

# IEEE 802.3 EFM Study Group Meeting Minutes 3/13-14/01, Marriot Beach and Golf Resort, Hilton Head, SC

Chairman Howard Frazier calls the meeting to order at 8:30 am and announces that Jo Beth Metzger will be the recording secretary for the meeting.

For agenda and technical presentation materials, see the following link:

<http://www.ieee802.org/3/efm/public/mar01/index.html>

## PAR

### 1. Title

David Thorn: Is it supposed to exclude customer premises distribution networks?

Answer: Demarcation within customer premises. Wants to add customer.

Hugh Barrass: Howard Frazier drafted such that it gives you a superset and does not exclude premise distribution networks, as stated above.

Speaker: does not agree

**Bill Quackenbush: move to accept PAR title as presented**

**Second: Hon Wah Chin**

Mark Durrett: wants to comment that BT was surrounding the scope. Suggesting that we defer 'title' in until after 'scope'. Wants to postpone discussion on this until we speak of scope.

**Mark Durrett: moves to postpone discussion of title until we consider scope.**

**Second: John Eagan**

**Vote: hear no objection. Motion to defer by acclamation.**

### 2. Scope

**Richard Brand: moves to accept scope as presented.**

**Hugh Barrass : Second**

Discussion:

Faouad – Clarify why EFM does not appear so far in scope and title. What is meant by subscriber access network?

Howard Frazier: EFM does not appear because it is a colloquialism. Marketing term which should not be in the title. FE never in 100BASE-T standard. For advertising. Subscriber access method is a network in which equipment and the plant is not owned by people who use it. Important distinction. In LAN, it is typically all the same people that use and own the products. End users are different from people who run network. Owners are different from users.

Howard Frazier states that we are to solve a problem. The solution may have apps in customer premises networks. Solution may have applications beyond what is solved presently.

Howard Frazier: would you be interested in adding customer premise.

David Thorn offers amendment: 'and customer premises' in between subscriber access and networks in the scope statement

Jack Anderson: second

Howard Frazier confirms: amendment has been moved and seconded

Hugh Barrass: Against amendment. User of port is not owner of port. Covers hospitality hotels but what is not covered is industrial or enterprise. No extra requirements for that. Does not want to discuss home networking which he believes would open door to homePNA, etc. Difficulty is terminology; subscriber access is how Howard Frazier described it. Would like to exclude customer premises network works.

Chris DiMinico : against amendment. Description wants to use subscriber networks and then specifically exclude what we are not going to do. Wants to delete access. Proposes different amendment to scope.

Srini Kola – carrier 9 networks. Does not feel conformable with customer premise networks. Wants to leave door open for customer to use what ever they want. Against amendment.

Bruce Tolley – against amendment. Customer prem are things that we do not want to attack such as home network. Believes it is more vague.

Russ Gyurek Cisco systems – Would like to add an appendix to show what we include and what we don't include.

Nersi Nezari – would like to have customer premise in it.

Bruce Tolley: David might consider a friendly amendment. 802.3 frame formats, subscriber access and in building distribution networks. Friendly amendment

David Thorn agrees:

Jack Anderson second.

Howard Frazier changes and in-building distribution – amendment is not on the floor.

John Eagan - insert 'over various media' before frames and in.

**John Eagan has called question to this amendment.**

**VOTE: 76 yes, opposed to calling question 15**

**Now voting on amendment: 'and in-building distribution'**

**VOTE: 92 in favor, 36 opposed, abstain 12**  
**Amendment fails because it is not 75%**

David Closs – concerned that with PONs in last meeting PONs may be a difficult fit but this may be the place for it. Concerned that this will prohibit the group from doing a PON standard.

Howard Frazier responds that there is a lot of wiggle room. Examples such as gigabit standard. EPONs involves physical layer modifications. Howard Frazier believes scope is broad enough without tying our selves down to saying we are going to do an ePON.

Michael Silverton, fiberhood: wants to propose an amendment. Strike subscriber access replace with metro distribution and in building access.

Howard Frazier wants him to hold on new amendment.

David Closs – it is acceptable to David if Howard Frazier's interpretation is correct.

Bruce Tolley – believes this statement is broad enough to work on PONs.

