

P802.3ah Draft 1.0 Comments

Cl 00	SC	P	L	#
Bharati, Barnali		Wipro Technologies		171
Comment Type	E	Comment Status	D	
Please use either on/off or true/false consistently, rather than using all of them for the same variable.				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	
Cl 00	SC	P	L	#
Jonsson, Ulf	54.1.4	P70	L1	286
Comment Type	T	Comment Status	D	
Change naming of Optical PMDs.				
<i>SuggestedRemedy</i>				
Proposed naming:				
PMD layer	PMD Type			
--100M				
100BASE-LX	100BASE-LX			
100BASE-BX	100BASE-BX-D			
--1G P2P	100BASE-BX-U			
1000BASE-LX1	1000BASE-LX1			
1000BASE-BX	1000BASE-BX-D			
--1G P2MP	1000BASE-BX-U			
1000BASE-PX1	1000BASE-PX1-D			
	1000BASE-PX1-U			
1000BASE-PX2	1000BASE-PX2-D			
	1000BASE-PX2-U			
Proposed Response		Response Status	O	

Cl 00	SC	P	L	#
Dawe, Piers	60	P225	L16	571
Comment Type	E	Comment Status	D	
D1.0 resolutions to comments 254, 255 seem to have been accepted but not acted on.				
<i>SuggestedRemedy</i>				
Insert in editor's box under "Definitions (to be added to 1.4)."; Update 1.4.15 definition of 100BASE-X.				
Then it won't get forgotten as we move forward.				
Proposed Response		Response Status	O	
Cl 00	SC	P	L	#
Dawe, Piers	60.4.1	P230	L44	508
Comment Type	E	Comment Status	D	
Use the cell straddle to reduce repetition				
<i>SuggestedRemedy</i>				
Signaling speed, off power, extinction ratio, eye mask in table 60-6, signaling speed in table 60-7.				
Proposed Response		Response Status	O	
Cl 00	SC	P	L	#
Dawe, Piers	60.8.11.2	P241	L39	554
Comment Type	E	Comment Status	D	
Calibration pattern may be repetitive yet not short (FDDI BLW pattern is an example, though I don't know if it's a good calibration pattern).				
<i>SuggestedRemedy</i>				
Change "short" to "repetitive."				
Proposed Response		Response Status	O	

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CI 22	SC	P	L	# 179
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Why are we skipping bits 5:2 instead of just placing the new bit in sequential order?				
SuggestedRemedy				
Put it in the first available bit.				
Proposed Response		Response Status	O	

CI 22	SC	P	L	# 929
Don Pannell		Marvell Semiconductor		
Comment Type	TR	Comment Status	D	
Clause 22 needs to be modified to support a standard way to access Clause 45 registers. Without this new 802.3ah PHYs will not be able to connect with existing MII based CPUs and switches.				
SuggestedRemedy				
A proposal "pannell_1_1102" will be presented at the November 2002 meeting.				
Proposed Response		Response Status	O	

CI 22	SC 22.2.4.1	P 9	L 17	# 913
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
If we are opening up the bit assignments for the control register, how about adding bits for resolved speed, duplex, and a pass/fail indication for resolution to a common ability?				
SuggestedRemedy				
Use 0.5:4 for speed as follows:				
Rate Indication: These bits indicate the result of the auto-negotiation for data rate arbitration as follows:				
0.5.0.4				
1 1 = Reserved				
1 0 = 100Base-X was the highest common denominator				
0 1 = 100Base-TX was the highest common denominator				
0 0 = 10Base-T was the highest commondenominator				
Use 0.3 for Duplex as follows:				
Duplex Indication: This bit indicates the result of the auto-negotiation for duplex arbitration as follows:				
0: half-duplex was the highest common denominator				
1: full-duplex was the highest common denominator				
Use 0.2 for common resolution as follows:				
Duplex Indication: This bit indicates the result of the auto-negotiation for common resolution as follows:				
0: arbitration did not resolve to a greatest common demoniator				
1: arbitration did resolve to a greatest common demoniator				
Add supporting text (at editors choice) in new paragraphs.				
Proposed Response		Response Status	O	

CI 22	SC 22.2.4.1	P 9	L 18	# 178
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
"OAM Enable" seems a bit misleading for the title of this control bit as it only controls the unidirectional xmit capability of the PHY. Ditto lines 26 and 38.				
SuggestedRemedy				
Change "OAM Enable" to "Enabled Unidirectional OAM"				
Proposed Response		Response Status	O	

