IEEE 802.1 Minutes, March 1999

Opening Working Group Plenary, Monday, March 8, 1999

<u>Voters and Voting Rights – Rosemary Slager</u>

<u>Minutes Approval – Michael Wright</u>
>   January interim meeting meetings will be passed out tomorrow by Alan Chambers.

>   Resolution: That the minutes from the November 802.1 Plenary be approved.

>   Move: Michael Wright
>   Second: Tony Jeffree

>   YES: Unanimous   NO: 0   ABSTAIN: 0

<u>Status of Standards – Bill Lidinsky</u>
>   .1D – Printed and released in December 1998
>   .1Q – Printing this week
>   802 Overview and Architecture – There is one no vote to clear up from the confirmation ballot, then O & A will be ready for sponsor ballot. Alan Chambers will have a motion to go to sponsor ballot at the closing plenary.
>   .1r GPRP – Passed working group ballot, there were 3 negative ballots.   Ballot resolution will be discussed after the opening plenary.
>   .1s Multiple Spanning Trees – The first draft will be distributed Tuesday.
>   .1t .1D Maintenance – Tony Jeffree is preparing a draft.
>   .1u .1Q Maintenance – The PAR is on the NESCOM agenda.
>   .1v Protocol and Port Based VLANs – The PAR is ready for submission. Someone in .1 has to take the lead in moving this work forward.
>   .1w Rapid Reconfiguration – The PAR is ready for submission.

<u>Executive Committee Report – Bill Lidinsky</u>
>   There is a PAR for Broadband Wireless study group. Do we need to consider it? The folks working on this and the chair of .11 (Vic Hayes) believe this should become a new working group. Does .1 have a position on this?

>   Wireless Personal Area Network (PAN) – The exec is trying to resolve a couple of no votes. There will be more discussion Thursday.

>   Enhanced Source Routing PAR Approval – 802.5 is creating a PAR to enhance source routing. 802.1 will have to be aware of the work and have some folks tracking this effort.

>   QOS Executive Study Group – It will not be renewed. Some on the exec want to reopen at a later date. The main concern of the exec now is can the QOS folks use the IEEE exploder.

>   <Discussion of the effects of QOS using IEEE exploder occurred. >
>   The consensus of the room was it is a bad idea to allow QOS folks to use the IEEE exploder. Doing so would cause people to thing the QOS effort was sanctioned by IEEE 802, which now will not be the case.

>   ARCs in 802 Overview and Architecture – Hal Keen will send an updated version to the exec exploder.

A Y2K issue in .1 standards – The exec wants the working groups to make sure there are no Y2K bugs in the standards. .1 does not be there are any problems.

SC6 Issues – There are two ballots that are currently open from SC6.
    11802-6 Standard Ethernet type – Jim Carlo wants .1 to tell him how 802 should vote.
    15802-3 – 802 has to vote on this.

CD-ROM Distribution
    New CD-ROMs will be distributed tomorrow to those folks who brought their old ones. There were some files that were corrupted on the original. New voting members can get a copy Wednesday.

Schedule for the week – Mick Seamen
    Tuesday 9:00 AM – Rapid Reconfiguration
    Tuesday 10:30 AM – 1:00 PM – Meet with 802.3ad Link Aggregation
    Tuesday 2:00 PM – Multiple Spanning Trees
    Wednesday AM – 802.3ad Link Aggregation
    Wednesday PM – 802.3ad Link Aggregation
    Thursday AM – Port Based Network Access Control
    Thursday PM – Closing Plenary

802.1w Resolution – Mick Seamen
    Resolution: 802.1 requests the 802 LMSC exec to forward the 802.1w 'Rapid Reconfiguration' PAR, as previously circulated to the exec, to NESCOM for approval.

    Move: Mick Seamen
    Second: Tony Jeffree

    YES: 17   NO: 0   ABSTAIN: 2

802.1r Ballot Comment Resolution – Tony Jeffree
    There were 3 no votes, all with the same concern; is this work something that .1 should be doing.