Glen Kramer – concerned about minimal. Wants to remove minimal.

**Motion to strike the word minimal:**  
**Amendment died for lack of second. No second.**

Martin Adams, 3com – wants to use minimum rather than minimal. Proposing amendment to use the word minimal to minimum.

**Amendment failed for lack of second. No second.**

Wes Walls, Cisco - 'by making minimal changes to 802.3', Define 802.....Then remove 'and minimal augmentation of the MAC operation'

**Amendment for above by Wes Walls.**  
**Weil Diab seconded amendment.**

Discussion on amendment:

Bruce Tolley, Cisco – does not like amendment. Bruce wants to leave just minimal augmentation. Concerned it will open par to scrutiny.

Paul Borttorff, Nortel – does wording as it stood limit ability to modify mac control layer.

Howard Frazier responds - no it would not. A lot of other things that made it into mac.  
Paul is ok with original wording.

**Bill Quackenbush, Cisco: Calls the question on this amendment.**  
**No objection to calling question.**

**VOTE: 1 in favor, 115 against, abstain 10**  
**Amendment fails.**

Michael Silverton: wants to make amendment: strike subscriber replace with 'local loop distribution and in building access'.

Hugh Barass – seconded amendment

Kobi Mizrahi – believes too dangerous to put local loop. Too restrictive to copper.  
Martin Adams 3 com, - problems with it is that in building access is not well understood.  
Wants to focus on local loop and eliminate in building. Does not Like amendment.

Paul Torgeson – digital media com – believes too restrictive. Against amendment  
Ed Eckert, Nortel – Dialed into ANSI standard for the terms. ANSI calls it a communication channel from switching center second item a pair of wires or it's equivalent. Believes definition is inclusive of fiber. Opposed removal of 'subscriber'. Reason is glossary is in the process of being revised and never printed. Subscriber is defined as user of PTT.

Richard Brand, Nortel– anything says about subscriber access in ANSI?

Michael Silverton – wants wording to be more of architect.

Howard Frazier suggested 'local loop distribution, in building and subscriber access networks'

Hugh Barrass –will agree to this amendment.

Ed Eckert, Nortel – suggests allow people to chew on this over lunch.

Howard Frazier wants to get his approved and a resolution.

David Thorne,– wants to know if group wants to specifically exclude in-building.

Bruce Tolley – believes statement excludes private enterprise and home network from our scope?

Paul Torgeson ,Mediacom – is too specific.

Martin Adams – wants to keep in-building because he believes it is fundamental.

Are we dealing with Ethernet in First mile or Ethernet in the first mile in the building.

Steve Haddock, extreme – makes it more exclusive. We will think of things that are not in the list

Hugh Barrass, - fundamental problem with scope initially was interpretation. network in telecom world is mtu and mdu environment was not in the space. Is it sufficient that we put in the objective and we exclude mxu distribution?

Howard Frazier – the objectives will explicitly state what is going to be covered.

Hugh Barrass – confident that we can get an objective that explicitly includes in building distribution.

Hugh wants withdraw motion.

Michael Silverton withdraws amendment.

Haddock – 5 attempts at amending motion have failed. Calls question.

Paul Bortoff - Objection to calling question.

**Vote on calling the question:**

**In favor 106, against 5**

**Question is called. Now voting on main motion.**

**Motion vote:**

**75% or greater to pass.**

**117 in favor, against 0, abstain 10**

## **Motion Passes**

### **3. Title:**

**Motion on floor for Title that was previously postponed  
Vote to accept title as is:  
In favor 75, opposed 0, abstain 1**

### **4. Purpose:**

**Motion: John Payne  
George Eisler seconded motion**

Comments:

Koi Mizarahi – proposes to add sentences to beyond ‘application’ to Incorporate or embrace carrier transmission technologies w/in Ethernet

Howard Frazier offers up adding the line ‘to incorporate carrier transmission technologies within the 802.3 standard in order to’

**Kobi offers this as an amendment  
Didi Ivankofski seconds amendment**

Jack - wants to keep purpose as succinct as possible. Against.

