Unconfirmed EFM Study Group May 21-23 Interim Meeting Minutes

Monday, May 21, 2001

Motion to approve agenda as presented, without Jonathan Thatcher's Late presentation.

M: Tom Dineen
S: Roy Bynum

Motion to amend the agenda to include his late presentation.

M: Jonathan Thatcher
S: David Cleary

Geoff Thompson asked for reasons that the presentation was tardy.

Jonathan stated that original version was available on time, but the presentation was amended based on feedback from others.

Bruce Tolley argued against it, stating that it looks like a rebuttal based on other presentations uploaded on time, and that it would set a bad precedent.

Roy asked for Jonathan to clarify why this presentation is relevant to this meeting.

Jonathan stated that presentation is important to highlight implications of EPON proposals. (Link aggregation, Flow Control, etc.)

Pat Thaler stated that EFM needs to be fast acting, and agile, and that exceptions should be made to achieve PAR by June.

Howard Frazier stated that late presentations are an undue burden.

Hugh Barass suggested the presentation be shortened, and presented at the end of the agenda.

Howard suggested this be an alternative motion if the current one did not pass.

Procedural requires >50% to PASS: Y: 70 N: 38 Abstain: --

Ammendment to add Thatcher presentation passed.

Main motion to approve agenda as ammended passed by acclamation

Tuesday, May 22, 2001

Discussion Points for PONs:

Conformance with 802.1D bridging.

1) Tail end station originates a broadcast frame, goes up to Headend, bridge forwards to all ports except the one upon which it entered, so other tail end stations don't see it, or all see it, including originating end station.

One solution from Norm Finn, 802.1, has a shared media emulation sublayer below MAC, upstream tags on broadcasts, originating station would ignore. Points out that it looks similar to ATM LANe, and that you could put bridges on tail end, but it would be a lot of work.

Tom, Multicast issue: source address learning based on point to point or broadcast type media. Learning Bridge Table. First time in, flood all other ports except originating port. If source and destination are both tail end, originating and desired address are on the same port.

Geoff Thompson, 802.3 Chair, points our 802.3FP had a similar issue, FP hubs flooded all ports, including originating hub.

Geoff Thompson, 802.3 Chair, points out that EPON used access model assumption that tail ends can only communicate via routing, which is not Ethernet functionality.

Doug ???, suggests that logical "virtual" bridge ports (MAC) in the head end, to emulate point-to-point rather than shared-media could also be a solution, as long as originating tail end can filter out its own frames which might return.

Bradley Booth, multiple virtual bridge MACs could lead to multiple broadcasts, when a single one would suffice.

Hugh Barrass, would welcome presentation on virtual ports, and pointed out that system providers could solve at higher layers, as long as L2 does not hinder this.

Roy Bynum, points out that this is a moot point for subscriber access networks, since privacy is desired. Only an issue for enterprises served by PONs.

Geoff Thompson, MAC addresses for virtual MACs is against the rules of the IEEE Registration Authority (RAC) which administers Ethernet addresses.

Jonathan Thatcher, virtual MACs could get real MACs, upstream is simple, downstream virtual MAC traffic creates slot assignment down, which has not be proposed.

Howard asked for volunteers to bring presentation tomorrow at earliest, July at latest. Gerry Pesavento from AllOptic will lead. Volunteers:

Roy Bynum
Ariel Maislos
Hiroshi Suzuki
Wei Gao
Yoram Gross
Uri Rotshtein

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Kobi Mizrahi thinks billing should be part of MAC for point to point and EPON.

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Tom, PMC Sierra, if tail end malfunctions and floods link, how do you identify the unit, and how do you take out of service without a truck roll. Fault isolation and localization.

Pat Thaler has said that this topic must be addressed before adoption, especially for shared networks. Want to minimize impact.

Howard asks how to quantify, and there is no formalized hurdle.

Geoff says that requirements date back to coax. Predates 5 criteria, but was part of functional requirements document.

Howard requested a consensus presentation on fault isolation and localization.

Pat said that some failure mode state machine is typically identified.

