DATE: 8th of March, 2009
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REQUESTED REVISION:
STANDARD: IEEE 802.3av-2009
CLAUSE NUMBER: 77.2.2.7
CLAUSE TITLE: State diagrams

PROPOSED REVISION TEXT:
[1] Change the top part of Figure 77-14 as proposed in attached file "Attachment 1.pdf"
[2] Add variable to 77.2.2.3 Variables
ResetBound = 8 * DelayBound
TYPE: 16-bit unsigned
This variable represents the value of DelayBound (76.3.1.2) expressed in units of octet time.
[3] Add variable to 77.2.2.3 Variables
IdleCount
TYPE: 32-bit unsigned
This variable represents length of gap between subsequent frames, expressed in the unit of octet time. This variable advances by 1 after every 8-bit times.

RATIONALE FOR REVISION:
A 10G-EPON ONU may be granted a large timeslot and not have sufficient data to fill this allocated time-slot. According to Figure 76-17, the laser shall be switched off when no data is transmitted. When more data becomes available at the ONU during the allocated time slot, laser will be switched on again. However, the variable fecOffset may become misaligned since it is reset only at the beginning of the time-slot.

When the transmission within the time-slot is restarted, the variable grantStart is not reset to true and the variable fecOffset will have some arbitrary value (depending on how long the gap in the allocated time-slot was), which may result in incorrect calculation of FEC position. This in turn may cause the transmission extend beyond the intended time-slot by up to 1 FEC codeword.

IMPACT ON EXISTING NETWORKS:
This revision is technical and affects the observable operation of 10G-EPON ONUs.
Please attach supporting material, if any
Submit to:- David Law, Chair IEEE 802.3
and copy:- Wael William Diab, Vice-Chair IEEE 802.3

At:- E-Mail: stds-802-3-maint-req@ieee.org

+------- For official 802.3 use --------+
| REV REQ NUMBER: 1220 |
| DATE RECEIVED: 8th Mar, 2010 |
| EDITORIAL/TECHNICAL |
| ACCEPTED/DENIED |
| BALLOT REQ'D YES/NO |
| COMMENTS: XX-Xxx-XX Ver: D1.0 Status: R |

For information about this Revision Request see -
http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1220
BEGIN

INIT

IdleCount <= 0

transmitAllowed *
MCI:MA_DATA.request(DA, SA, m_sdu_tx)

TRANSMIT READY

SelectFrame()

fecOffset[1:0] = 0 *
(grantStart +
IdleCount >= ResetBound)

START OF GRANT

fecOffset <= 16
grantStart <= false

CHECK PACKET TYPE

Length/Type = MAC_Control_type

Length/Type != MAC_Control_type

77-14 Modifications to ONU Control Multiplexer state diagram