**Vote: amendment  
In favor 6, opposed 76, abstaining 7  
Amendment fails**

Pat Kelly , Intel – wants to include ‘increase in bandwidth and reach’ some qualifier to show we are going after reach.

**Amendment Pat Kelly  
Nerzi Nazari seconded**

Chris Diminico. – is concerned that we are adding too much qualifying info.

Pat Kelley & Nerzi – do you accept this as an amendment to the amendment from Chris.

Pat & Nerzzi agree.

Amending amendment 'performance' and remove bandwidth.

Paul Torgenson, Digital Mediacom – concerned we are asking for smaller and faster.  
Instead of lowering use the word considering operation cost.

Discuss previous amendment. Howard Frazier skipped ahead.

Mathew Goldman, WWP – Do a friendly amendment rather than going to the previous  
Amendment.

**Vote: amendment remove bandwidth replace with performance.**

**In favor 81, opposed 8, abstain 8**

**Motion passes**

Paul Torgenson – wants to use 'considering' rather than 'lowering'. Amendment to  
change lowering to considering.

**Amendment Paul Torgenson**

**Didi Ivankofsky second**

Bruce Tolley – wants goal to be lowering cost rather than just considering it.

Alan Flatman wants an amendment to amendment.

Proposed Friendly amendment – use “minimizing” rather than “considering”

Didi Ivankovsky liked it

Paul did not like it

Alan Flatman offers amendment – use “minimizing” rather than “considering”

Seconded by Richard Brand

Jack Jewell – in favor of amendment to amendment. Likes minimizing.

Paul now considers it friendly now. Minimizing it is.

John Payne – supports minimizing rather than considering.

**Voting; change lowering to minimizing.**

**In favor 105, opposed 0, abstain 5**

**Main motion:**

**Motion to amend: Curtis Knittle, - remove application space to transport**

**Kobi Mizari second**

Fred Lucas 3 Com – now space is no longer defined.

Bruce Tolley – not sure why they prefer transport

Curtis – application is an ISO 7 layer reference model

Howard Frazier responds – his intention was area rather than ISO model

Kobi – believes meaning of transport is more important

Bruce Tolley – application space means Ethernet and ports.

???? – wants change to “expand application space of Ethernet”

Curtis will buy friendly

Kobi will live with friendly

Amendment to Amendment

It is now a friendly amendment.

Mathew Goldman – WWP – proposes friendly keep wording but remove the word ‘space’ and remove ‘in that space’.

Accepted as a friendly

Ed Eckerdt – the original was OK.

**Vote:**

**In favor 94, opposed 5, abstain 6**

**Amendment passed**

**Jack Jewell – calls the question**

**Ed Edeckert against calling the question**

**Vote: on calling the question**

**In favor 86, opposed 1**

**Vote of Main motion: 75% required**

**In favor 108, opposed 0, abstain 1**

**Main motion passes**

Ed Eckert – would like to remove the word cost. ANSI discourages discussion of costs.

Howard Frazier- Discussion of Pricing is not allowed. Discussion of costs, particularly relative costs, is okay, and the 5 Criteria require that we address costs.

Howard Frazier – PAR Title, Scope and Purpose have now been approved.

# 5 Criteria

## 1. Broad Market Potential

### **Head Count:**

**Individuals 121, 77 companies**

### **Tom Dineen moves to accept Dennis Beaudoin seconds**

Curtis Knittle – change 40 million nodes to 40 million subscribers.

Dennis is willing to change .

Richard Brand – where did 40 million subscribers come from?

Howard Frazier – computer economics, ryan-hankin-kent.

Richard wants 65 million world wide.

Howard Frazier to modify.

**Tom and Dennis consider it friendly, It is amended.**

Jeff Fidley, Elastic, US Worberg projects 150 million subscribers worldwide by 2005

Roy Bynum – wants to include both US and world wide as shown by third party vendors.

Motion to include Roy's above recommendation.

Friendly

John Payne – wants Howard Frazier to explain what is meant by business access.

Brian Murry – use Worberg 33 instead of 40.

Chris Kerry r, Net2Net – reduce 150 to 110 more subscribers or take out the US numbers.

Dave Thorn – wants to keep phase as it stands.