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CI 22	SC 22.2.4.1.12	P9	L40	# 180
Squire, Matt	Hatteras Networks			
Comment Type	T	Comment Status	D	
I believe the statement "the PHY shall return a alue of zero in bit 0.1" is incorrect as the return value should be in bit 1.7.				
<i>SuggestedRemedy</i>				
Change 0.1 to 1.7, and spell value correctly:)				
Proposed Response		Response Status	O	
CI 22	SC 22.2.4.1.12	P9	L42	# 115
Martin, David	Nortel Networks			
Comment Type	E	Comment Status	D	
Type				
<i>SuggestedRemedy</i>				
Change "alue" to "value".				
Proposed Response		Response Status	O	
CI 22	SC 22.2.4.1.12	P9	L42	# 331
Brown, Benjamin	AMCC			
Comment Type	E	Comment Status	D	
misspelling				
<i>SuggestedRemedy</i>				
Replace "alue" with "value"				
Proposed Response		Response Status	O	
CI 22	SC 22.2.4.2	P10	L1	# 1
Daines, Kevin	World Wide Packets			
Comment Type	E	Comment Status	D	
Table is incorrectly numbered and named.				
<i>SuggestedRemedy</i>				
Should read "Table 22-8 - Status register bit definitions"				
Proposed Response		Response Status	O	

CI 22	SC Table 22-7	P9	L17	# 330
Brown, Benjamin	AMCC			
Comment Type	E	Comment Status	D	
Throughout the changed section of this clause, the MII is referenced where both the MII and GMII should be referenced. Other locations include:				
22.2.4.1.12, page 9, lines 40, 42 & 43				
Table 22-7				
22.2.4.2.8, page 10, lines 17 & 18				
<i>SuggestedRemedy</i>				
Replace MII with MII/GMII				
Proposed Response		Response Status	O	
CI 24	SC	P11	L34	# 2
Daines, Kevin	World Wide Packets			
Comment Type	E	Comment Status	D	
Tabs missing in Revision History section.				
<i>SuggestedRemedy</i>				
Add tabs for readability.				
Proposed Response		Response Status	O	
CI 24	SC 24.2.2.1.7	P12	L27	# 4
Daines, Kevin	World Wide Packets			
Comment Type	E	Comment Status	D	
Register is incorrectly named.				
<i>SuggestedRemedy</i>				
Change "MDIO register bits" to "Coding Violation Counter register bits"				
Proposed Response		Response Status	O	

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Cl 24	SC 24.2.3.2	P 12	L 10	# 3
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Register bit is incorrectly named.				
SuggestedRemedy				
Change "MIDIO register bit 0.1" to "Control register bit 0.1".				
Proposed Response		Response Status	O	

Cl 24	SC 24.2.3.2	P 8	L 10	# 181
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
To go along with an earlier comment, "OAM capability" is misleading.				
SuggestedRemedy				
Maybe call this "unidirectional OAM capability" ?				
Proposed Response		Response Status	O	

Cl 24	SC 24.2.4.2	P 12	L 44	# 434
Cravens, George		Mindspeed		
Comment Type	E	Comment Status	D	
Line states "Add new term at the top of Figure 24-8.", but there's no term shown. (It seems that the section on 24.3.4.5 got inserted before Figure 24-8.)				
SuggestedRemedy				
Move Section 24.3.4.5 to follow Figure 24-8.				
Proposed Response		Response Status	O	

Cl 24	SC Figure 24-8	P 13	L 1	# 5
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Left-pointing assignment operator arrows have been lost from this figure.				
SuggestedRemedy				
Replace the less-than sign with left pointing assignment operator arrows (ALT-0220) in Figure 24-8. 21 occurrences.				
Proposed Response		Response Status	O	

Cl 24	SC Figure 24-8	P 13	L 2	# 6
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Not equal to symbol has been changed to 1/4 symbol.				
SuggestedRemedy				
Replace 1/4 symbol with not equal to symbol (ALT-0185). One occurrence.				
Proposed Response		Response Status	O	

Cl 30	SC	P 15	L 30	# 7
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Tabs missing from Revision History section.				
SuggestedRemedy				
Add tabs for readability.				
Proposed Response		Response Status	O	