    There was much discussion about .1r; the following items were the main points of the discussion.

- If people are going to do this it should be done in a standard way.
- SNAP already allows proprietary protocols
- The original motivation was having designed GARP that if others wanted to do proprietary protocols it should be done in a standard way.
- Customers will require 802.1r support when they don't know what it means.
- If there are two implementations on a given network where one protocol was poorly designed and the other well designed the poorly designed protocol could cause severe problems for the good design. If the poor design was sending many packets all other implementations of .1r would have to capture the packet and at least read the packet to the OUI to determine that the packet was not for this implementation. This is an unacceptable burden for the good implementation.

It was decided that we would not be able to close this issue today that more discussion was needed.

Bill asked for a sense of the room – Do you have a definite opinion what we should do? NO There should be more discussion, put comments on the exploder.

Working Group Session, Tuesday AM, March 9, 1999

<u>Current State of Rapid Reconfiguration – Mick Seamen</u>
- Determine what might go into an initial draft
- Add a requirement to .1D for physical link loss detection
- Need more technical input
- Discussion of the changes to the 802.1D Document
  - What degree of backwards compatibility will be required
  - Generate a new Section 8 call it Section 17. If at later time we will decide if it should replace Section 8 or be in parallel.
  - Build a new C code model using ANSI 'C'.
  - May have to do a maintenance update to .1Q to have pointers to the new document.
- Tony and Mick will put together a working document to start some discussions.
- This presentation is on the exploder at URL:

<u>802.3ad Link Aggregation</u>
> .1 met with the 802.3ad Link Aggregation group from 10:30 AM to 2:00 PM. The minutes for Link Aggregation are kept by 802.3ad.

Working Group Session, Tuesday PM, March 9, 1999

<u>802.1s Multiple Spanning Trees – Alan Chambers</u>
> Alan handed out draft 1 of 802.1s; it will be placed on the ftp server.

<u>VLAN Trunk Protocol – Norm Finn</u>
> This presentation is on the ftp server URL:
>> ftp://p8021.hep.net/go_wildcats/docs99/vlan-trunk-prot.txt

> What? – VLAN Static configuration info flood protocol.
> Which Info?
>> At least:
>>> VLAN – to – STP instance mapping
>>> VLAN – to – FIB mapping
>> Useful:
>>> VLAN text name
>>> VLAN existence
>>> VLAN suspend
>>> 802.1Q – to – XYZ mapping
> Why not GARP?
>> GARP conveys directionality, which is not needed.
>> This directionality information has a cost
> How to flood?
>> Jittered broadcast time, hold time, and rev level
>>> Flood when you get a flood, or when you timeout, but not twice with the same information.
>> Only on the management VLAN.
>> Only with one domain.
> What to flood?
>> If database changes, or if requested,
>>> Tell everything
>> If nothing changes,
>>> Just summarize (MD5 checksum)
>> If you don't know,

Just ask.

Who remembers the data?

> Servers. A server has sufficient nonvolatile (NV) memory to remember everything. You may have any number of servers.

Who can change the data?

> Only a server.

Who do you trust?

> Only those who know the MD5 key, servers are manually attached to the domain.

What about partitioning? Updates to re-booted servers?

> Highest database sequence number wins. Different databases with same sequence number flagged to the user.

Discussion:

- Most things this protocol does are SNMP settable; the argument for the protocol is to make it automatic.
- One assumption of this protocol is there is not enough information being distributed that requires a flow control mechanism.
- Information is location independent.
- Assumption here is the database exists and is being passed around.
- What to do with this protocol?
  - Norm will prepare more for the next meeting, the focus will be on the requirements for and alternatives to this protocol.
  - There should be a motion at the closing plenary to put this out for comment.

Discussion about an interim meeting – Mick Seamen

> 802.1 will probably have a short interim co-located with 802.3. They will decide on the location at their closing plenary.

802.5 Source Routing Enhancement PAR – Sharem Hakimi

> The following describes the work that 802.5 proposes to enhance source routing.