Howard Frazier to change text per Chris Kerry

### **Second to amendment to amendment.**

**No second. Amendment to amendment is removed.**

Mathew Goldman – proposes friendly “third party analyst.”

John Phips Berilly – does committee really care about decimal places?

### **Vote on Amendment:**

**In favor 99, opposition 3, abstaining 2**

**Amendment passes**

Roy Bynum – amend comment from residential and business access networks to subscriber to ‘residential and business subscriber’



Tom Dineen and Dennis consider it friendly.

Roy Bynum – Ethernet vendors and their customers. Remove the word ‘users’ and replace with Ethernet equipment vendors and their customers.

Howard Frazier changes verbiage to: ‘Ethernet equipment vendors and service providers’

Tom Dineen and Dennis Beaudoin friendly.

Kevin Daines – serviced providers is too limiting. Suggests ‘customers’

Chris Thompson, extreme – wants ‘purchasers’ instead of ‘service providers’.

**Kevin Danes moves to make amendment to change service provider to customer  
John Walcott seconds.**

Mark Durrett – retracts

Shimone Muller, Sun – gets everyone on track again.

Ralph Anderson – friendly amendment to original paragraph. Concerned about tense of first and third paragraph.

Howard Frazier responds – the tense is correct.

Roy Bynum – regarding historical changes context of service providers.

Howard Frazier - Ethernet vendors and their customers have always been able to achieved optimal cost balance.

**Vote: calling question**

**In favor 47, opposed 15, abstain 18**

**Vote on main motion: 75% required  
In favor 103, opposed 0, abstaining 3  
Motion passes**

## **2. Compatibility**

**Tom Dineen moved to accept text**

**Jim Welch seconded**

Richard Brand – new PAR form had a place where there was issues related to other organizations.

Howard Frazier responds – Two places in the PAR which may be relevant. The coordination section deals with external liaisons, not internal to IEEE. The second place is a box if we are aware of any other standards with similar scope.

Paul Torgenson – what is 802.1d, .q and .f?

Group answer: 802.1f managed object definitions, .q vlans, .d bridging

**Vote on motion to accept text 75% required**

**In favor 93, opposition 0, abstain 1**  
**Motion passed**

### 3. Distinct Identity

**Tom Dineen moved to accept text**  
**Michael Bennet seconded motion**

John Wollcott, wwp – re: John’s replacement, he actually wanted to strike first 3 sentences.

**John motions for amendment**  
**Mathew Goldman seconds**

Roy Bynum – ‘are applicable’ changed to ‘are used’.

Tom Denine – verbiage similar to this is traditional part of our venues. Verbiage belongs in there.

**Vote on amendment:**  
**In favor 4, Opposed 56, abstention 25**  
**Amendment defeated**

#### Main motion discussion

Chris Thompson, extreme – is the intension to exclude speed adaptation.

Howard Frazier responds – when justifying multiple phy types for the same medium.

Just one type of phy for a medium. Does not exclude that there are multiple speeds for a given medium or two different wavelengths for the purpose of the same medium.

Paul Nikolich – wants to include examples such as media examples. ‘to include new media such as outside plant twisted pair wiring and passive optical network based fiber.

**Paul Nikolich’s amendmend. George Eisler seconded**

Roy Bynum – wants to put word

Hugh Barrass– opposing amendment does not help by including.

Paul Torgenson – believes should be excluded

Johnathan Thatcher – does not want to include new media specification.

Howard Frazier responds that we need this because we will be defining a new physical layer on a new media.

Tom Dineen – does not want to get this specific should be deferred to objectives.

Tom wants to call the question.

Rich – passive optical fiber is redundant. Delete passive.

George and Paul have problems with removing passive

Bruce Tolley – against, should be done in objectives not critters

Paul - wants to see some bounds in the identity

**Vote on ammendment**

**In favor 7, opposed mucho 73, abstain 8**

**Amendment failed**

Discussion:

Roy Bynum – make mod to second paragraph after word speed insert range.

Tom Dineen accepts as friendly, Mike Bennett seconded

Terry Cobb – Lucent

Darrell Furlong – wants to change ‘wireline’ to subscriber access.

