

8802-3/802.3 REVISION REQUEST	
DATE:	5th March, 2000
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REQUESTED REVISION:	
STANDARD:	IEEE Std 802.3ab-1999
CLAUSE NUMBER:	40.3.1.3.3
CLAUSE TITLE:	Generation of bits Sc_n [7:0]

PROPOSED REVISION TEXT:

It is believed that the text:

The four bits Sc_n [7:4] are defined as

```
Sc_n [7:4] = Sx_n [3:0] if (tx_enable_n = 1)
[0 0 0 0] else
```

should read:

The four bits Sc_n [7:4] are defined as

```
Sc_n [7:4] = Sx_n [3:0] if (tx_enable_{n-2} = 1)
[0 0 0 0] else
```

RATIONALE FOR REVISION:

While at t = n and t = n-1, SSD1 and SSD2 are being sent, respectively, Table 40-1 seems to imply that Sd_n[6:8] should equal [0 0 0]. It is believed that the only way to ensure that Sd_n[6:8] = [0 0 0] is to have Sc_n[7:4] = [0 0 0 0].

IMPACT ON EXISTING NETWORKS:

None, it is believed that an implementation that meets the text of the standard would not operate correctly.

Please attach supporting material, if any
Submit to:- Geoffrey O. Thompson, Chair IEEE 802.3
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----- For official 802.3 use -----+
REV REQ NUMBER: 1030
DATE RECEIVED: 5th March, 2000
EDITORIAL /TECHNICAL
ACCEPTED/ DENIED
BALLOT REQ'D YES/ NO
COMMENTS: Published IEEE Std 802.3-2002
For information about this Revision Request see -
http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1030

Comment from Sailesh Rao on proposed change:-

Sent by: "Rao, Sailesh" <sailesh.rao@intel.com>
Subject: RE: IEEE Maintenance Revision to clause 40 PCS code

All:

Here is my response to the comment:

The commenter has a valid concern that since $Sc_n[7:4]$ is defined as

```
Sc_n[7:4] = Sx_n[3:0] if (tx_enable{n} = 1)
[0 0 0 0] else
```

in Section 40.3.1.3.3, the bits $Sd_n[6:7]$ need not be [00] during the encoding of SSD1 and SSD2. This renders the definition of SSD1 and SSD2 in Table 40.1 incomplete, since at a minimum, the entries for SSD1 and SSD2 should have been repeated across the 4 columns of this table.

The resolution offered by the commenter is a simpler alternative for clarifying the definition of the SSD1 and SSD2 encoding. I recommend that we accept the resolution.

Since the convolutional encoder states, $cs_n[0:2]$, are defined to be [000] in Section 40.3.1.3.4 during the encoding of SSD1 and SSD2, the trellis code already requires that both SSD1 and SSD2 be encoded from subset D0, regardless of the state of $Sd_n[6:7]$. Thus, it is very unlikely that the proposed change to Clause 40 has any effect on existing implementations.

Regards,
Sailesh.