- Enhancement of Annex C
- Possible update of the main text in Section 6.5.3 in order to invoke the enhancement annex
- Voting members
  - All of 802.1 voting members or a subset; this is up to .1
- Early input is requested on early drafts but not required.
- Drafts will be on the .5 site URL: www.8025.org
- A description of the enhancement is a bridge keeps a list of routes, if the first route fails the bridge switches to another route without the end station having to do route discovery again. The RI given to the end station is a pointer into a table kept by the edge switch rather than the current bridge – ring number.

Working Group Session, Wednesday AM, March 10, 1999

> 802.1 meet with 802.3ad during Wednesday AM. The minutes for this meeting are keep by 802.3ad.

Working Group Session, Wednesday PM, March 10, 1999

> 802.1 meet with 802.3ad during Wednesday PM. The minutes for this meeting are keep by 802.3ad.

Working Group Session, Thursday AM, March 11, 1999

Port Based Access Control – Vipin Jain

> This was a presentation about an area of work that 802.1 should consider.

Problem Statement:

        Physical accessibility of network is a problem; this allows unauthorized users or malicious attacks.

Existing Solutions:

        DHCP, Snooping, Proprietary server based, proprietary MAC, telnet – based login, end to end encryption

        End user want an authenticating scheme not encryption, this is especially true for small and medium companies. They don't want the overhead of encryption. A goal is to make sure the edges are secure.

Why is it interesting to 802.1?

        New market opportunities.

        Some one has to do it!

Goals and Objectives:

        Access control on bridge port

        Software upgrade only

Dialup World

        Authentication server for dial in user to authenticate with.

Dialup World's Problems:

        Upgrades are difficult

        Methods are not extensible

        Backend servers are difficult to maintain

        Lots of difficult protocols to support

Dialup World – EAP (RFC 2284)

        PPP – Link negotiations determines which authentication will occur.

        EAP then transparently passes the authentication to the authentication server.

        Radius is currently being used as the authentication protocol. The IETF draft is http://www.ietf.org/internet-drafts/draft-ietf-radius-eap-05.txt

Dialup World – Operation with EAP

        Trusted relationship between server and network access device

LAN World – Is EAP the solution?

        Will this work for a LAN? The missing piece is EAP over 802.

LAN World – Operation with EAP

        Same as the PPP picture

LAN World – Extending Initiation with EAP

        End system generates EAP start when the system boots or when user logs in.

EAP in Action

        There were several slides showing how EAP works

Revisiting Goals and Objectives

        Use existing protocols wherever possible

        Small software upgrade, no hardware changes

Discussion of the scope of the problem:

- Should server be able to send to the switch policy information about the user or should it be able to send information to the client?
- We should not try to define user. User could be person, router, server, etc;
- We might use this to attach a user to a VLAN.
- Lots of things to consider.
- Our goal should be authentication only.
- The information supplied to the server; does it send the MAC address? Is there a "handle" that we could send to the server?
- Discussion of EAP. 802.1 needs to "come up to speed on EAP". Read the EAP draft.
- Need statement that this work would not support 10BaseT.
- We have to study the link status issue.

EAP in LAN World – What does it take?

