

P802.1Qav/D4.0 Forwarding and Queuing comments

Cl 00 SC 0 P L # 53  
Rouyer None entered

Comment Type TR Comment Status A

P802.1Qat seems to imply a flag is set by P802.1Qav to inform P802.1Qat that bandwidth is or isn't available for a particular stream when P802.1Qat uses P802.1Qav to perform a "trial reservation". It isn't clear which flag allows the two draft specifications to exchange such information. Same comment made on P802.1Qat/D2.1 ballot.

SuggestedRemedy

Please clarify.

Response Response Status C

ACCEPT IN PRINCIPLE. The way it is described in Qav is correct; the Qat document is the one that needs to be brought in line.

Cl 00 SC 0 P L # 1  
Michelle Turner None entered

Comment Type ER Comment Status A

See text of the coordination comments included in the comment disposition PDF

SuggestedRemedy

Response Response Status C

ACCEPT. The requirements stated in the coordination comments will be implemented in the next draft.

Cl 03 SC 3 P 4 L # 55  
Seaman None entered

Comment Type ER Comment Status A

The format of the definitions does not follow that of 802.1Q.

SuggestedRemedy

Change the format of the definitions to match existing practice. Longer definition, e.g. 3.4 should be done in the main clause text and only referenced from clause 3. If clause 3 were to come to comprise an alphabetical list of half page clauses on all the topics in 802.1Q it would entirely lose its utility.

Response Response Status C

ACCEPT.

Cl 06 SC 6.6.4 P 9 L 16 # 67  
Jeffrey None entered

Comment Type TR Comment Status A

Strictly speaking the parameter is FALSE either if the port is a core port or if it is in a different (or no) SRP domain.

SuggestedRemedy

Change "otherwise, the Port is an SRP domain core port (3.6) for that SR class," to "otherwise, the Port is either an SRP domain core port (3.6) for that SR class, or is not part of the SRP domain,"

Response Response Status C

ACCEPT.

Cl 08 SC 8.6.8.2 P 13 L 52 # 65  
Goetz None entered

Comment Type TR Comment Status R

There are applications where talkers are synchronized to each other. Being able to send Streams simultaneously can cause bursts. As the credit-based shaper is defined, bursts cannot be transferred with short latencies because at any time there are no frames in the queue the credit is set to zero.

SuggestedRemedy

Accumulate credit also over time and not set credit to zero if there is no frame in the queue.

Response Response Status C

REJECT. The right way to deal with this would be to define an additional de-queuing algorithm to meet the needs of other (non-AV) applications.

Cl 08 SC 8.8 P 14 L # 54  
Seaman None entered

Comment Type TR Comment Status A

The base text shown ignores the changes made by the 802.1Qay amendment. These must not be lost. They affect a number of changes in 8.8, in 8.8.8, and 8.8.9. There may also be additional changes in 802.1aq that are not directly concerned with SPB, but are needed from the point of view of establishing a satisfactory base text, and I suggest 802.1aq D1.5 be looked at to see if any of those should be made in Qav (which could save some later risk of conflict).

SuggestedRemedy

Rework the changes to clause 8 to include all other amendments in (or just about to go to) Sponsor ballot, particularly 802.1Qay

Response Response Status C

ACCEPT.

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Cl 08 SC 8.8.9 P 18 L # 73  
Parsons None entered

Comment Type **TR** Comment Status **A**  
This amendment ignores the significant changes to 8.8.9 (and likely elsewhere in .1Qav) in 802.1Qay!!!

SuggestedRemedy  
All of the clause 8 chagnes (and possibly the entire document) must be reworked to align with amendments in front of it. Like .1ah, .1Qay, .1Qaw, ...

Response Response Status **C**  
ACCEPT.

Cl 12 SC 12 P L # 2  
Jeffree None entered

Comment Type **ER** Comment Status **A**  
The Clause 12 material is getting harder to read and less useful, especially now that we have MIBs.

SuggestedRemedy  
Remove the changes to Clause 12 and move any relevant description of management functionality to the places where the parameters that are managed are described.