Roy said that this issue falls under Layer 1 reliability requirements from his presentation.

Pat offered to help with presentations, but thinks that protocol must be identified first.

Howard counters that the existence of 1 or more technically feasible solutions is all that needs to be demonstrated.

Pat says, and Howard agrees that **all proposals that attempt to demonstrate technical feasibility of PON must address fault isolation and localization.**

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Geoff Thompson said that the scope of this project is significantly larger and more complex than pt-to-pt fiber or copper. And may need to be separated in the future, with its own PAR, and separate time line.

Howard says that this will be discussed tomorrow, when Geoff or other would make a motion to separate.

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Dinesh Venkatachalan stated that shared media does require security, which would require changes to the MAC.

Tom stated that party lines on phones depended on etiquette, which fell apart if people did not follow it, and pointed out that "jamming" by local and amateur hackers are possible. Intentionally, or not, a 1310nm transmitter could be connected and jam the fiber.

Onn Haran asked if 802.10,has ever been deployed.

Point was made that security was not an issue for Frame Relay networks.

DiffServe, or other higher layer protocols could be used.

Point made that jamming cable modem coax would be much simpler than jamming fiber.

Matthew Goldman pointed out that some content providers have asked for security on shared media networks. Dynamic keying for multicast, re-key on every leave, questioned scalability of this in a large broadcast group.

Roy Bynum pointed out that re-keying would be limited to head end domain, which is relatively small. Segregation at PHY level would be a virtual circuit, not requiring MAC changes. Need to choose MAC or PHY.

Geoff remembers phone company handled security issues in the past, but has moved away from shared media to solve the issue.

Howard suggested that we debate this tomorrow.

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Pat requested that a list of issues be compiled before debating others.

1) More full proposal on node admission and on slot time protocol details (time space diagram)

2) Efficiency studies based on 1)

3) MAC previously did not need to know length of frame before transmitting. Need to decide if this needs to be changed for EPON.

4) Redefinition of OP Code vs. new MAC control frame. Pat supports latter.

5) Dinesh asked about economic criteria: Wants to see relative cost of EPON PMD vs. GigE.

Dick Cunningham, would like to see relative costs, and believes that applications supported vary, and extended temperature range implications on complexity/cost. Willing to help, but not willing to lead.

Howard asked for volunteers for addressing this:

Louis Eatherton * Leader (leathert@excitehome.com)
Tom Murphy
Hal Roberts
Rob Carlile
Wael Diab
David Cunningham
John George
Tom Linsey
Ajay Gummalla

Jonathan wants to talk about:
Peet to peer
link aggregation support.
pause
collisions
very robust links vs. efficiency
auto initialization, configuration

Martin Adams – 3Com, asked for empirical or simulation data that shows it works, and here's how it behaves.

Dave Close, ADC, stated that trials or soon to be trials, are not compatible with what is being proposed in 802.3

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Pat had another issue:
1) Mysterious linkage between MAC control layer and PHY, to start and stop transmissions. Either PHY needs to warm up ahead of time, or else start up in a few bit times. How does PHY know about end of slot?

Suggested that all of the following issues have been addressed in DOCSYS (www.cablelabs.com): (www.cablemodems.org link to DOCSYS specs)
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slot cycles
registrations
slots
real time/bit time
jamming
request grants
timing calibration
power calibration

Bruce Tolley pointed out that EPONs voted overwhelming at the last meeting to support EPONs, and asked if these 57 things need to be done by July in order to move forwarded.

Howard stated that addressing lists of issues in presentations is good, but he has highlighted what he feels is key items as action items. And that the real hurdle is to convince 75% of the engineers in the room of that the 5 criteria are met for EPON.

David, BT, suggested that most of these issues are general PON issues, not specific to EPON. Questions what is the broad market potential for EPON vs. APON. Questions if distinct identity is met vs. APON.

Pat answers Bruce, saying that due diligence should be given for any proposal, and this process of constructive criticism leads to good standards.

Wednesday, May 23, 2001

Motion to approve last meeting's minutes.

M: Roy Bynum
S: Mack McCarron

Approved by acclamation.