Cl 30	SC 30.11	P 30	L 4	# 944
Ho-Sook Lee		ETRI		
Comment Type	T	Comment Status	D	
It is not necessary to collect statistics for each PDU type separately. The attributes defined in Draft 1.0, such as OAM_TX_Frames and OAM_RX_Frames, should be added to collect the statistics for the total OAM traffics.				
SuggestedRemedy				
We recommend that OAM_TX_Frames and OAM_RX_Frames be added as the attributes for the statistics of the total OAM traffics.				
Proposed Response		Response Status	O	

Cl 30	SC 30.11.1.1.20	P 35	L 5	# 914
Tom Mathey		Independent		
Comment Type	E	Comment Status	D	
30.11.1.1.20 aOAMVariableRequestRx is a duplicate of 30.11.1.1.17 aOAMVariableRequestRx				
SuggestedRemedy				
Nuke or replace with intended text.				
Proposed Response		Response Status	O	

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Cl 30	SC 30.11.1.1.20	P 35	L 518	# 111
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Duplicate subclause.				
SuggestedRemedy				
This entire subsection looks like a duplicate of subsection 30.11.1.1.17 on the previous page. This duplicate should be deleted.				
Proposed Response		Response Status	O	

Cl 30	SC 30.11.1.2	P 36	L 15	# 114
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Missing OAM Event Notification request.				
SuggestedRemedy				
Add an action subsection for "acOAMEventNotification".				
Proposed Response		Response Status	O	

Cl 30	SC 30.11.1.2	P 36	L 15	# 113
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Missing OAM Variable request.				
SuggestedRemedy				
Add an action subsection for "acOAMVariableRequest".				
Proposed Response		Response Status	O	

Cl 30	SC 30.11.1.2	P 36	L 15	# 112
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Missing OAM Loopback request.				
SuggestedRemedy				
Add an action subsection for "acOAMLoopback".				
Proposed Response		Response Status	O	

Cl 30	SC 30.2.1	P	L	# 10
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
2nd paragraph contains a description of the counters within Clause 30. This will need to be changed to support 30.5.1.1.12, since aPCSCodingViolation will not wrap around.				
SuggestedRemedy				
Change first three sentences to read as follows: "Most counters defined in this specification are assumed to be wrap-around counters. Wrap-around counters are those that automatically go from their maximum value (or final value) to zero and continue to operate. These unsigned counters do not provide for any explicit means to return them to their minimum (zero), i.e., reset. Because of their nature, wrap-around counters should be read frequently enough to avoid loss of information. These counters are identified with as nonresettable counters. Some counters defined in this specification do not wrap around. Instead, when they reach their maximum value, they stop incrementing. These counters are identified as non-wrap-around counters."				
Proposed Response		Response Status	O	

Cl 30	SC 30.3.1.1.20	P	L	# 61
Marris, Arthur		Cadence Design Foun		
Comment Type	T	Comment Status	D	
MAC-PHY rate matching for copper uses CRS deferral. There is counter defined in clause 30 called FramesWithExcessiveDeferral. The contents of this counter should be ignored when using an EFM copper PHY.				
SuggestedRemedy				
Change last sentence of subclause 30.3.1.1.20 to read "The contents of this attribute are undefined for MAC entities operating in full duplex mode or with Clause 61 PHYs."				
Proposed Response		Response Status	O	

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Cl 30	SC 30.3.2.1.2	P 23	L 24	# 30
Kimpe, Marc	ADTRAN			
Comment Type	E	Comment Status	D	
The draft as presently written includes some of the copper Phys but not all of them. The draft should be consistent and list either no options or all options. 2PASS-TL is listed but 2BASE-TL is not. The same comment applies to clause 30.3.2.1.3 page 24 line 3 with the same remedy.				
SuggestedRemedy				
Add "2BASE-TBDD Clause 61 TBD D"				
Proposed Response		Response Status	O	

Cl 30	SC 30.5.1.1.12	P 28	L 30	# 9
Daines, Kevin	World Wide Packets			
Comment Type	T	Comment Status	D	
Increment rate is missing. However, this counter does not rollover. Need to address.				
SuggestedRemedy				
Change APPROPRIATE SYNTAX section to read: "Generalized non-wrap-around counter. This counter has a maximum increment rate of 100 000 000 counts per second for 100 Mb/s implementations. However, this counter does not wrap around and instead remains at its maximum value until read."				
Proposed Response		Response Status	O	

Cl 30	SC 30.5.1.1.12	P 28	L 33	# 110
Martin, David	Nortel Networks			
Comment Type	T	Comment Status	D	
Missing 2 and 10 Mb/s cases.				
SuggestedRemedy				
Add 2 and 10 Mb/s cases. Add the following: "For 2 Mb/s operation it is a count of the number of times...For 10 Mb/s operation it is a count of the number of times..."				
Proposed Response		Response Status	O	

