

Comment Report

Std. 802.2, 1998 Edition and Amendments Reaffirmation

Ballot closed: 2003-03-11

First recirculation closed: 2003-08-18

Second and final recirculation closed: 2003-10-31

Purpose of This Comment Report

Working Group 802.2 has been inactive for some time, and resources needed to revise the Standard, especially the commitment of time from those sufficiently acquainted with both the text and its implementation, are not available. No project for revision of Standard 802.2 has been authorized, and none is anticipated.

However, the committee felt that the comments offered on a reaffirmation ballot deserved the full benefit of the members' expertise, and therefore deserved consideration in the same fashion as comments offered against a standard which is under development or revision. For each ballot comment, therefore, the committee offers its own comment on its merits, just as though a revision were under consideration.

The committee comments do not revise or even interpret the Standard; those require separate procedures. Nor do they constitute final closure on the questions raised; both the full set of ballot comments and the committee rejoinders are preserved in this report for publication on the Working Group's web page. As it is unfair to expect any participant to be responsible in perpetuity for an opinion offered during a ballot cycle, the identities of those submitting the comments are omitted.

In the absence of any revision project, the report will play a tutorial and explanatory role, clarifying where issues have arisen from misunderstandings and where editorial changes might, without technical effect, make it easier for readers to comprehend the Standard. The detailed committee comments serve this tutorial function.

Should a revision project be undertaken in the future, the ballot and committee comments will all be available, in the published report on the Working Group web page, for use by the revision committee. In that (unlikely) case, the full ballot comments should be considered; the committee rejoinders may themselves become outdated before then, and should be treated as advisory notes from an earlier team of experts.

For the reaffirmation ballot, the committee's conclusion is prescribed by rule and stated below.

Committee Conclusion on the Ballot

The committee has reviewed all comments, determining in each case whether the comment does indicate a problem with the standard, and whether the problem (if any) could best be corrected by the voter's suggested remedy or a different one.

The committee did agree with some proposed changes, but all changes which received committee agreement were editorial in nature. Therefore, the committee concludes that the information in Standard 802.2 is not obsolete, and its reaffirmation, without revision, is appropriate.

Response and Comment Statistics

	Number	Out of	Percentage
Total eligible to vote	76		
Total responses (affirmative, negative, and abstentions)	63	76	82.9
Abstentions returned	3	63	4.8
Votes returned	60	63	95.2
Affirmative votes (after final recirculation)	58	60	96.6
Negative votes (after final recirculation)	2	60	3.3
Comments	39		
“Committee Comments,” below, explains the recommendation categories. The numbers listed with each category identify individual comments.			
Comments accompanying affirmative votes	15	39	
Accepted (<u>3</u> , <u>7</u> , <u>12</u> , <u>20-22</u> , <u>26</u>)	7		
Accepted in principle (<u>8</u> , <u>14</u> , <u>25</u>)	3		
Agreed (<u>2</u>)	1		
Acknowledged (<u>11</u>)	1		
Rejected (<u>13</u> , <u>19</u> , <u>24</u>)	3		
Comments accompanying negative votes	24	39	
Accepted (<u>1</u> , <u>4</u> , <u>6</u> , <u>10</u> , <u>23</u> , <u>27-28</u> , <u>30</u> , <u>32-33</u> , <u>39</u>)	10		
Accepted in principle (<u>31</u>)	1		
Partly accepted (<u>29</u>)	1		
Not accepted (<u>34-35</u> , <u>37-38</u>)	4		
Rejected (<u>5</u> , <u>9</u> , <u>15-18</u> , <u>36</u>)	7		

Notes on Transcription and Presentation of Ballot Comments

The ballot comments have been transcribed exactly, except for

- correcting obvious spelling or typographical errors;
- as appropriate, altering “comment” and “suggested remedy” labels to “suggested change”;
- adding location references (subclause, annex, or subannex) where applicable; and
- replacing a non-portable symbol with an equivalent (→).