Motion to update the copper PHY objectives to:

PHY for single pair non-loaded voice grade copper.
Distance >=2500ft, speed >=10Mbps

M: Hugh Barass
S: Patrick Stanley

Hugh commented, and Howard concurred, that these are minimum requirements and the door is open for PHYs that have greater bandwidth and/or greater reach

Bruce Tolley offered a friendly amendment that 2500ft be modified to meters.
Clarification, change ',' to 'and'.

PHY for single pair non-loaded voice grade copper.
Distance >=2500ft and speed >=10Mbps

Pat Thaler offered a friendly amendment that aggregate be added after 10Mbps

Hugh Barrass accepted.

Patrick Stanley accepted.

PHY for single pair non-loaded voice grade copper.
Distance >=2500ft and speed >=10Mbps aggregate

Bruce Tolley and Roy Bynum were tally takers.

Vote Technical, 75% required to PASS: Y: 85 N: 7 Abstain: 28
PASS

Motion to change OAM&P objective to:

Support far-end OAM for subscriber access networks, which includes:

- **Remote Failure Indication**
- **Remote Loopback**
- **Link Monitoring**
- **Management Channel Functionality**

M: Bruce Tolley
S: Jack Andresen

The target managed domain is PHY layer at minimum.

Bruce said that the last line was commentary, so he removed it.

Support far-end OAM for subscriber access networks, which includes:

- **Remote Failure Indication**
- **Remote Loopback**
- **Link Monitoring**
- **Management Channel Functionality**

Motion to amend to insert PHY Layer before OAM

Support far-end <u>PHY Layer</u> OAM for subscriber access networks, which includes:

- **Remote Failure Indication**

- Remote Loopback
- Link Monitoring
- Management Channel Functionality

M: Roy Bynum
S: Richard Brand

Hiroshi Suzuki offered a friendly amendment to the amendment to move targeted layer as PHY Layer to be a sub-bullet

Support far-end OAM for subscriber access networks, which includes:

- Remote Failure Indication
- Remote Loopback
- Link Monitoring
- Management Channel Functionality
- The target managed domain is the PHY layer at minimum

Roy and Richard accepted.

Steve Haddock and Geoff Thompson commented that new wording is more clear

David Law asked for clarification of word target, does that mean that scope can increase as project moves along.

Roy stated that additional functionality is not precluded by these minimum requirements.

Kobi asked for clarification about whether this included configuration.

Roy said that configuration is contained within administration.

Howard said that that interpretation is not contained in the text.

Steve said that he interpreted target at minimum to mean MAC at the maximum, why he felt that David Law interpreted it to limit it to PHY.

Motion to amend to add MAC at the maximum to the last bullet.

Support far-end OAM for subscriber access networks, which includes:

- Remote Failure Indication
- Remote Loopback
- Link Monitoring
- Management Channel Functionality
- The target managed domain is the PHY layer at minimum and the MAC layer at a maximum

M: Mick Seamen
S: Steve Haddock

Mick clarifies that these are bounds on the work of 802.3, not bounds on the system.

Richard Brand said that he did not accept the amendment as friendly, because proposals in EFM are focused on PHYs.

Roy commented that we should not preclude higher layer management.

Geoff offered an amendment to the amendment to the amendment to change MAC layer at a maximum with scope of 802.3.

Mick and Steve rejected as friendly.

Geoff withdrew motion.

Vote on MAC layer at a maximum

Vote Technical, 75% required to PASS: Y: 30 N: 29 Abstain: 50
Defeated.

Support far-end OAM for subscriber access networks, which includes:

- **Remote Failure Indication**
- **Remote Loopback**
- **Link Monitoring**
- **Management Channel Functionality**
- **The target managed domain is the PHY layer at minimum**

David Law speaks against, saying it is out of scope of 802.3

Roy Bynum speaks in favor, as it sets minimum with out limiting

Tom Dineen spoke against, saying that last bullet is superfluous.