Response Response Status **C**  
ACCEPT IN PRINCIPLE. Use the diagrammatic representation used by Mick Seaman in X-Rev.

Cl 12 SC 12 P 21 L 1 # 79  
Parsons None entered

Comment Type **TR** Comment Status **A**  
More work is needed here. Given the rewrite/amendment in clause 8, I would expect changes in 12.6, 12.7 & 12.8

SuggestedRemedy  
Modify clasue 12 as required.

Response Response Status **C**  
ACCEPT.

Cl 12 SC 12.21.1.1 P 21 L 34 # 59  
Elie-dit Cosaque None entered

Comment Type **ER** Comment Status **A**  
Outputs describes a table. To clarify, move all the parameters used to uniquely identify an entry in the input section.

SuggestedRemedy  
Break the "Read Bandwidth Availability parameters" into two objects (one per port, and one per port and per traffic class)  
For the per port and per traffic class object:  
"12.21.1.1.2 Inputs  
a) Port Number—The number of the Bridge Port.  
b) Traffic Class—The number of the traffic class, in the range 0 through 7(supports the credit-based shaper algorithm).

12.21.1.1.3 Outputs  
a) Delta bandwidth—The value of the deltaBandwidth parameter (34.3) for the traffic class, represented as a percentage in the range 0-75%.  
b) Reserved Bandwidth—The value of the reservedBandwidth parameter (34.3) for the traffic class, in bits per second."

For the per port object (could be part of an existing per port object):  
"Inputs:  
a) Port Number—The number of the Bridge Port.

Outputs:  
a) Port Transmit Rate—The value of the portTransmitRate parameter (34.3) for the Port."

Response Response Status **C**  
ACCEPT IN PRINCIPLE. Accept, subject to outcome of comment#2.

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Cl 12 SC 12.21.2.1 P 23 L 11 # 60  
 Elie-dit Cosaque None entered

Comment Type ER Comment Status A

Outputs describes a table. To clarify, move all the parameters used to uniquely identify an entry in the input section.

SuggestedRemedy

Change inputs/outputs as follow:

"12.21.2.1.2 Inputs

- a) Port Number—The number of the Bridge Port.
- b) Priority—The priority value in the range 0-7.

12.21.2.1.3 Outputs

- a) Priority Group—The priority group (34.5) to which the priority is currently assigned, in the range 0-7."

Response Response Status C

ACCEPT IN PRINCIPLE. Accept, subject to outcome of comment#2.

Cl 12 SC 12.21.2.1.1 P 23 L 19 # 58  
 Elie-dit Cosaque None entered

Comment Type ER Comment Status A

Outputs describes a table. To clarify, move all the parameters used to uniquely identify an entry in the input section.

SuggestedRemedy

Modify as follow:

- "a) Port Number—The number of the Bridge
- b) Priority—The priority value in the range 0-7."

And

"12.21.2.1.3 Outputs

- a) Priority Group—The priority group (34.5) to which the priority is currently assigned, in the range 0-7."

Response Response Status C

ACCEPT IN PRINCIPLE. Accept, subject to outcome of comment#2.

Cl 12 SC 12.21.3.1.2 P 24 L 7 # 61  
 Elie-dit Cosaque None entered

Comment Type ER Comment Status A

Outputs describes a table. To clarify, move all the parameters used to uniquely identify an entry in the input section.

SuggestedRemedy

Change Inputs/Ouputs as follows:

"12.21.3.1.2 Inputs

- a) Port Number—the number of the Bridge Port.
- b) Priority Group—The priority group value (34.5) in the range 0-7.

12.21.3.1.3 Outputs

- a) Transmission Type—The transmission type (34.5) to which the priority group is currently assigned. This can take the following enumerated values:  
 0: Unused—This priority group is unused.  
 1: Strict priority algorithm (8.6.8.1).  
 2: Credit-based shaper algorithm (8.6.8.2).  
 3) Traffic class—The traffic class to which the priority group is currently assigned, in the range 0-7."

Response Response Status C

ACCEPT IN PRINCIPLE. Accept, subject to outcome of comment#2.