Comment headings assign each comment a number and describe the document section or other topic addressed. Voters’ names are not included, but the voter’s position *at the time the comment was submitted* is represented by an A (approve) or D (disapprove) suffix on the heading.

Unused comment fields have been dropped; except where specified in a comment and easily understood, this includes the “line” field, which is not much use because the document does not have line numbers.

Where a comment heading describes the comment as Editorial or Technical, that represents the comment type selected by the voter. Note that remedies for issues raised as Technical may turn out to be editorial in nature. The committee comment indicates when this is so.

Where additional information might be useful in assessing a comment, the editor of this report has attempted to supply it. Such notes are identified by enclosure in brackets and by attribution to the editor. [An editor’s note, added to a comment, looks like this example. – *ed.*]

Committee Comments

The committee has discussed each ballot comment, and stated its recommendation as a Committee Comment. Possible recommendations include:

- **Accepted.** The comment and suggested remedy should be accepted as offered.
- **Accepted in principle.** The comment should be accepted, with a modified remedy.
- **Agreed.** The comment is correct, but beyond a Working Group’s scope of action.
- **Acknowledged.** The committee acknowledges that the comment reveals a problem, but disagrees with details of the comment and suggested remedy and recommends alternatives.
- **Rejected.** The committee disagrees with the comment.
- **Not accepted** (usually coupled with “pending further study”). The committee does not see sufficient grounds for the proposed action, but regards the matter as unsuitable for a final determination because insufficient detail has been presented.

In addition, one comment is “partly accepted”; the comment raised multiple issues on which the committee reached different recommendations.

A supporting explanation is provided for any recommendation other than “accepted.”

Comments by Topical Category

Document Section or Topic	Number	Comments
Cover page and Introduction	2	<u>1-2</u>
1.1 Scope and purpose	1	<u>3</u>
1.4.1 Abbreviations and acronyms	7	<u>4-10</u>
1.4.2 Definitions	3	<u>11-13</u>
2 LLC sublayer service specifications	8	<u>14-21</u>
3 LLC PDU structure	1	<u>22</u>
4 LLC types and classes of procedures	1	<u>23</u>
5 LLC elements of procedure	1	<u>24</u>
7 LLC description of the Type 2 procedures	2	<u>25-26</u>
Annex A Protocol implementation conformance statement (PICS) proforma	6	<u>27-32</u>
Annex D Subnetwork access protocol support [by RDE]	1	<u>33</u>
Revision proposals	5	<u>34-35</u>
Ballot procedure	1	<u>39</u>

Comment #1 - Cover, D

Page: i (cover page)

Suggested change: Capitalize only proper nouns and 1st word of heading:
Logical Link Control → Logical link control

Committee Comment: Accepted. Editorial. Consistent with current IEEE Guidelines.

Comment #2, Editorial - Introduction, A

Page: v-vi (Introduction to ANSI/IEEE Std 802.2, 1998 Edition)

Comment: IEEE 802 now has several more MAC/PHY such as 802.16, 802.19, etc This comment does not need to be resolved before publication.

Suggested remedy: Add a complete list of all 802 MAC/PHY

Committee Comment: Agreed. This material is not part of the Standard, and is normally brought up to date in each edition.

Comment #3, Editorial - Scope and Purpose, A

Page: 1

Subclause: 1.1

Suggested change: This International Standard is one of a set of international standards produced to facilitate the interconnection of computers, terminals and other devices on a Local Area Network (LAN)

[replacing “computers and terminals” with “computers, terminals and other devices” – *ed.*]

Committee Comment: Accepted.

Comment #4 - Acronyms and abbreviations, D

Page: 5

Subclause: 1.4.1

Comment: Two distinct uses for the same acronym is ambiguous:

Suggested remedy: SA Source Address → SA source address
(etc. for all non-proper nouns)

[The comment description appears to have been overwritten during editing by the voter—see comment #5. It probably should read something like “improper capitalization” instead. – *ed.*]

Committee Comment: Accepted as interpreted by the editor—see the note, above. Editorial.