Vote on addition of "the target managed domain…"
Technical, 75% required to PASS: Y: 50 N: 20 Abstain: 41
Defeated

Back to original motion:

Support far-end OAM for subscriber access networks, which includes:

- Remote Failure Indication
- Remote Loopback
- Link Monitoring
- Management Channel Functionality

"friendly" amendment offered to delete the last bullet, saying it is too early to choose this, and it is a radical departure from current Ethernet architecture.

Support far-end OAM for subscriber access networks, which includes:

- Remote Failure Indication
- Remote Loopback
- Link Monitoring

Roy and Jack rejected as friendly.

M: Geoff Thompson
S: Shimon Muller

Motion withdrawn, and a new motion to divide, separating last bullet item from the rest of the original motion.

Support far-end OAM for subscriber access networks, which includes:

- Remote Failure Indication
- Remote Loopback
- Link Monitoring
- Management Channel Functionality

M: Geoff Thompson
S: Shimon Muller

Geoff said that others argue that it is essential to users, but he is loathe to take on this radical departure from Ethernet architecture.

Howard states that vote on motion to divide is procedural, requiring 50%.

Roy offers that dividing would require rewording of heading

Hugh Barass thinks this is a procedural trick

Matthew Goldman says that we need to vote, and the last two statements were specious.

Motion to divide
Vote Procedural, 50% required to PASS: Y: 30 N: 24 Abstain: 33

PASSED

First half of divided question:

Support far-end OAM for subscriber access networks, which includes:

- **Remote Failure Indication**
- **Remote Loopback**
- **Link Monitoring**

Vote Technical, 75% required to PASS: Y: 76 N: 2 Abstain: 20
PASSED

Second half of divided question:

Support far-end OAM for subscriber access networks, which includes:

- **Remote Failure Indication**
- **Remote Loopback**
- **Link Monitoring**
- **Management Channel Functionality**

Hiroshi Suzuki stated that service provider requires this, which is included in other access technologies.

Hugh Barrass speaks in favor, stating that management channel may be MAC control words, and not necessarily a separate physical channel.

Mick speaks against the motion, since as evidenced by previous speaker, this objective is not specific enough, and open to interpretation. So without further definition, this will lead to debates of interpretation in the future.

Steve Haddock thinks this functionality is required, but it is premature to add this ill defined objective now. Stated that another standards body took 7 years to resolve this debate.

Geoff concurs more definition is required, and speaks against inclusion.

Roy speaks for it at this time because of timeline. If not added now, then it will be added later with many presentations about what is required in subscriber access infrastructure vs. data infrastructure. Feels this is key to subscriber access networks and should be in now.

Howard Frazier said Steve was referring to FDDI SMT taking 7 years, and required 220+ pages to describe. Ethernet has survived 25 years without it.

Pat Thaler spoke against it, saying that FDDI, in addition to taking a long time and a lot of effort, this aspect is a key reason why FDDI is too expensive (complicated).

John Egan offered a friendly amendment to insert remote before management and and strike channel to remove implication of separate channel which has not be agreed to yet.

Bruce and Jack reject.

Tom Murphy seconds.

Support far-end OAM for subscriber access networks, which includes:

- **Remote Failure Indication**
- **Remote Loopback**
- **Link Monitoring**
- **Remote Management ~~Channel~~ Functionality**

Hugh Barass asks if motion can be made to table it until next meeting so that more definition can be given.

Bruce withdraws the motion, and Jack Andresen agrees. First 3 sub bullets have passed, last bullet withdrawn.

Motion to change Pt-to-Pt objective.

1000Base-X >= 10km over single SM fiber

M: Pat Kelly
S: Bruce Tolley

Jonathan Thatcher strongly supports this motion, as it spells out distance, rate, and topology, which have always been defined for previous projects.

Geoff thinks this should include PHY in the objective.

Howard makes the point that header for this sub bullet says PHY, and 1000Base-X is a PHY.

Vote Technical, 75% required to PASS: Y: 93 N: 0 Abstain: 1
PASSED

Motion to change objective for PHY for PON to:

PHY for PON, >= 10km, 1000Mbps, SM Fiber, >= 1:16

M: Gerry Pesavento
S: Wes Wycoff

Clarification asked for 1000Mbps Howard stated MAC/PLS interface bitrate

Roy asked for friendly amendment to >= 1000Mbps as a motion.