        Discussion

- We should not touch the backend protocol
- What exactly do we need to do?
  - We have to define the interaction between port and client
  - Get Ethertype for protocol
  - Protocol to backend from the switch
- Have to carefully define how to switch port on and off
  - Off has to allow EAP packets through
- How to carry EAP protocol
- Discussion about how much of the protocol .1 has to do.
- The following diagram was shown, as a way to consider the work 802.1 has to do.
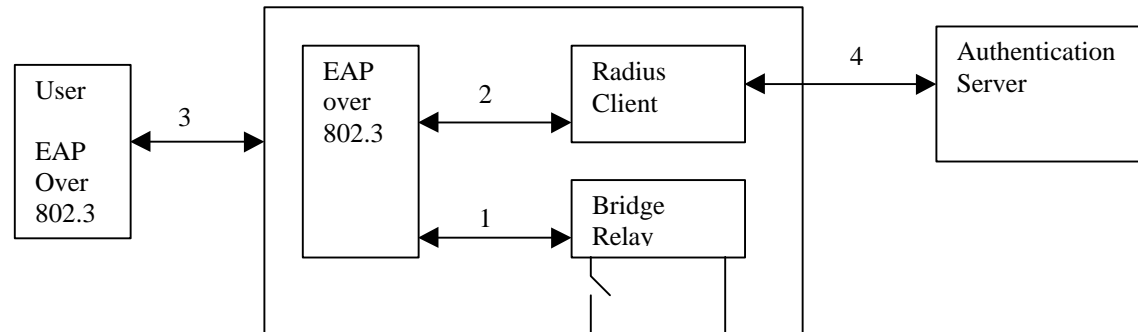

Figure 1 Model for 802.1 Network Access Control

- Number 4 in Figure 1 is not 802.1's job
- Numbers 1, 2, and 3 is where we would have work
- Number 2 is independent, we might define a standard interface
- Bridge Relay to client might be necessary

Discussion of how to proceed
- Need to draft a PAR so there is a basis for discussion
- Have to determine what we need and how to specify
- Is the diagram above a good model?
- How much is going into the standard?
- We need to understand EAP.
- Do the five criteria.
- Need a good description of the pieces and how they fit together.
- Determine if we will impact the end system.
  - The end system has to do EAP over 802.3
  - Need to know about log on and log off
- There may be a gray line about starting the protocol exchange
- We should not define EAP over 802.3; we should provide the hooks so the IETF can define EAP over Ethernet.
- A "sense of the room" was taken; it was there are valid reason for 802.1 to proceed with this work.
- We need more contributions
- Need to get a draft PAR so we can define the scope of the work. Also, this gives us a chance to figure out what we should be doing.

Working Group Session, Thursday PM, March 11, 1999

Review this afternoon's agenda – Bill Lidinsky

Voter list – Rosemary Slager

January Interim Meeting Minutes – Alan Chambers

Resolution: That the minutes from the January 802.1 Interim meeting be approved.

Move: Alan Chambers
Second: Tony Jeffree

YES: Unanimous   NO: 0   ABSTAIN: 0

Email Exploder – Hal Keen
Mail messages are limited to a size of 40K.
To subscribe send email to: p8021-request@hepnrc.hep.net
Leave the subject blank; in the body of the message put the word subscribe. The from address will be used as the subscription address. Also, you can put the word subscribe followed by an address. Note replies go only to the sender, not to the mail list.

Quality of Service/Flow Control (QOS/FC) Study Group – Tony Jeffree
There was a meeting about the QOS/FC study group during the week. The study group will end at the executive committee meeting as long as nothing unexpected happens. QOS/FC will be able to keep the existing web page on the IEEE site until they can get a web site up and running. There will be a disclaimer stating that the QOS/FC activity is no longer an IEEE 802 activity.

ISO Relationship Proposal – Tony Jeffree
Tony reported on the survey that requested requirements for ISO labeling of 802 standards. He also discussed the current proposal to handle these requirements. There is a feeling that broadening the comments on the standards is a good but it is not necessary to have an ISO label. Robin Tasker has the task of creating a proposal to get the ISO label and input without the current overhead. Robin's proposal is the following.
- IEEE 802 will become a Class A Liaison organization to SC6.
  - This eliminates the ANSI path, we can send drafts and the like directly to ISO
- Send a liaison (email) to SC6 on all WG ballots and when 802 passes a PAR.
  - The liaison for PARs is to inform SC6 of the new work item in 802
  - On WG ballots they would be able to comment if they wished
- Comments from SC6 do not count as a response but we should resolve the comment
- At sponsor ballot send liaison (email) to SC6 to let them know 802 is about done with this work.
- Publish the standard as an 802 standard only.
- There probably would not be an ANSI standard
  - ANSI could still endorse but we would not seek the endorsement
- SC6 will publish a single Technical Report (TR) that contains previously publish joint 802/ISO standards and 802 standards SC6 has endorsed.