Comment #5 -Acronyms and abbreviations, D

Pages: 5 and 6

Subclause: 1.4.1

Comment: Two distinct uses for the same acronym is ambiguous:

Suggested remedy: Don't use one of the I acronyms. Don't use one of the S acronyms.

Committee Comment: Rejected. In each case, two different uses of the abbreviation—not an acronym—do occur in the text of the standard. The committee believes that these different uses, in context, are readily distinguished by the reader. The comment does not mention any instance of their use as evidence to the contrary.

Comment #6 - Acronyms and abbreviations, D

Page: 5

Subclause: 1.4.1

Comment: Acronym definitions do not (I believe) capitalize key words in style guideline:

Suggested remedy:

ABM Asynchronous Balanced Mode → ABM asynchronous balanced mode

...

RDE Route Determination Entity → RDE route determination entity

...

UI Unnumbered Information → UI unnumbered information

(etc.)

Committee Comment: Accepted. Editorial. Consistent with current IEEE Guidelines.

Comment #7, Editorial - Acronyms and abbreviations, A

Page: 5

Subclause: 1.4.1

Comment: Additional acronyms

Suggested remedy:

AC0 Acknowledged connectionless information, Seq. 0

AC1 Acknowledged connectionless information, Seq. 1

Committee Comment: Accepted. Another appropriate addition would be the following:

ACn Acknowledged connectionless information, sequence number unspecified
as either 0 or 1

Comment #8, Editorial - Acronyms and abbreviations, A

Page: 5

Subclause: 1.4.1

Comment: Add I/G to acronym list

Suggested remedy:

I/G Individual/Group address

Committee Comment: Accepted in principle, with the word “address” omitted.

Comment #9 - Acronyms and abbreviations, D

Page: 6

Subclause: 1.4.1

Comment: Abbreviations do not correspond to actual names:

Suggested remedy: N(R) Receive sequence Number → sequence number, receive

N(S) Send sequence Number → sequence number, send

Committee Comment: Rejected. The notation is a convention widely understood by users of similar protocols, and the descriptions are more readily understood as they stand. These considerations are more significant than the requested correspondence.

Comment #10 - Acronyms and abbreviations, D

Page: 6

Subclause: 1.4.1

Comment: Acronym definitions do include GDMO:

Suggested remedy: a) Include this definition in acronyms
b) Spell out GDMO when first used.

[The first use of GDMO is at the bottom of page 6. – *ed.*]

Committee Comment: Accepted. Editorial. Specifically:

a) To the long list of abbreviations and acronyms, add the item:
GDMO Guidelines for the definition of managed objects

b) In the paragraph following that list, change “GDMO templates” to “Guidelines for the definition of managed objects (GDMO) templates.”

Comment #11, Editorial - Definitions, A

Page: 7

Subclause: 1.4.2.7

Comment: Changes

Suggested change: control/response field (C/R)
[instead of “control field (C)” – *ed.*]

Committee Comment: Acknowledged. “Control field” is correct; the comment confuses it with the command/response bit. The confusion may be caused by the presence of the “(C)” abbreviation in this definition of Control field, contrary to the documented use of “C” for “command” in 1.4.1. The “(C)” in 1.4.2.7 should be removed.

A search of the standard revealed one use of “C” in this sense, in 2.3.2.1.2. In that subclause, “DSAP, SSAP, C, and information” should be changed to “DSAP, SSAP, control, and information”; with the removal of the “(C)” abbreviation in 1.4.2.7, that should eliminate the confusion.

Comment #12, Editorial - Definitions, A

Page: 7

Subclause: 1.4.2.9

Comment: Addition to last sentence

Suggested remedy: These functions include address/control field interpretation, channel access and command PDU/response PDU generation, sending, receiving, and interpretation.
[adding “receiving” to the list of functions – *ed.*]

Committee Comment: Accepted.

Comment #13, Editorial - Definitions, A

Page: 9

Line: 1

Subclause: 1.4.2.30

Comment: Addition to first sentence

Suggested remedy: In data communications, a reply represented by 1 in the control/response (C/R) field of a response PDU.