Howard Frazier responds “wireline” is important because of wireless group

**Vote on motion: 75% required**

**In favor 96, opposed 0, abstain 0**

**Motion passes**

## 4. Technical Feasibility

**Tom Dineen to move on floor, Jim Welch second**

Roy Bynum – suggest ‘to the extent possible’, taken as friendly

George Eisler - will accept as is

**Vote on motion: 75% required**

**In favor 93, opposed 0, abstaining 3**

**Motion passes**

## 5. Economic Feasibility

**Tom Dineen moved**

**Jim Welch seconded it**

Discussion:

Geoff Thompson, Nortel – Would like to augment first two paragraphs to show feasibility.

Howard Frazier responds – cost performance happened first and that gave volume.

Reasonable cost for performance is best quantified as cost per megabit per second. \$\$s per megabit per second Ethernet is cheapest technology you can find.

Roy Bynum – agrees with Howard Frazier, consistent demonstration with the cost of Ethernet versus ATM.

Mike Bennet – 3<sup>rd</sup> paragraph sums up the all the issues. Rhetorical statement.

Geoff Thompas – proposes amendment in third paragraph after broader labor pool would like to include ‘simpler configuration’.

Mike , Jim , Tom and OK with this paragraph.

Alan – concerned we are in different environment. Modify ‘will’ to ‘should’ be reduced  
Friendly agree jim, tom and mike.

Chris Thompson – wants to point out that the reuse of the present cabling will .

**Chris calls the question.**

**Richard Brand objects**

**Vote on calling the question**

**In favor 55, opposed 15**

**Questions is called**

**Vote on motion: 75% required**

**In favor 89, opposition 0, abstaining 5**

**Motion passes**

# New Business

## **Richard Brand – wants to submit a motion**

‘To direct the chair to present the par and 5 criteria to 802.3 working group on Thursday and to ask for permission to presubmit it to the 802 SEC for consideration at the july meeting and ask that the study group’s charter be renewed for another meeting cycle.’

**Move from Alan Flatman.**

**Second T. Dineen**

**Vote on motion:**

**In favor 89, opposition 2, abstain 2**

**Motion passes**

**Motion Bruce Tolley to approve minutes of previous meeting**

**Hugh Barrass seconds**

**Approved by acclamation**

# Objectives

## **Motion by Bruce Tolley, John Egan second**

John – objectives are pertinent to be accepted as they are.

Roy Bynum. – distinction between local loop and building riser.

Geoff Thompson – lack of consistency between bullet one and bullet 2. Bullet two is not sufficient to support point to multipoint on optical fiber.

Mike Dudek – surprised to see physical layer specs at this stage.

Expects temperature ranges. Believes that we are prejudging solutions

Chris Thompson – address local loop and not necessarily building riser.

Tom Jepson – first bullet already states subscriber access and may drop .

Delete the words local loop. Accepted by friendly

Darrell Furlong – offers amendment to delete the second bullet 1000BASE-X 10 km  
1310 over dual sm fiber.

Uri Rotshtein – seconds motion

Hugh Barrass – against amendment wants to draw the amendment and vote on each individual objective. Darrell agrees to pullback amendment and vote one by one.

Mover and seconder on amendment have withdrawn support for amendment.

Darrell Furlong brings a motion to divide. Hugh Barrass seconds.

## **Vote to divide the question:**

**In favor 77, opposed 1**

## **Motion to be divided.**

## **Point to multipoint on optical fiber**

## **Vote on point to multipoint fiber (75% required)**

**In favor 84, opposed 3, abstain 12**

**Passed**

**Point to point on optical fiber**

**Vote on point to point on optical fiber (75% required)**

**In favor 86, opposed 0, abstain 10  
passed**

**Point to point on copper**

**Vote on point to point on copper (75% required)**

**In favor 64, opposed 1, abstain 33  
Passed**

**1000BASE-X extended temperature range optics**

**vote on 1000BASE-X extended optics (75% required)**

**in favor 87, opposed 0, abstain 11**

**1000BASE-X 10km 1310 over dual SM fiber**

Mike Silverman – does anyone have the information between CO to cover the area adequately.

Bruce Tolley – one way to drive down cost is optics based on standards. Proposal is this is easy to do, should be done, low cost and tech feasible.

