Inconsistent use of the term "both". Used as an adverb and predeterminer, and this may create ambiguity.

172.3.2 FEC_corrected_cw_counter is identical to 119.3.2 with the clarification that the count includes both flows.

172.3.3 FEC_uncorrected_cw_counter is identical to 119.3.3 with the clarification that the count includes both flows.

Proposed Response
Recommend consistency throughout to document as an adverb.

PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

The word "both" is correct in the referenced sentences.

[Editor's note: The page was changed from 230 to 226.]

In the .pdf version of the draft and also the .pdf version of the compare draft the axis labelling of Figure 124-2a is unreadable. It was correct in draft 3.1.

Proposed Response
Replace this figure with the one from draft 3.1

PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff. This change will be passed to the IEEE staff editor for consideration during final editing.

No changes were made to the graphs in the referenced figures, however, it appears that FrameMaker incorrectly rendered the graphics file in D3.2.

Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff.

This change will be passed to the IEEE staff editor for consideration during final editing.
Table title is strangely offset to the right. This might be related to the formatting in the base document for multiple tables in Clause 124.

Suggested Remedy
The text box for the figure titles should be full width. Same issue on next page.

Proposed Response Response Status W
PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff. This change will be passed to the IEEE staff editor for consideration during final editing.

"where ... are defined in 172.2.6.2.2 and + ..." could be improved. If this were a formal equation, each "where" item would go on a separate line.

Suggested Remedy
Insert a comma after 172.2.6.2.2. Also in 172.2.4.6.

Proposed Response Response Status W
PROPOSED REJECT.
Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff. This change will be passed to the IEEE staff editor for consideration during final editing.

"should be thin."

Suggested Remedy
Should be tx_scrambled_am as in the column header. Fig 119-11 shows that these are different things. Also for Table 172A-2. Annex 119A is the same, by the way, and should be fixed sometime.

Proposed Response Response Status W
PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff. This change will be passed to the IEEE staff editor for consideration during final editing.
Another reference would make this easier to use, so the reader can find what "am_mapped" and "tx_scrambled_am" at lines 29, 30 are (am_mapped does not appear in this amendment anywhere else, and while values for tx_scrambled_am are given in the tables, there is no indication of what it is).

**Suggested Remedy**
Please insert (see 172.2.4.6) after alignment marker.

**Proposed Response**

PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

The suggested change is redundant since the opening paragraph points to the subclause that defines the entire transmit function (172.2.4).
There is no consensus to make the proposed change.

---

Unsatisfied D3.1 comment: need examples to show some of the output from the PCS, particularly as the numbering/ordering in the PCS generally and in the FEC (which is different) is confusing, as was recognised in 3bs.

**Suggested Remedy**
Add a table here for the start of Flow 0 tx_out (16 lanes x 80 hex characters would be more than enough). Upload a plain text file to go with the others, and reference it with a NOTE here.

**Proposed Response**

PROPOSED REJECT.
This comment is a restatement of comment R1-39. The resolution to comment R1-39 is recorded in the following file:

The response to R1-39 is:

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"REJECT. The example patterns are provided to help the implementer confirm correct interpretation of the encoding functionality which is complex. Figure 119-11 provides sufficient guidance to correctly implement "Mux and 10-bit symbol distribution". Therefore adding the suggested additional patterns is not necessary. There is no consensus to make the proposed changes."

---

No new evidence has been provided to support the proposed changes. There is no consensus to make the proposed changes.
Proposed Response

R2-12
Cl 172A SC 172A P287 L52

Unsatisfied D3.1 comment 39: need examples to show some of the output from the PCS.
This says that 10 bits of cx_A (in reverse order) is one symbol of c_A. It is not clear whether the reverse order is telling the reader to reverse the order, or it is just weird notation. Also the order of the bits in a symbol of C_A is not given.

Suggested Remedy
Explain the bit and symbol ordering using words.

PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

The mapping is defined by the algorithm on page 287 lines 49 to 54. If this algorithm is misinterpreted by the implementer, the error would be evident by comparing the outcome to the examples provided in Annex 172A.

R2-13
Cl 172 SC 172.2.4.8 P218 L50

Unsatisfied D3.1 comment 39: need examples to show some of the output from the PCS.
It turns out that the order of the bits in each 10-bit FEC symbol going into the FEC and coming out of it is not specified in 119. The examples in 172A show what is given to the FEC and what two FEC-coded codeword within the FEC are, but not what is just after the FEC - and it's only informative.
For example, here is what Clause 91 says:
The message symbols are composed of the bits of the transcoded blocks tx_scrambled (including a mapped group of alignment markers when appropriate) such that bit 0 of the first transcoded block in the message (or am_txmapped<0>) is bit 0 of m_k–1 and bit 256 of the last transcoded block in the message is bit 9 of m_0.

Suggested Remedy
Define the order the bits in each 10-bit FEC symbol going into the FEC and coming out of it.
Provide an example of the output of the FEC after 10-bit interleaving "tx_out", which is after translation from the ordering/numbering that the FEC uses to what most of the PCS uses.

PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
Note that comment R2-24 relates to a similar concern.
The distribution and mapping of bits from tx_scrambled_am to the codeword message symbols is defined explicitly in 119.2.4.5.
If this algorithm is misinterpreted the error would be evident by comparing the outcome to the examples provided in Annex 172A.
Unlike Figure 119-10, there is nothing about bit ordering in Figure 172-4. It's all by reference to Figure 119-10.