Committee Comment: Rejected. The evident intent is to incorporate material from the definition of “response PDU” (1.4.2.31). The two definitions are intentionally distinct. See the definitions of “command” and “command PDU” (1.4.2.5, 1.4.2.6) for a parallel example.

Comment #14, Editorial - Sublayer service, general, A

Page: 13

Subclause: 2.1

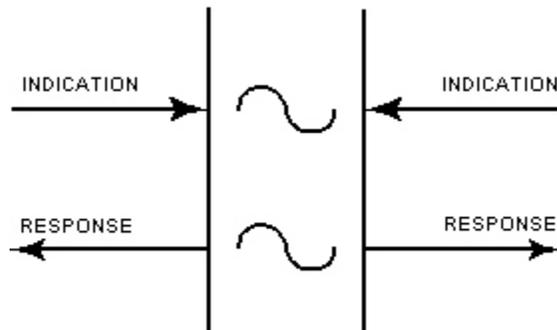
Comment: In Figure 3, the tilde "~" symbol is not explained in the paragraph above the figure.

This comment does not need to be resolved before publication.

Suggested remedy: Define the use of the tilde "~" symbol in the paragraph preceding Figure 3.

Committee Comment: Accepted in principle. These markings in Figure 3, parts (d), (e), and (g), are not intended to represent the tilde character. They were originally conventional markings for time sequence diagrams, representing an indeterminate time relationship.

The confusion could best be resolved by reverting to the more conventional depictions in the first (1989) edition of ISO 8802-2, which looked like the following figure.



Comment #15, Technical - Network layer/LLC overview of interactions, D

Page: 15

Subclause: 2.2.1.2.1

Comment: DL-CONNECT gives no return identifier (e.g. ConnectionId)

Suggested remedy: I suggest revising 802.2 DL-CONNECT to provide a return identifier (e.g. ConnectionId)

Committee Comment: Rejected. The proposal is semantically equivalent to parameters described; see `source_address` and `destination_address` in 2.2.2.5.2. The syntax of an internal interface is outside the scope of the standard; implementers are free to use a `ConnectionId` or not.

Comment #16, Technical - Network layer/LLC overview of interactions, D

Page: 15

Subclause: 2.2.1.2.2

Comment: DL-DATA takes no ConnectionId parameter. How do you know on which connection to send?

Suggested remedy: I suggest revising 802.2 DL-DATA.

Committee Comment: Rejected. See the committee comment on Comment #15.

Comment #17, Technical - Network layer/LLC overview of interactions, D

Page: 15

Subclause: 2.2.1.2.3

Comment: DL-DISCONNECT takes no ConnectionId parameter. How do you know on which connection to terminate or terminate what?

Suggested remedy: I suggest revising 802.2 DL-DISCONNECT.

Committee Comment: Rejected. See the committee comment on Comment #15.

Comment #18, Technical - Network layer/LLC overview of interactions, D

Page: 16

Subclause: 2.2.1.3.1

Comment: Why DL-DATA and DL-DATA-ACK?

Suggested remedy: Just pass an Ack-Policy! Actually, revise all the primitives

Committee Comment: Rejected. DL-DATA (2.2.1.2.2) and DL-DATA-ACK are given distinct names because they are associated with separate services (respectively, connection-mode and acknowledged connectionless-mode), as is plainly stated. The suggestion that “an Ack-Policy” has any bearing on that distinction reveals that the comment arises from confusion.

The committee recommends attention to the descriptions of the services in 2.2, and to the clear statements in such subclauses as 2.2.1.2.2 and 2.2.1.3.1 regarding the services with which specific primitives are associated.

Comment #19, Editorial - Network layer/LLC detailed service, A

Page: 26

Subclause: 2.2.2.14.4

Suggested change: The network layer entity may not use this connection for data unit transfer [adding the word “not” to the sentence – *ed.*]

Committee Comment: Rejected. Adding “not” would make the statement incorrect.