Darrel Furlong – does not believe we are ready today to do this.

Hugh Barras – table this and discuss this in May

Howard Frazier – rather than tabling it, just vote it down and discuss it in May

Kevin Daines questions whether that would take a motion to reconsider.

Howard Frazier states that a motion to reconsider would only be required to bring the same topic up again during the current session.

Hugh – calls the question

Richard Brand objects to calling the question.

**Vote: calling the question (66% required)**

**In favor 55, opposed 14**

**Question called**

**Motion on 1000BASE-X 10 km 1310 over dual SM Fiber (75% required)**

**In favor 28, opposed 32, abstain 36**

**Motion fails**

**1000BASE-X long distance over single SM fiber**

Roy Bynum – against this. Believes this is premature for us to be stating distances at this point.

Kobi Miazrahi – important to denote single or dual fiber.

Geoff Thompson – friendly to change 10 km to long distance

Bruce and John Eagan accept as friendly.

Tom Dineen - >= to 10 km, no one.

**Vote 1000BASE-x long distance over single SM fiber (75% required)**  
**In favor, 84, opposition 4, abstain 13**

**Phy for copper**

Mike Dudek – wants more specifications on copper

Bruce Tolley responds – specifically vague since we heard from several groups and motions. Affirmation that we want to work on copper but premature to define distances.

Bruce Tolley – Cisco, alcatel and Elastic all presented proposals for copper.

George Eisler – dedicated copper head believes Ethernet solution is strongly desired for a group to undertake new phy is not feasible. Go ahead with objectives and let group define specifics.

Hugh Barrass – reuse or phy or development of new phy

**Vote PHY for copper: (75% required)**

**In favor 68, opposed 0, abstain 27**

**Passed**

**support oam&p for subscriber access networks**

Roy Bynum – friendly amendment to remove word remote Remote is redundant.

Bruce Tolley– it's friendly – John Eagan did not accept it as friendly

Richard Brand – wants to remove remote

**Motion to remove the word remote**

Roy Bynun. Motion to remove remote Richard Brand seconded

Hiroshi – supports amendment

Kobi – telcos definition of remote is when it is another network management other than inband management.

Roy Bynum– would only limit to only remote sites. Does not talk about out of band or inband.

**Amendment to remove the word remote**

**Kevin Daines makes motion to adjourn**

**Ed Eckert seconds**

Howard Frazier states that a motion to adjourn takes priority over all other motions and that the only debatable point is the time at which to adjourn.

**Bruce Tolley – moves to fix the time at which to adjourn at 6:35 pm (50% required)**

**seconded by John Eagan**

**In favor 49, opposed 27.**



Ammendment to remove the word “remote” was accepted as friendly by John Eagan  
**No need to vote on it.**

Hugh Barrass – call question

**Vote on support oam&p for sub access networks (75% required)**

**In favor 79, opposed 0, abstain 12**

**Motion passed.**

Glen Kramer – would like to add objective 1000BASE-X long distance over PON

Second from Kobi Mizarhi

Jack Jewel – friendly amendment ‘point to multipoint sm fiber’

Glen Kramer does not consider it friendly.

Jack Jewel wants to push point. Jack withdraws

Geoff Thompson – is this a speed symmetric network?

Howard Frazier – Did you really mean 1000BASE-X? That implies 1.25 Gbaud, 8B/10B encoded ala 802.3z clause 36.

Glen Kramer – responds wants 1000 per second not 1000BASE-X

John Walcott – does not understand what 1gps long distance over PON

Ed Beili – wants to add 100 megabits.

Glen Kramer– to change bullet for Phy for long distance over PON

Everyone OK with changes

John George – call question – no objection to calling the question.

**Vote ‘PHY for long distance over PON’**

**In favor, 59, opposed 3, abstain 19**

That being the last item of business, Howard Frazier reminded the group of the plans for the May interim meeting (Monday May 21<sup>st</sup> – Wednesday May 23<sup>rd</sup>) at the Adams Mark Hotel in St. Louis, MO, hosted by Agilent Technologies.

The chairman thanked the group for their participation, and the meeting was adjourned promptly at 6:35 pm.

Respectfully submitted

Jo Beth Metzger