Discussion
- This gets any advantage 802 gains from ISO labeling without the current pain and overhead.
- The $100 per person fee is a side issue for now.
- The $100 fee may be used to subsided downloaded 802 standards for free. This debate will continue.
- SC6 won't want to see the early ballots (Task Group); they will only be interested in the mature stuff.
- We would like the SC6 folks that are interested in our work to show up at the 802 meetings.
- Does removing the ANSI label create legal problems? Probably not.

- There will be a motion at the executive committee meeting this evening to approve this procedure.

<u>Position to ISO – Bill Lidinsky</u>
SC6 TAG meeting next week.
11802-6 Standard Ethertypes ballot – Recommend that it be with drawn. The Ethertypes should be put on the IEEE web site.
15802-3 – 802.1D 1998 – This is completed.

<u>Overview and Architecture – Alan Chambers</u>
Resolution: Following the successful WG confirmation ballot of P802/D26, Overview and Architecture, P802.1 requests LMSC SEC to approve the submission of the revised draft, P802/D27, for sponsor ballot. P802/D27 is to be produced by the editor in accordance with the four editorial change items contained in the Disposition of Comments document.

P802.1 asks that LMSC SEC approve an electronic ballot, based on the procedures that have proved successful in P802.1 WG ballots, with any changes that may be agreed in discussion with the IEEE Standards Office.

Move: Alan Chambers
Second: Michael Wright

YES: 16   NO: 0   ABSTAIN: 1

<u>Bridge Task Group Reports – Mick Seaman</u>

<u>802.3ad Link Aggregation</u>
There will be another task group ballot within a couple of weeks of this meeting. A draft will be produced from the June interim that should go to WG ballot out of the July meeting.

<u>802.1w Rapid Reconfiguration</u>
The PAR should be forwarded to NESCOM; the form has to be updated to the 1999 revisions.

<u>802.1v Port and Protocol based VLAN classification</u>
No action, it comes up at the executive committee meeting this evening.
Andrew Smith will now be the editor.

<u>Port Based Network Access Control</u>
Need to get the 5 criteria together and create a straw man PAR to focus the discussion

<u>802.1r GPRP – Tony Jeffree</u>
Should we be doing this is the question.

A technical problem was identified during discussions this week. The technical problem is if there are two implementations on a given network where one protocol was poorly designed and the other well designed the poorly designed protocol could cause severe problems for the good design. If the poor design was sending many packets all other implementations of .1r would have to capture the packet and at least read the packet to the OUI to determine that the packet was not for this implementation. This is an unacceptable burden for the good implementation.

Should we stop this work?

Discussion
- Continue discussion on the exploder
- We need to consider the technical and philosophical issues that have been raised.

- There has been a lack of discussion about how 802.1r would be used.
- What protocols are folks going to implement with this?

802.5 Source Routing Enhancement PAR – Bill Lidinsky

We need some volunteers to review the 802.5 work on source routing.
The five are Rosemary Slager, Sharem Hakimi, Michael Wright, Tony Jeffree, and Hal Keen

Upper and Lower Case Designators – Bill Lidinsky

In the past and upper case designator on a standard indicated a base document and a lower case designator indicated a supplement. This method will be continued for convenience but not officially. .1 is the only group that has two base documents. There will not be any changes for .1.

Patent Policy – Mick Seaman

Call for patents have been informal in 802.1. 802.1 patent policy does not cover in progress patents whereas 802.3 policy does.

During this discussion Geoff Thompson, the chair of 802.3, presented the 802.3 patented policy. The .3 patent policy is on the .3 web site.

Situation:
- Patent Questions in standards bodies becoming more frequent and more important
- Patented Technology (Granted or in Process) may get included in a standard at any time.
- Patent issues may not be known at PAR time.
- Process of calling for patents somewhat informal in 802.1. It depends on participants paying attention to the PAR.
- Default is that 802.1 operates IEEE policy that does not cover "in progress" patents.