Gerry and Wes reject.

Motion to amend

PHY for PON, >= 10km, >= 1000Mbps, SM Fiber, >= 1:16

M: Roy Bynum
S: Dinesh Venkatachalan

Tom Dineen speaks against this, since presentations have proposed greater rates.

Roy states that context of presentations has been GigE, but not precluding higher rates.

Geoff opposes, since projects traditionally cover only 1 speed, and higher rates should be considered separately.

David Cunnigham opposes since technical feasibility has not been demonstrated for >.

Vote Technical, 75% required to PASS: Y: 13 N: 70 Abstain: 7
Defeated.

Main motion.

Pat Thaler objects, stating that this objective will take longer than other objectives in this project.

Geoff Thompson opposes, despite the views of many, including his employer. He feels that upstream bandwidth requirements have not been defined well enough.

Howard replies that GigE included CSMA/CD, resulting in bitrate < full duplex, and under some traffic scenarios < CSMA/CD on 100Mbps. Rates were improved by technical presentations after task force was formed.

Roy says that this is more specific than previous objective, but still leaves open symmetry, and other details that can leave enough room for exploring technical alternatives.

Jonathan Thatcher strongly supports this proposal, which shows distance, media, and rate. **Offers a friendly amendment to change PON to Point to Multi-Point Fiber**.

Howard responds that Pt-Multi-Pt is spelled out in other areas of the objectives, and feels adding explicitly in this particular objective would result in a wordy objective, with no added value.

Jonathan feels that Pt-to-Pt could be construed as passive.

Gerry rejects.

Jonathan withdraws, although says that "active" PON equipment may end up in the field.

Bruce speaks in favor of original motion, echoing Jonathan's comments of support.

Wes Wycoff speaks in favor, and says further refinements may be added later.

Gerry summarizes stating that this is more detailed, and we should put a stake in the ground for what is currently agreed.

Vote Technical, 75% required to PASS: Y: 85 N: 0 Abstain: 16
PASSED.

Motion in principal to create a separate PAR for all work on PONs.

M: Tom Dineen

Point of Order from Jonathan Thatcher. We had agreed to discuss objectives at this point, and would prefer that we complete objectives before beginning PAR. Jonathan calls for orders of the day.

Howard asks Tom Dineen to withdraw his motion regarding the PAR until motions on objectives have been completed. Tom agrees. Discussion returns to objectives.

Motion to add an objective:

Develop 802.3 compatible Media Access Control Specifications for a point to multi-point topology over optical fiber.

M: Paul Nikolich
S: Dolors Sala

Rationale by Nikolich: He wants to make this explicit for the group

Roy speaks against because it limits us to making major changes to the MAC rather than explore PHY-based changes that would give us point-to-multipoint media control as presented yesterday. Each channel would be treated as an independent link.

Paul states that this does not necessarily mean a new MAC must be made, but opens up the possibility. Want a group to go off and study this, and come back with options.

David Law, wants to clarify on what compatibility means.

Paul says same service interface, but allowing new MAC algorithm.

Jonathan asks if different frame format could be used below service interface.

Paul said that intention was to preserve from format.

Clarification:

Develop 802.3 compatible (at the MAC_Client service interface) Media Access Control Specifications for a point to multi-point topology over optical fiber.

Bruce Tolley speaks against it, because it goes against the spirit and content of the consensus, and all PON presentations that have occurred since the call of interest.

Roy asks what the distinction would be between 802.14 and this objective besides copper vs. fiber.
Paul responds that 802.14 uses cells.

Dolors said that presentations mentioned new control messages, so we need to recognize new effort required for new functionality.

Vote Technical, 75% required to PASS: Y: 20 N: 35 Abstain: 37
Defeated.

Jonathan Thatcher requests that discussion be limited to 15 minutes on both of these motions.

Motion to add the following objective:

Support 802.3ad Link Aggregation on copper media and point to point optical fiber only.

