 4) Contributions between meetings (such as reflector discussions and/or written contributions) can be equated to meeting attendance, at the discretion of the Chair.
- 4) Votes will only be taken at qualified meetings, defined as follows:
  - a) The meeting was announced with at least 30 days warning. (So attendees can have time to resolve schedule conflicts.)
  - b) The meeting has teleconferencing facilities (To reduce voter dependencies on travel budgets.)

\*\*\*\* Future meetings \*\*\*\*

The general strategy is to meeting approximately every six weeks, with this December (due to Christmas) being a likely exception.

It was noted that the following meeting could conflict, and should therefore be considered:

2005Jan10 to 2005Jan13 Sacramento, CA meeting of 802.1

\*\*\*\* Slide updates requested \*\*\*\*

- 1) The PDF should be in color, not black and white.
- 2) The backplane wiring illustration should have overpass humps when wire sets pass over slots.
- 3) The backplane wiring illustration should have sequential numbers on the backplane, non sequential numbers on the logical equivalent illustration.

\*\*\*\* Performance concerns \*\*\*\*

Detailed slide discussions raised the concern that an only-ring backplane solution may suffer from problems:

- a) Latency, due to passing through multiple stations
- b) Bandwidth, due to sharing the links
- c) Cost, due to each station's transceiver supporting the bandwidth of the whole.

We noted that there are also advantages, such as:

- a) Reducing the pincount on the central switch (when compared to a star)
- b) Improving the link utilization (when compared to a full mesh)

The degenerate case is an open ring with two stations, in which case RBR is equivalent to duplex Ethernet, except that well defined classes of service are supported.

So, its never possible to be worse, but possible for the ring to be better!

\*\*\*\* Performance metrice \*\*\*\*

We noted that a major supplier and an talented performance consultant were simultaneously present. As such, a discussion of simulations assumptions would be valuable. With these "sniffer" traces, it would be possible to show how an RBR ring would compare to other options.

The consensus was that the following assumptions could be made:

- 16 - slots on the backplane
- 1Gb - lower bandwidth simulation scenario
- 10Gb - high bandwidth similation scenario
- paths - an equal load from all sources  
equal likelihood destination slot addressing

Several topologies could be evaluated:

- a) star
- b) full mesh
- c) full ring
- d) hybrid ring

We discussed where applicable "sniffer" traces could be obtained. One suggestion was to interact with:

- Enterprize Grid Alliance  
(perhaps after obtaining Oracle support)

\*\*\*\* Pending topics \*\*\*\*

Should we have three transit queues so that classB&classC can be queued separately.  
We noted this could improve classB latency.  
Topic was tabled for further offline discussion & thoughts.

\*\*\*\* Door prizes \*\*\*\*

Several individuals noted that accurate meeting attendance predictions would facilitate the arrangement of meetings.

It was noted that some groups improve RSVP returns by rejecting those that have not responded to RSVPs. The Chair noted this would in inappropriate for the IEEE meetings, where meetings shall always be open to all.

A possibility was to provide a door prize at the close of meetings, where only RSVP'd attendees would be eligible. This seemed like a viable strategy.