Proposal:
- Adopt the 802.3 patent policy
- Issue a regular "Calls for Patents" on approved and pending PARs, both at technical meetings and on the reflector.

Action Requested:
- All members to re-familiarize themselves with the IEEE and 802.3 patent policy.
- Put this request on the exploder
- Prepare for discussion and motion on adopting the 802.3 policy at the next meeting.
- Investigate where they stand on patent issues on existing work.

Discussion
- It is up to the WG chair to solicit letters from patent holders to allow use of patented technology; however, it is the WG responsibility to handle the patented material.
- Get a draft onto the 802.1 ftp site and have a discussion on the reflector.

RAC Report – Mick Seaman

MAC Address Use
- Issue arose with a vendor's OUI consumption – related to 'virtual addresses' used as bridge Ids in multiple spanning trees in VLANs.
- RAC reaffirmed principle that addresses are intended for 1 – 1 allocation to real physical instances of MACs – and organizations acquiring OUIs should engage in due diligence to consume the preponderance of addresses derivable from an OUI.
- Vendor representative has accepted principle, and proposed a plan to return to approved OUI consumption practice.
- Requested help with transitioning, anticipating changes previously discussed in 802.1 to extend bridge and port STP Ids into priority field.

- RAC request to 802.1 – Consider such technical changes, with support 1:1 principle as outcome
- 802.1 individual experts' opinion – use of 12 bits of system priority would assure support of 2^{12} VLANs (if required) in P802.1s.

Action Requested:
- 802.1 members to consider reservation of 12 bits for system ID extension (leaving 16 priority levels)
- Prepare for preliminary "vote in principle" on this issue at the next plenary.
- Ensure that their associated organizations are not similarly abusing OUI usage.

802.1s Multiple Spanning Trees – Alan Chambers

Resolution: 802.1 instructs the editor for P802.1s, Alan Chambers, to produce a revised version of P802.1s/D1 with any appropriate further enhancements and corrections to the present text. The text is to be made available for review by April 22, with a view to facilitating detailed technical work at the expected interim meeting of 802.1 in early June, and with a further view to developing the text so that a first WG ballot will take place following the July 1999 meeting in Montreal.

Move: Alan Chambers
Second: Hal Keen

YES: 16   NO: 0   ABSTAIN: 0

New Exec Mailer – Bill Lidinsky
The executive committee has a new mailer. It is stds-802-sec@ieee.org

Using Overhead Projectors in 802.1 – Bill Lidinsky
Should we be moving to using projectors? Consensus of the room – Yes.
We will still need documents in machine-readable form.
We will start getting projectors.

Face to Face Events – Bill Lidinsky
CCI has changed its name to Face to Face and will be based in the San Jose, CA. The email address, 802_cci@msn.com will not change.

802.1 Interim meeting – Bill Lidinsky
.3ad will have an interim June 3 and 4 in Boulder, Co.
We should have a daylong meeting on June 2, also in Boulder.
Main topic will be Multiple Spanning Trees based on April 22 draft. There will be some other things to deal with.

Resolution: 802.1 hold and interim meeting to be co-located and sequential with 802.3ad.
Currently, 802.3ad is scheduled to hold an interim meeting June 3 and 4 in Boulder, Co.

Move: Tony Jeffree
Second: Alan Chambers

YES: 12   NO: 0   ABSTAIN: 2

802.1 Pre-meeting at Montreal – Bill Lidinsky
Resolution: 802.1 will hold a pre-meeting at the Montreal 802 Plenary in July 1999.

Move: Michael Wright
Second: Rosemary Slager

YES: Unanimous   NO: 0   ABSTAIN: 0

<u>Motion to Adjourn – Bill Lidinsky</u>

Resolution: Move to adjourn the 802.1 closing plenary.

Move: Michael Wright
Second: Rosemary Slager

YES: Unanimous   NO: 0   ABSTAIN: 0