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Cl 12 SC 12.21.4.1.2 P 25 L 20 # 62  
 Elie-dit Cosaque None entered

Comment Type ER Comment Status A

Outputs describes a table. To clarify, move all the parameters used to uniquely identify an entry in the input section.

SuggestedRemedy

Change Input/Output to :  
 "12.21.4.1.2 Inputs

- a) Port Number—the number of the Bridge Port.
- b) SR class—The SR class value, in the range A through G(For each supported SR class (3.3)).

12.21.4.1.3 Outputs

- a) SR class—The SR class value, in the range A through G.
- b) Received Priority—The priority value, in the range 0-7, that the Bridge associates with the SR class.
- c) Regenerated Priority—The priority value, in the range 0-7, that is used to override the value in the Priority Regeneration Table for the Received Priority.
- d) Boundary Port—A Boolean value reflecting the value of the SRPdomainBoundaryPort parameter for the SR class (6.6.4)."

Response Response Status C

ACCEPT IN PRINCIPLE. Accept, subject to outcome of comment#2.

Cl 17 SC 17 P L # 3  
 Jeffree None entered

Comment Type TR Comment Status A

MIB section still needs work.

SuggestedRemedy

Fix it.

Response Response Status C

ACCEPT. Editor to fix it somehow.

Cl 17 SC 17.2 to 17.4 P 27 L 41 # 45  
 Romascanu None entered

Comment Type TR Comment Status A

The sub-clauses and clauses that define the structure of the MIB module, the relationship of the MIB module to other MIB modules and the security considerations have no content

SuggestedRemedy

add adequate content

Response Response Status C

ACCEPT.

Cl 17 SC 17.2.13 P 27 L # 70  
 Parsons None entered

Comment Type TR Comment Status A

Empty clause

SuggestedRemedy

complete

Response Response Status C

ACCEPT.

Cl 17 SC 17.3.13 P 27 L # 71  
 Parsons None entered

Comment Type TR Comment Status A

Empty clause

SuggestedRemedy

complete

Response Response Status C

ACCEPT.

Cl 17 SC 17.4.13 P 28 L # 72  
 Parsons None entered

Comment Type TR Comment Status A

Empty clause

SuggestedRemedy

complete

Response Response Status C

ACCEPT.

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Cl 17 SC 17.7.13 P 28 L 16 # 80  
Parsons None entered

Comment Type TR Comment Status A

Given the changes in clause 8 I would agree that some modification to the existing BRIDGE MIBs would be in order. However, while the proposal is feasible, I'd like to see a proposed change in clause 12 before discussing the best MIB approach.

SuggestedRemedy

Update clause 12, then contemplate modifications to base BRIDGE MIB.

Response Response Status C

ACCEPT.

Cl 17 SC 17.7.13 P 30 L 49 # 46  
Romascanu None entered

Comment Type ER Comment Status A

Reference clauses must indicate the full document name, and not only the clause number

SuggestedRemedy

include document name in all MIB Reference clauses

Response Response Status C

ACCEPT IN PRINCIPLE. In line with precedent set in 802.1ap, amend the penultimate para in the DESCRIPTION clause of the module identity as follows:

"Unless otherwise indicated, the references in this MIB module are to IEEE Std 802.1Q-2005 as amended by IEEE Std 802.1ad, IEEE Std 802.1ak, IEEE Std 802.1ag, IEEE Std 802.1ah, IEEE Std 802.1ap, and IEEE Std 802.1Qav."

Cl 17 SC 17.7.13 P 31 L 38 # 47  
Romascanu None entered

Comment Type ER Comment Status A

The DESCRIPTION clauses are insufficient. For example this specific one just repeats the name of the function without detailing what each enumerated value represents and when it is set

SuggestedRemedy

add adequate content

Response Response Status C

ACCEPT.

Cl 17 SC 17.7.13 P 35 L 25 # 48  
Romascanu None entered

Comment Type TR Comment Status A

Should not read-write objects like ieee8021FqtssDeltaBandwidth have a DEFVAL defined, so that the agents initializes a value at row creation before the first management operation is performed by the manager?