Connection reset is not the same as disconnection. Note the instances of the RESET_CONFIRM action in clause 7, Table 4 (pages 93 and 95); all three are associated with transitions to the NORMAL connection state.

Comment #20, Editorial - LLC/MAC interface, A

Page: 35

Subclause: 2.3

Comment: Is the Note still valid in this edition? This comment does not need to be resolved before publication.

Suggested remedy: Indicate the year and group that is doing this work

Committee Comment: Accepted. The status of the MAC service definition, whether or not a reference should replace the description in this standard, and the rewriting or elimination of the Note should all be considered if the standard is revised.

At this writing, the MAC service definition is undergoing revision in Working Group 802.1.

Comment #21, Editorial - LLC management function interface, A

Page: 38

Subclause: 2.4

Comment: Is the Note and sub-clause still valid in this edition? This comment does not need to be resolved before publication.

Suggested remedy: Probably should just delete section 2.4

Committee Comment: Accepted.

Comment #22, Editorial - LLC PDU structure, A

Page: 40

Subclause: 3.3.1.1

Comment: Mistype in Figure 5

XODDDDDD DSAP address

XOSSSSSS SSAP address

Suggested remedy:

X0DDDDDD DSAP address

X0SSSSSS SSAP address

[replacing capital letter “O” with 0 (zero) on each line – *ed.*]

Committee Comment: Accepted.

Comment #23 - LLC types and classes of procedures, D

Page: 45

Subclause: 4.2.4

Comment: Sentence ends prematurely.

Suggested remedy: shall be → shall be as listed in the table below.

(etc. for similar text)

[Similar text is found in 4.2.1, 4.2.2, and 4.2.3 as well. – *ed.*]

Committee Comment: Accepted. Editorial.

Comment #24, Editorial - 5 LLC elements of procedure, A

Page: 51

Subclause: 5.4.1.1.2

Comment: Changes (addition) to first sentence

Suggested remedy: For Class II LLCs in ABM the XID command PDU shall be used to convey the types of LLC services supported (for all LLC services) and the receive window size on a per data link connection basis ...

[adding “For Class II LLCs in ABM” at the beginning of the sentence – *ed.*]

Committee Comment: Rejected. The applicability to implementations which support LLC Type 2 (of which “Class II” is only a subset) is made clear by the reference to connections.

Adding a state restriction (with the words “in ABM”) would be a technical change. The committee is aware that at least one implementation imposes this state restriction, but does not believe that others should be restricted by the standard to the same limits on functionality.

Comment #25, Editorial - Type 2 procedures, A

Page: 81

Subclause: 7.6

Comment: The phrase in the 11th paragraph, second sentence, "timer runs out before" would read better as "timer expires before"

Suggested remedy: Revise text

Committee Comment: Accepted in principle. The language describing the completion of a timed interval varies throughout the standard; repeated instances of both “runs out” and “expires” can be found. The next revision project should determine the most appropriate phrasing and apply it consistently throughout.

Comment #26, Technical - Type 2 procedures, A

Page: 93

Line: second event, second line

Subclause: 7.9 (Table 4)

Comment: In Table 4, the second event describes the handling in the ADM state of the event RECEIVE_SABME_CMD(P=X). The second action, given as P_FLAG:=P, is incorrect. The flag which should be set in this case is the F_FLAG rather than the P_FLAG.

This was originally reported against ISO 8802-2:1989, as the third item in Defect Report 8802-2/002 (ISO/IEC JTC1/SC6 N 7658). The disposition declared the matter an editorial correction and left it to the editor to correct it. I recently discovered that this particular correction had not appeared.

Suggested remedy: Change P_FLAG:=P to F_FLAG:=P in this location.

It may be best to publicize this by means of an erratum report, as the rest of the document is probably stable.

Committee Comment: Accepted. The committee regards the error as typographical and this correction as editorial. Publication of the correction in this report will meet the publicity requirements.