M: Jonathan Thatcher
S: Tom Dineen

Jonathan thinks this makes objectives more well defined. Does not require support on copper media and pt-to-pt optical fiber.

Howard thinks ‘only’ makes it sound inclusive.

Jonathan intends to not require rather than prohibit.

Roy agrees that Howard is right, and that ‘only’ should be removed so that the possibility may be explored, since presentations have

Mick Seaman, supports.

Geoff questions if Link Aggregation would support asymmetric links.

Howard replies that Link Aggregation requires that all links in the aggregate must be the same speed, but does not require that the TX/RX bandwidth be symmetric.

Gerry and Roy thought this should be subject of further study.

Jonathan withdraws his motion.

Motion to add the objective:

Support 802.3x PAUSE Flow Control on copper media and point-to-point optical fiber only.

M: Jonathan Thatcher
S: Hugh Barass

Roy again states that 1of 3 topologies on the table could support PAUSE, and this motion with ‘only’ in wording could limit development.

Jonathan states that 1 architecture will support, but it is abhorrent. He would rather see an addressable PAUSE added rather than modify operation or use the current PAUSE.

Brian Unitt asked for clarification.

Jonathan thinks that for interoperability, current PAUSE should not have new uses.

Roy asked if a PON is developed that could support PAUSE, then this objective would need to be changed.

Jonathan says that he would move to change this objective if such a system were developed.

Bruce opposes this motion, stating it is premature, and we need to see more technical presentations.

Geoff questions what this is trying to say in the affirmative, since current standards state that PAUSE is supported by all full duplex pt-to-pt at 10Mbps and above on all media, and would not apply for Pt-to-MPt.

Hugh Barass withdraws based on Geoff's comments.

Jonathan request 802.3 chair and EFM chair to make a list of all things that are inclusive in the list of previous Ethernet things that do not apply to MPt systems.

Preview from Geoff Thompson:
Flow control
Link aggregation
Repeaters

End of motions on Objectives

Motion to:

Divide in principal the current proposed EFM PAR to develop a separate 802.3 PAR for Point to Multipoint Passive Optical Networks (PONs)

M: Tom Dineen
S: David Cunningham

Tom Dineen says that presentations show interesting work, but complex and would take more time than other objectives.

Stephan Worster, TDK, says we are close to a working Pt-to-Pt transceiver, and more work is required for PONs

Hiroshi Suzuki opposes, since PONs accepted several times in many meetings. Ad Hoc meetings on PONs could speed progress.

Roy Bynum opposes, since no technical work shown on PHYs, Roy plans to bring in presentation on PHY that would support all 3, and this is premature.

Hugh Barass, echoes that it is premature, and no presentations shown on scope of work, and OAM work and copper work may take just as long. Splits may be made as timelines unfold, but this may not be the appropriate split.

Bruce Tolley opposes, previous splits occurred later in the process.

Richard Brand opposes for same reasons, and also because 10Gig effort already causes scheduling conflicts. Separate efforts could further divide attention.

Mick Seamen, Telseon, strongly supports the motion, saying lack of scope implies it is too long.

Denny Gentry opposes. So far OAM has been most controversial topic.

Tony Jeffrey supports, and thinks it should go farther, so far market area, and not technical project, has been discussed.

Geoff Thompson states implication of this. Approval of PAR is significant milestone, approval of IEEE is minor compared to what has been self-imposed. No precedent on splitting PARs. Previously splitting has occurred after time schedule differences. In the past unrelated PARs have run in parallel in lock step. Agrees that market and not technical project has been stated.

Hugh Barass says all timelines are fuzzy, not just PONs. Common thread for all 4 areas is requirements of subscriber access networks.

Shimon Muller states that PONs have greatest complexity, adding MAC like functionality to the PHY. States PONs don't look like Ethernet, and reluctantly supports.

David Law, asks if Hugh is advocating delaying PAR approval until after all timelines have been defined, since no procedure is defined for splitting after PAR approval.

Howard states procedure for splitting PAR is to write a new, more narrowly focused PAR, and possibly amend previous PAR, then send both through for approval.