SuggestedRemedy

add DEFVAL clause if determined as necessary

Response Response Status C

ACCEPT. Default for delta bandwidth should be 75% for A, 0% for B. This means B can use anything not used by A.

Cl 34 SC 34.5 P 49 L 35 # 63  
Elie-dit Cosaque None entered

Comment Type ER Comment Status A

Typo.

SuggestedRemedy

"on" -> "one"

Response Response Status C

ACCEPT.

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Cl 34 SC 34.5 P 51 L 42 # 36  
 Garner None entered

Comment Type TR Comment Status A

The text starting on page 50, line 39 explains how priority groups are mapped to traffic classes. However, it is not clear in either the general description of the mapping or the two examples how priority to priority group mapping in the Priority Group Table is decided on. In the 2nd example, how was it determined which priorities should be mapped to each priority group? More generally, the description is not fully clear on what items are given and what items are determined, in applying the algorithm.

SuggestedRemedy

Clarify what the algorithm starts with, what is determined, and in what order. It appears that the number of priority groups, the group numbers, and whether each group uses C-S or S-P is a starting point (which either is taken to be the default values or is configured) but, if this is not correct, it needs to be clarified. It also appears that the number of traffic classes is taken as given. With that, it is clear from the text how to map priority groups to traffic classes. It is not clear whether the mappings of priorities to priority groups is taken as a given input or is determined by the algorithm. Note: this comment is being made from the standpoint that the commenter has no previous familiarity with this procedure. If this or a similar procedure appears in other 802.1 documents and is explained there, it is sufficient to reference that material.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment #69 that proposes getting rid of priority groups.

Cl 34 SC 34.6.2 P 53 L 41 # 64  
 Elie-dit Cosaque None entered

Comment Type ER Comment Status A

Typo.

SuggestedRemedy

remove stray "and"

Response Response Status C

ACCEPT.

Cl A SC A.14 P 57 L # 77  
 Parsons None entered

Comment Type TR Comment Status A

A.14Bridge management is missing

SuggestedRemedy

Add

Response Response Status C

ACCEPT.

Cl A SC A.24 P 57 L # 78  
 Parsons None entered

Comment Type TR Comment Status A

A.24 MIB is missing

SuggestedRemedy

Add

Response Response Status C

ACCEPT.

Cl L SC L.1 P 61 L 34 # 37  
 Garner None entered

Comment Type TR Comment Status A

On first reading, the note is somewhat unclear; the statement "For example, a traffic class that has a defined maximum bandwidth allocation, such as one that uses the credit-based shaper algorithm, would be unable to use any bandwidth allocation not used by a higher priority traffic class; however, a traffic class that uses the strict priority algorithm would be able to use bandwidth allocation not used by a higher priority traffic class" seems to be inconsistent with the fact that a traffic class can reserve deltaBandwidth for that class plus any unused bandwidth associated with higher priority classes. The statement becomes clear when it is realized that the note is referring to the bandwidth that has already been reserved, i.e., if for a class that uses the credit-based shaper algorithm streams have reserved the full X% that is deltaBandwidth for this class, then X% is what will be used; however, it is possible for additional streams to reserve more if there is unused bandwidth of higher priority classes.

SuggestedRemedy

Indicate in the note that the reference to "bandwidth allocation" is referring to bandwidth that is currently reserved, and not maximum bandwidth that could be reserved by streams of the class.

Response Response Status C

ACCEPT.

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CI L SC L.2 P 64 L 51 # 40  
Garner None entered