Comment #27 - PICS proforma, D

Page: 199

Location: Annex A

Comment: Capitalize only proper nouns and 1st word of heading:

Suggested remedy:

Protocol Implementation Conformance Statement (PICS) proforma →

Protocol implementation conformance statement (PICS) proforma

Committee Comment: Accepted. Editorial. Consistent with current IEEE Guidelines.

Comment #28 - PICS proforma, D

Page: 200

Subannex: A.2.3

Comment: Capitalize only proper nouns and 1st word of heading:

Suggested remedy: CLS Class of LLC supported → CLS class of LLC supported
RDE Route Determination Entity → RDE route determination entity
MIS Miscellaneous protocol features → MIS miscellaneous protocol features
Parameters → parameters
Protocols → protocols
...
TRS Route Selection Timer → TRS route selection timer

Committee Comment: Accepted. Editorial. Consistent with current IEEE Guidelines.

Comment #29 - PICS proforma, D

Page: 201

Subannex: A.2.3

Comment: Abbreviations do not correspond to full names, nor names on page #6:

Suggested remedy: TTR Route Response Timer → TTR timer, route response
TRS Route Selection Timer → TRS timer, route selection
Conflicting definitions, from defined on page #6, shall be eliminated:
RQC Route Query Command (#6) vs RQC ROUTE_QUERY_COMMAND PDUs (#201)
RQR Route Query Response (#6) vs RQC ROUTE_QUERY_RESPONSE PDUs (#201)
RS Route Selected (#6) vs ROUTE_SELECTED PDUs (#201)
STR Spanning Tree Route (#6) vs Spanning Tree Route parameters (#201)

Committee Comment: Partly accepted. The discrepancy in terms for the RDE PDUs should be corrected throughout the Standard. Editorial.

Assignments of item references in the PICS proforma are intentionally separate from, and independent of, abbreviations used elsewhere. There is no need to match the respective sets of names, and in fact such a match would be incorrect in some cases; “Spanning Tree Route parameters” is a case in point.

Comment #30 - PICS proforma, D

Page: 201

Subannex: A.3.1

Comment: There is no part called “Implementation Identification and Protocol Summary”

Suggested remedy: Implementation Identification and Protocol Summary →
subannex A.4 Identification, consisting of subannexes A.4.1 Implementation
identification and A.4.2 Protocol summary

Committee Comment: Accepted. Editorial.

Comment #31 - PICS proforma, D

Page: 204

Subannex: A.4.2

Comment: Excessive length header

Suggested remedy: Protocol summary, ISO... → Protocol summary

And, add a line or two of text that describe the reference that was printed in the header.

Committee Comment: Accepted in principle. Editorial. Only the change to the header is
necessary; the requested line of text is already present in the table.

Comment #32 - PICS proforma, D

Page: 205

Subannex: A.6

Comment: There is no clause A.6

Suggested remedy: clause A.6 → A.6.

Committee Comment: Accepted. Editorial.

Comment #33 - RDE support for SNAP, D

Page: 230

Subannex: D.2

Comment: Inconsistent notation, illustration and text:

Suggested remedy: XX XX XX XX XX → xx xx xx xx xx

Committee Comment: Accepted. Editorial.

Comment #34, Technical - revision proposal, D

Comment: There are no hooks for any QoS (DiffServ/IntServ/RSVP support functionality, such as Bandwidth Manager, Policing, Shaping, ...)

Suggested remedy: I suggest revising 802.2 for QoS support.

Committee Comment: Not accepted, pending further study. The nature of such hooks, and their effect on LLC behavior, is not apparent. The committee suggests that Working Group 802.1 be consulted on the question.

Comment #35, Technical - revision proposal, D

Comment: There is no stream support (QoS).

Suggested remedy: I suggest revising 802.2 for QoS support.

Committee Comment: Not accepted, pending further study.

An earlier project to develop a stream-oriented LLC service was abandoned for lack of support. There is considerable doubt that the LLC sublayer is an appropriate architectural context. Most successful approaches require the capacities of higher layers, and find the LLC unacknowledged connectionless-mode service, combined with suitable MAC provisions, most appropriate to satisfy QoS requirements.