Cl 30	SC 30.5.1.1.12	P 28	L 34	# 8
Daines, Kevin				
Comment Type	T	Comment Status	D	
Behaviour missing.				
SuggestedRemedy				
Change Behaviour to read:				
"For 100 Mb/s operation it is a count of the number of times an invalid code-group is received, other than the /H/ code-group. For 1000 Mb/s operation it is a count of the number of times an invalid code-group is received, other than the /V/ code-group. When it reaches all ones, it stops incrementing."				
Proposed Response		Response Status	O	

Cl 30	SC 30.5.1.1.2	P 25	L 25	# 31
Kimpe, Marc		ADTRAN		
Comment Type	E	Comment Status	D	
2PASS-TL and 2BASE-TL are copper PHYS listed in clause 63 that are not listed here.				
SuggestedRemedy				
Add the following lines				
2BASE-TL Voice Grade UTP PHY C as specified in clause 63				
2PASS-TL Voice Grade UTP PHY D as specified in clause 63				
Proposed Response		Response Status	O	

Cl 36	SC 36	P 39	L 36	# 13
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Tabs missing in Revision History section.				
SuggestedRemedy				
Add tabs for readability.				
Proposed Response		Response Status	O	

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Cl 36	SC 36.1.2	P962	L	# 490
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
36.1.2 Objectives says: "The following are the objectives of 1000BASE-X: f)To allow for a nominal network extent of up to 3 km, including 4)DTE/DTE links of 3000 m (using fiber); <i>SuggestedRemedy</i> Sort out the range. 20 km if PON uses clause 36, 10 if not. Are there any delay ("logical reach") implications with these distances? <i>Proposed Response</i> <i>Response Status</i> O				

Cl 36	SC 36.2.4.19	P40	L 16	# 11
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Counter behavior should be clarified. Intentional errors should not be counted. <i>SuggestedRemedy</i> Change: "When the receiver is in normal mode, coding_violation_counter counts once for each invalid code-group received." to read: "When the receiver is in normal mode, coding_violation_counter counts once for each invalid code-group received. The single code-group Error_Propagation ordered_set (/N/) is not considered an invalid code-group and as such is not counted when received." <i>Proposed Response</i> <i>Response Status</i> O				

Cl 36	SC 36.2.5.1.3	P40	L 23	# 12
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Register is incorrectly named. <i>SuggestedRemedy</i> Change "MDIO register bit 0.1" to "Control register bit 0.1" <i>Proposed Response</i> <i>Response Status</i> O				

Cl 36	SC 36.2.5.1.3	P66	L 26	# 182
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Echo earlier comment: oam_enable seems misleading <i>SuggestedRemedy</i> "Unidirectional OAM enable" <i>Proposed Response</i> <i>Response Status</i> O				

Cl 36	SC 36.3.9	P41	L 4	# 333
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
misspelling <i>SuggestedRemedy</i> Replace "equal" with "equal" <i>Proposed Response</i> <i>Response Status</i> O				

Cl 36	SC 36.3.9	P41	L 4	# 332
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
What should the COM_DET assert limit be when PMA_TX_CLK is not equal to twice the PMA_RX_CLK frequency? <i>SuggestedRemedy</i> Shouldn't it be the same value? <i>Proposed Response</i> <i>Response Status</i> O				

Cl 36	SC 36.3.9	P41	L 4	# 863
Thatcher, Jonathan		World Wide Packets		
Comment Type	E	Comment Status	D	
Spelling error: "equal" <i>SuggestedRemedy</i> Remove T <i>Proposed Response</i> <i>Response Status</i> O				

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Cl 36	SC 36.3.9	P 41	L 4	# 14
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Spelling.				
SuggestedRemedy				
Change "equal" to "equal".				
Proposed Response		Response Status	O	

Cl 43B	SC 43B.2	P 424	L 28	# 564
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
I wasn't quite sure what "per link" means in a PON scenario. I guess you mean per outstation: thus the head end connected to 16 outstations could handle up to 1600 frames/s. Also it's not clear if "maximum length frames" means the recommended maximum, 128 octets, as above, or the hard maximum ~1500 octets.				
SuggestedRemedy				
Please clarify.				
Proposed Response		Response Status	O	