Comment Type TR Comment Status A

Item d) states that the minimum interval over which the 75% utilization can be measured is 73376 bit times, or 734 ms. During this interval, SR class A transmits 57376 bits, and there is a best-effort frame of 16000 bits. However, the computed utilization is 57376/73376, or 78.2%, and the reader is left wondering why this exceeds 75%. Item c) states that the 57376 bits is slightly more than 6 frames; if one considers that the fractional frame would not be transmitted because the credits would be negative at that point, one would find that  $6(9375) = 56250$  bits of SR class A would be transmitted after the 16000 best effort bits. However, now the utilization becomes  $56250/(56250+16000) = 77.85\%$ , which is still larger than 75%. In fact, the computed utilization is higher here because this is a period of a maximum burst. The 75% utilization is obtained during steady-state transmission of SR class A traffic at its maximum rate, i.e., class A transmits a maximum size frame of size 9375 bits starting from 0 credits, then waits for credits to build back up to zero at the rate idleSlope, then transmits another 9375-bit frame, etc. In this case, SR class A transmits for  $9375 \text{ bits}/(1e8 \text{ bits/s}) = 93.75 \text{ ms}$ , during which time the credits decrease to -2343.75. It then does not transmit for  $2343.75/[(0.75)(1e8)] = 31.25 \text{ ms}$ . The total interval is  $93.75 \text{ ms} + 31.25 \text{ ms} = 125 \text{ ms}$ , and SR class A has transmitted for  $93.75/125 = 0.75$  of the time. the longer measurement interval, i.e., 734 ms is obtained in the example because the example covers a maximum burst situation; however, the 75% utilization is slightly exceeded. It would be helpful to the reader to add some explanation clarifying these points.

SuggestedRemedy

Clarify the points.

Response Response Status C  
ACCEPT.

CI L SC L.3 P 70 L 17 # 42  
Garner None entered

Comment Type ER Comment Status A

Eq. (30) actually is the justification for Eq. (29), i.e., Eq. (29) follows from Eq. (30). To make this clear, the following rewording of the text just before Eq. (30) is suggested: Eq. (29) follows from the fact that the increase in credits of class P during the transmission....." Note also that the 'P' in 'class P' has been made upper case, consistent with the other occurrences of class P here.

SuggestedRemedy

Make the changes to the text.

Response Response Status C  
ACCEPT.

CI L SC L.3 P 70 L 20 # 41  
Garner None entered

Comment Type TR Comment Status A

The right hand side of Eq. (30) should have a division by R0, i.e., the equation should read:  $(Mq/R0)*Rp > (R0 - Rp)*Mp/R0$ . (Note: There was a typo in the 5th line of comment 55, made by this commentator, of the D3.1 ballot; the division by R0 was missing there (the 2nd line of comment 55 does not have the division by R0; that line is correct).

SuggestedRemedy

Fix the equation.

Response Response Status C  
ACCEPT.

CI L SC L.3 P 71 L 31 # 44  
Garner None entered

Comment Type TR Comment Status A

In the first term of Eq. (44), the quantity  $W < X * WX$  is in the denominator. To make this clear, it would be useful to put parentheses around this product, i.e.,  $(W < X * WX)$ . Note that if the expression is read using the normal rules of precedence for algebraic expressions, i.e., grouping from left to right if there are no symbols of inclusion, then  $WX$  would be interpreted as being in the numerator, which is not correct.

SuggestedRemedy

Add parentheses around the product

Response Response Status C  
ACCEPT.

CI L3 SC L3.1.1 P 61 L 1 # 76  
Parsons None entered

Comment Type TR Comment Status R

Why is Annex L informative? Is it because it is a proof? Then should not the concluding equations be part of the normative text?

SuggestedRemedy

Move some of the defining equations and text on the credit-based shaper to normative text

Response Response Status C

REJECT. The specification of the credit-based shaper in Clause 8 is complete of itself, and contains all of the material for which we believe that conformance requirements should exist. The Clause L material provides further illustration of the way the algorithm operates, and some of the queuing issues; however, this isn't material that we plan to write conformance requirements for in Qav. It may be necessary to make normative statements in Qat, but not here.

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CI L3 SC L3.1.1 P 66 L 51 # 75  
Parsons None entered

Comment Type TR Comment Status R

The delay experienced by class A frames is actually the delay experienced by the class A frame at the head of the queue. Subsequent class A frames are going to be delayed by the amount needed to transmit frames ahead of them in the queue

*SuggestedRemedy*

More precision is needed in order not to confuse the reader

Response Response Status C

REJECT. The intent of the Annex L material is to describe the components of delay that apply to any frame.