Additional material provided in support of this comment has directed attention to the draft P802.15.3 standard, which introduces a MAC capability to use stream assignments as the basis for classifying traffic and providing appropriate QoS to each class. The committee takes support for this capability to be the primary purpose of the comment.

The requirement is that LLC implementations for use over the P802.15.3 MAC be capable of identifying transmissions, at the MAC interface, with a particular stream. The semantics described in 2.3.2.1 do not specifically address this case. Nor should they do so, as the circumstances of a particular underlying MAC do not affect the standardized aspects of LLC. The service descriptions are not restrictive; the syntax of every LLC implementation conveys information beyond what is described in the standard.

The notion that additional lower-layer information might be required is acknowledged, albeit imperfectly, in 2.3.2.1.2: “...sufficient information to create the SA and DA fields that are appended to the LLC SDU by the local MAC sublayer entity *as well as any physical layer address information (e.g., transmit frequency in broadband applications).*”

The restriction to the “physical layer” could perhaps be amended to “lower layer or sublayer” for greater generality, but that would be an editorial change with no practical effect. The standardized aspects of an LLC implementation are unaffected by distinguishing which underlying layer or sublayer is affected by the information. When used over frame relay, existing LLC implementations deal with MAC-equivalent addressing considerations (the DLCI); such enhancements do not raise questions of conformance.

If progression of P802.15.3 requires that the LLC standard allow a conforming implementation to pass stream indices across its MAC interface, then let it be noted that the committee finds no prohibition in the standard.

Comment #36, Technical - revision proposal, D

Comment: 802.1D and 802.1q priorities has no defined meaning

Suggested remedy: I suggest revising 802.2 for 802.1D and 802.1q.

Committee Comment: Rejected. Clause 2 acknowledges priority information to be part of the semantics of interactions with both the DL user and the MAC sublayer, but from the supplemental materials offered with the comments, “defined meanings” for priorities appears to mean a table of traffic classes and specific priority assignments. These assignments need to be determined above the Data Link layer, by an entity cognizant of the end-to-end network topology and traffic conditions.

By design, LLC simply conveys the necessary information to the MAC sublayer when needed. Such tables, if incorporated into the LLC standard, would be inapplicable and ultimately irrelevant, unless some specific effect on LLC behavior is also introduced.

If MAC priority assignments are creating difficulties, this committee suggests consulting Working Group 802.1.

Comment #37, Technical - revision proposal, D

Comment: 802.2 doesn't tie to any IETF L3 standard.

Suggested remedy: Harmonize with IETF.

Committee Comment: Not accepted, pending further study. Internet standard Layer 3 protocols have successfully operated over LLC for many years. No particular disharmony has been brought to the committee's attention.

In general, higher-layer interfaces are deemed to be primarily the concern of Working Group 802.1.

Comment #38, Technical - revision proposal, D

Comment: Most likely an Inter-LLC protocol is needed to support QoS. Once the requirements for LLC is set, this has to be addressed.

Suggested remedy: After revising 802.2 for QoS support, I suggest adding Inter-LLC protocol to support QoS

Committee Comment: Not accepted, pending further study. It has not been made clear what would constitute an "Inter-LLC" protocol. Nor have any clear requirements been stated for changing LLC to support QoS management.

If this "Inter-LLC protocol" is for management purposes, the request should be taken to Working Group 802.1. If it is intended to connect LLC data links in sequence, that is a bridging function and should be considered by 802.1. If it is intended to manage traffic capacities and flows across the network, that requires cognizance of network conditions only available at higher layers, which again falls into the scope of work in 802.1, or else beyond the scope of Project 802 altogether.

Comment #39, Technical - Ballot procedure, D

Comment: I am a little puzzled by the resolution of comments that are being recirculated here, especially with respect to their disposition which I believe is improper or at least inappropriate given the very small makeup of the comment resolution group. I believe that the proper disposition of each comment, per the procedures attached below, is limited to:

"The Sponsor shall review all ballots received and shall respond to the negative balloter stating either that the information in the document is not obsolete and/or his or her comment may be included in the next revision."