Cl 43B	SC 43B.2	P 555	L 47	# 183
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Says the slow protocols specified in 43 conform to this recommendation. Doesn't mention OAM.				
SuggestedRemedy				
Change NOTE to be: The LACP and Marker protocols defined in Clause 43 conform to this maximum frame size recommendation. The OAM protocol may generate frames greater than 128 octets.				
Proposed Response		Response Status	O	

Cl 45	SC 45.2	P 44	L 54	# 681
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Additional registers needed for PCS (PAF) error counters.				
SuggestedRemedy				
Add the following registers to table 45-1:				
TC_PAF_RxErrorReceived; TC_PAF_FragmentTooSmall; TC_PAF_FragmentTooLarge; TC_PAF_Overflow; PAF_LostFragment				
Add subclause:				
45.2.2.5 PMI Aggregation Function RxError Received counter				
TC_PAF_RxErrorReceived, 16 bit counter: (for each PMA, gamma interface) this counts the number of fragments that have been received across the gamma interface with RxErr asserted.				
45.2.2.6 PMI Aggregation Function Fragment Too Small counter				
TC_PAF_FragmentTooSmall, 16 bit counter: (for each PMA, gamma interface) this counts the number of fragments that have been received across the gamma interface which were smaller than the minFragmentSize defined.				
45.2.2.7 PMI Aggregation Function Fragment Too Large counter				
TC_PAF_FragmentTooLarge, 16 bit counter: (for each PMA, gamma interface) this counts the number of fragments that have been received across the gamma interface which were larger than the maxFragmentSize defined.				
45.2.2.7 PMI Aggregation Function Overflow counter				
TC_PAF_Overflow, 16 bit counter: (for each PMA, gamma interface) this counts the number of fragments that have been received across the gamma interface which would have caused the receive buffer to overflow.				
45.2.2.8 PMI Aggregation Function Bad Fragment Received counter				
PAF_BadFragmentReceived, 16 bit counter: this counts the number of fragments that have been received which did not fit into the sequence expected by the frame assembly function.				
45.2.2.9 PMI Aggregation Function Lost Fragment counter				
PAF_LostFragment, 16 bit counter: this counts the number of gaps in the sequence of fragments expected by the frame assembly function.				
Proposed Response		Response Status	O	

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CI 45	SC 45.2.1.1	P45	L13	# 62	
Marris, Arthur		Cadence Design Foun			
Comment Type	T	Comment Status	D		
In EFM copper deployments the exposed MAC-PHY interface is likely to be SMII or RMII. This is because low cost multiport ethernet switch silicon is available. These chips will enable multiple subscriber loops to be aggregated in the CO. These chips use SMII or RMII as the MAC-PHY interfaces. To reduce pin count these interfaces infer a collision when TX_EN and CRS are asserted simultaneously. To work with SMII or RMII interfaces the MAC-PHY rate matching state machines need a minor modifications which is the subject of another comment. Also they need to know whether an SMII or RMII interface is present. A bit needs to be added to the PHY-MAC rate matching register to indicate this. <i>SuggestedRemedy</i> Add bit 3.44.14 TX_EN and CRS infer a collision 0 is the default Changed range of reserved bit definitions to 3.44.13:0 Add 45.2.1.1.2 TX_EN and CRS infer a collision This bit is set for exposed MAC-PHY interfaces (such as RMII or SMII) that do not have a separate collision signal but infer a collision when TX_EN and CRS are asserted simultaneously.					
Proposed Response		Response Status	O		

CI 45	SC 45.2.2	P45	L25	# 436	
Cravens, George		Mindspeed			
Comment Type	E	Comment Status	D		
Multiple locations in Clause 45 refer to "Loop Aggregation". The term was changed to "PMI Aggregation" during the interim meeting. <i>SuggestedRemedy</i> Global search and replace of "Loop Aggregation" with "PMI Aggregation".					
Proposed Response		Response Status	O		

CI 45	SC 45.2.2.4	P47	L49	# 437	
Cravens, George		Mindspeed			
Comment Type	E	Comment Status	D		
Remove "that" between code and used. <i>SuggestedRemedy</i> Change sentence to: The Aggregation Discovery Code register stores the code used by the Loop Aggregation discovery mechanism.					
Proposed Response		Response Status	O		

CI 45	SC 45.3.1	P48	L	# 309	
Barnea, Eyal		Metalink			
Comment Type	TR	Comment Status	D		
The NT should be able to advertise on suggested PMA and PMD registers to the LT , using separate registers. This comment is also for subclause 45.4.1 <i>SuggestedRemedy</i>					
Proposed Response		Response Status	O		