Howard feels that particularly with work done this meeting, the objectives are defined in a very specific manner to technical objectives. Timelines are part of the PAR form and will be discussed later today.

Tom Dineen, says that he has not seen enough technical work, including complete protocol, link budget, economic feasibility, etc.

Roy feels that OAM work is much greater effort than PON, and should be common to all access topologies in EFM.

Mick Seamen says that OAM could be coordinated between both projects. Feels that Pt-to-Pt is clearly less effort than PONs.

David Law states that even though it could be split later, some people already feel it should be split.

Hugh states that OAM has already be agreed to be common to all 3 media. Agrees with Roy that OAM will be longest project, so PON will be done before OAM is complete, so it will not slow down project.

Geoff states that if what Hugh says is true, then FDDI would be even less successful, because station management came out later.

Vote Technical, 75% required to PASS: Y: 32 N: 60 Abstain: 7
Defeated.

Discussion of PAR:

Howard states that body will end in July, if PAR is not forwarded.

Bruce Tolley points out that before the PAR is discussed, he has a proposed modification to one of the 5 Criteria responses. This must be handled before the PAR.

Motion to change the 5 Criteria:

To add to the end of first bullet of Criteria 2:

As a supplement to Std 802.3 the proposed project will remain in conformance with 802 Overview and Architecture with possible exception of the peer to peer key concept for Ethernet over PON.

M: Bruce Tolley
S: Wes Wycoff.

David Law states that some back up material should be ready to justify this change.

Howard states that Tolley/Wycoff presentation contains reasons that could be adopted by the group on July.

Stephan Haddock thinks this may be too little or too much depending on how PON achitecture evolves, and other 802.1D exceptions may be needed.

Howard states that 2 out of 3 proposed PON architecture do not support peer-to-peer, so this is a known need for exception. Other exceptions may be identified in July. Clarified that 3rd party device is a switch, not a hub, and having a MAC is key criteria.

Vote Technical, 75% required to PASS: Y: 48 N: 10 Abstain: 16
PASSED.

Now move on to PAR.

Howard presented official NesCom PAR form.

Date of Request: [2001 Jul 16]
Project Number: [P802.3ah]

[X] Standard for {document stressing verb "shall"}

Expected Date of Submission for Initial Sponsor Ballot: [Jan 2003]
(802 as Sponsor, votes) 20 months from today, written draft, conducted working group ballot, comment resolution, updated, etc.

Projected Completion Date for Submittal to RevCom [Aug 2003] 7 months for public comment period (Sponsor Ballot)

Howard clarifies that projects have 4 years to live after PAR is approved, extensions are common.

Will be submitted to international org for consideration/adoption?

[Yes]
Will be submitted to ISO/IEC JTC1 SC6 WG3

Tony states that ISO submission is no longer assumed. 802.1 no longer submits their standards to ISO.

David Law states that 802.3 continues to submit to ISO, but will be reviewed in 802.3.

Mandatory Coordination (drafts submitted to):

SCC 10 (IEEE Dictionary) Standards Coordinating Committee
IEEE Staff Editorial Review
SCC 14 (Quantities, Units, and Letter symbols)

Motion to:

Submit the draft PAR and 5 Criteria to the 802 SEC for consideration at the July meeting:

M: D. Ruby
S: J. Egan

No discussion.

Vote Technical, 75% required to PASS: Y: 73 N: 1 Abstain: 1
PASSED.

Howard asked that he be allowed to coordinate the tutorial and solicit volunteers to help with tutorial. Time will be requested Mon or Tuesday night.

David Law states that exception to 5 criteria should be included.

Closing SEC meeting Fri 4-9PM

Closing 802.3 meeting Thurs 1-6PM

Study Group Meeting Tues-Weds Day

Intel hosts 17-19 Sept, Copenhagen Denmark, meeting space in Hilton airport. Shuttles will be available for downtown hotels. Multiple hotels have contracted rates and shuttles. Details to follow. ~ > $300 per night.

There being no further business for the group, the meeting was adjourned at 2:00 pm.