The thing that I have a problem with is the claimed resolution of the comments. That would lead balloters to believe that the comments as resolved would be up for consideration in the (if ever) next revision. I believe that is incorrect and that what is appropriate is that the comments themselves are to be considered for the next revision. Any resolution of those comments should be made by a hopefully larger body that has responded to the call for participation generated by a new PAR.

My personal position on the reaffirmation of this standard is that it should go forward.

Further, that this standard is a good candidate for "Senior Standard" status.

It does have some out of date material in it and it is not as widely used as originally intended having been swept aside by EtherType based protocols.

Any revision needs to acknowledge the dominance of EtherType protocols in 802.3 environments and a result the diminished importance of SNAP.

I would suggest that long term maintenance of 802.2 be turned over to 802.1.

9.1 Reaffirmation

Standards that continue to reflect the state of the art and contain no significant obsolete or erroneous information may be submitted by the Sponsor for reaffirmation when accompanied by a ballot indicating approval by at least 75% of the interested and affected parties. When the Sponsor ballots a standard for reaffirmation, the entire document, including amendments, is open to review by its balloters. Objections may indicate the need to revise the standard rather than to reaffirm it.

9.1.1 Reaffirmation ballot

The ballot shall provide three choices:

- a) Approve (Affirmative). This means, in the opinion of the voter, that the standard contains no significant obsolete or erroneous information and is useful in its current form. This vote may be accompanied by comments suggesting corrections and improvements. Action on such comments is left to the discretion of the Sponsor in future revisions.
- b) Do Not Approve (Negative). This vote shall be accompanied by identification of either
 - 1) The specific contents that are obsolete or erroneous, along with reasons for the claim, or
 - 2) Identification of the specific topics to be added, along with justification why their omission is detrimental to the utility of the standard.
- c) Abstain. This vote shall be treated in the same manner as a regular ballot (see 5.4.3.1).

9.1.2 Resolution of reaffirmation comments, objections, and negative votes

After clarifying the intent of a negative ballot, the Sponsor shall respond to a negative ballot. The Sponsor shall review all ballots received and shall respond to the negative balloter stating either that the information in the document is not obsolete and/or his or her comment may be included in the next revision.

All unresolved negative ballots, together with the reasons of the negative voters and any rebuttal by the members conducting the resolution of the ballot, shall be submitted to the members of the Sponsor balloting group, providing each member an opportunity to change his or her ballot. Names of the unresolved negative balloters are to be included with their negative comments in the recirculation of negative comments. Comments accompanying affirmative votes that advocate changes in the technical meaning of the document may be considered for a future revision of the standard.

Suggested remedy: Restate the context of the "resolutions" in the recirc package to be comments from those who conducted the reaffirmation as opposed to resolution of comments.

Committee Comment: Accepted. All references to “resolution” or “disposition” of the comments on the reaffirmation ballots were removed from subsequent drafts of this report, and the status of the committee comments clarified. The committee agrees with the voter’s assessment, and the editor of the report is grateful for the suggested change, as it removes a potential source of confusion.

Beyond the suggested remedy, the comment does allude to several other matters in a way which could lead to confusion. For the benefit of the wider audience, these points should be qualified:

The content of the Standard is “out of date” only in the sense that the use of alternatives to LLC has increased. For those who continue to use LLC, this Standard is no less applicable than when the current edition was published; it is not out of date for matters within its scope.

The extent to which alternative protocols are employed instead of LLC should, indeed, be considered when assessing the need for further extensions to the standard; it calls into question whether the criterion of “broad market potential” can be met. As those alternatives are outside the scope of Standard 802.2, however, a revision would not address them. In particular, neither SNAP nor EtherTypes are in scope; both are covered in Standard 802.

No opinion can be rendered on “Senior Standard” status until such a status is established and clearly defined.

Any offer for another Working Group to assume responsibility for maintenance of Standard 802.2 should come from its Chair, with the support of the Working Group.