**Suggested Remedy**
Move the arrow beside "66-bit blocks" to show which end of a 66-bit block goes first, or change the figure title from "800GBASE-R PCS transmit bit ordering and distribution" to "800GBASE-R PCS transmit distribution"

**Proposed Response**
PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

Subclause 119.2.4.2 defines explicitly how the bits in tx_coded are processed to form a 256B/257B block.
Further details in the figure are not necessary.

---

Putting "bit" on a new line looks odd

**Proposed Response**
PROPOSED REJECT.
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff. This change will be passed to the IEEE staff editor for consideration during final editing.
We show the sublayer stack in the first figure of each "Introduction to <MAC rate>" clause and the first figure of each sublayer clause in its overview. Usually we include all relevant sublayers, which gives the reader a familiar map to give the clause context. See figures 69-1, 80-1, 81-1, 82-1, 93-1, 91-1, for example. Also 105 106 107 108 109 for 25G, 131 132 133 134 135 for 50G.

This consistency should be maintained unless changed through the maintenance process. There are few exceptions: when 116, 117, 118, 119 and 120 for 200 Gb/s and 400 Gb/s were written, the first wave of PHY's had no AN, and 3ck did not add them to these diagrams, although AN is included in Figure 161-1 (RS-FEC-Int).

**Suggested Remedy**

Add the missing AN sublayer to Figure 169-1 (introduction to 800 Gb/s), like 80, 105, 131.

It may be advisable to revert "800GBASE" to "800BASE-R" for consistency; any future project with a non-BASE-R 800G PHY may choose its own layer stack.

Add the missing AN sublayer to Figure 170-1 (RS and 800GMII), like 81, 106, 132.

Add the missing AN sublayer to figures 171-1 and 3 (800GMII Extender and 800GXS) for consistency.

Add the missing AN sublayer to Figure 172-1 (PCS), like 82, 107, 133.

Add the missing AN sublayer to Figure 173-1 (PMA), like 83, 109, 134. Either now or via maintenance, (maybe to be implemented in 3dj), insert the missing AN in figures 1 of 116, 117, 118, 119 and 120.

**Proposed Response**

PROPOSED REJECT.

This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

Although this Figure was modified in Draft 3.2, the only modification was changing the label "800BASE-R" to "800BASE" per comment R1-1 in the following:


The concerns expressed in this comment (R2-17) are not related to this change in label.

The reference to the figure states "relationships among 800 Gigabit Ethernet, the IEEE 802.3 MAC, and the ISO Open System Interconnection (OSI) reference model are shown in Figure 169–1." The figure is not intended to provide all of the details within all 800 Gb/s PHYs that might be defined.

There are many sublayers and structures that are not included in addition to the AN including the 800GMII Extender, 800GXS, 800GAUI-n, and additional sublayers might be added in the future. Its not practical or necessary to include all of these additional sublayers.

There is no consensus to make the proposed changes.
Figure 119-7, 400GBASE-R alignment marker mapping to PCS lanes, shows "A = from FEC codeword A B = from FEC codeword B". But this is AM creation, part of the Transmit function. AMs are not from the FEC codewords here, they go into them.

**Suggested Remedy**
"from" should be "to", twice.

**Proposed Response**

**Response Status** W

PROPOSED REJECT.

This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

The use of the word "from" is correct as the figure is showing how data from the codewords are mapped to each PCS lane.

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**Comment ID** R2-21

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12/14/2023 3:07:11 PM

**Comment Status** D

**Response Status** W

**Comment Type** TR

Unsatisfied D3.1 comment 39: need examples to show some of the output from the PCS. Confusion between tx_out the 1088 x 10 array in 119.2.4.7 and tx_out<0:16> the contents of the 16 PCS lanes in Figure 119-11.

**Suggested Remedy**
As these seem to be different things, they should have different names.

**Proposed Response**

**Response Status** W

PROPOSED REJECT.

This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

In regard to this comment, Figure 119-11 is accurate as currently written. There is no consensus to make the proposed change.

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**Comment ID** R2-23

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12/14/2023 3:07:11 PM

**Comment Status** D

**Response Status** W

**Comment Type** T

As this Figure 119-11 is called "Transmit bit ordering..."

**Suggested Remedy**
The arrows from "10-bit round robin distribution" should not go to the middles of the FEC messages but to the appropriate end to show which way the FEC messages are filled.

**Proposed Response**

**Response Status** W

PROPOSED REJECT.

This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

In regard to this comment, Figure 119-11 is accurate as currently written. There is no consensus to make the proposed change.
Comment Type TR  Comment Status D  bit ordering

Unsatisfied D3.1 comment 39: need examples to show some of the output from the PCS.
Figure 119-11 implies that bit 0 (rather than 9) of a 10-bit symbol in a FEC codeword goes to the PMA first but there is no indication of what that means, and whether it corresponds to a bit 0 or a bit 9 of tx_scrambled_am.

Suggested Remedy
Define the bit ordering.

Proposed Response W
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
Note that comment R2-13 relates to a similar concern.
The distribution and mapping of bits from tx_scrambled_am to the codeword message symbols is defined explicitly in 119.2.4.5.
If this algorithm is misinterpreted the error would be evident by comparing the outcome to the examples provided in Annex 172A.

Comment Type E  Comment Status D  editorial

The label "tx_coded<0>" on the left overlaps the block.

Suggested Remedy
Move the label leftward so that it does not overlap.

Proposed Response W
This comment does not apply to the substantive changes between IEEE P802.3df D3.1 and D3.2 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
Although the suggested remedy is an improvement to the draft it is an editorial issue that may be addressed by referral to the IEEE SA Editorial staff.
This change will be passed to the IEEE staff editor for consideration during final editing.