CI 45	SC 45.3.1.1	P48	L36	# 438	
Cravens, George		Mindspeed			
Comment Type	E	Comment Status	D		
Bit 6 is part of the interleaver block size (not reserved). <i>SuggestedRemedy</i> Change 1.x.6:0 to 1.x.5:0					
Proposed Response		Response Status	O		

CI 45	SC 45.3.1.2	P49	L10	# 439	
Cravens, George		Mindspeed			
Comment Type	E	Comment Status	D		
NT Interleaver Block size should be bits 7:6, and 5:0 should be reserved. Also, heading for 45.3.1.2.3 calls out bits 7:1 for interleaver depth. <i>SuggestedRemedy</i> Change NT interleaver block size to bits 1.x.7:6 and Reserved to 1.x.5:0 Also, heading for 45.3.1.2.3 should say NT interleaver block size (1.x.7:6)					
Proposed Response		Response Status	O		

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Cl 45	SC 45.3.1.3	P 49	L 40	# 425
Cravens, George		Mindspeed		
Comment Type	E	Comment Status	D	
Minor typo in last line of Table 45-9 and 45-10. R/W column shows CRb ("b" should be superscript).				
<i>SuggestedRemedy</i>				
Change last line entry of R/W column for both Table 45-9 and 45-10 to CRb				
Proposed Response		Response Status	O	

Cl 45	SC 45.4.1.17	P 62	L 2	# 310
Barnea, Eyal		Metalink		
Comment Type	T	Comment Status	D	
There is no RX PSD level register in T1.424				
<i>SuggestedRemedy</i>				
Delete the subclause				
Proposed Response		Response Status	O	

Cl 54	SC 54	P 51	L 13	# 99041
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	D1.0 #285
OLT and ONU are bad nomenclature.				
They are not true opposites.				
One cannot extract any meaning from them, apart from that something is optical: what is the difference between a "Line Termination" and a "Network Unit"? How can one tell which is the centre of the star and which is used multiple times at its points?				
<i>SuggestedRemedy</i>				
What does the cable TV industry use?				
Proposed Response		Response Status	W	
Pending resolution of numerous comments on naming				

Cl 54	SC 54.1	P 68	L 19	# 116
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
The OAM sublayer is shown as optional. It is mandatory for EFM PHYs, which is the context of Figure 54-1.				
<i>SuggestedRemedy</i>				
The "(Optional)" text in the OAM sublayer should be deleted.				
Proposed Response		Response Status	O	

Cl 54	SC 54.1	P 69	L 7	# 117
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
The OAM sublayer is shown as optional. It is mandatory for EFM PHYs, which is the context of Figure 54-2.				
<i>SuggestedRemedy</i>				
The "(Optional)" text in the two OAM sublayers shown should be deleted.				
Proposed Response		Response Status	O	

Cl 54	SC 54.1.2	P 69	L	# 129
Yoshimura, Minoru		NEC		
Comment Type	E	Comment Status	D	
Point to Point Emulation Sublayer stated in 54.1.2 is not explained in Clause57.				
<i>SuggestedRemedy</i>				
Add descriptions that clarify the relationship between Point to Point Emulation Sublayer and Reconciliation Sublayer.				
Proposed Response		Response Status	O	

C/ 55	SC 1.6.3	P 76	L 50	# 146		C/ 55	SC 4.2	P 79	L 39	# 148	
Kramer, Glen		Teknovus				Kramer, Glen		Teknovus			
Comment Type	T	Comment Status	D			Comment Type	TR	Comment Status	D		
OAM is being implemented as a tool to monitor and control remote end including some form of data flow control (ex: loopback). As such, OAM PDUs should not use the same data path that they ultimately control.											
Additionally, when a device is placed in a loopback mode, data frames from the client will be blocked (see Fig 55-3). But client may also contain OAM PDUs that use the same data path. These OAM PDUs should be transmitted even in the loopback mode. It is not clear how MAC Client will know that said OAM PDUs can be transmitted, but that some regular data frames cannot.											
<i>SuggestedRemedy</i>											
A logical way to implement OAM is to not use MA_DATA path. OAM PDUs should have a separate Ethertype (OAM Control) and use MA_OAM.request and MA_OAM.indication primitives.											
The advantages of having a separate MA_OAM primitives are											
(1) OAM-capable devices still can support PAUSE operation											
(2) Will not subject OAM traffic to any rate limit											
(3) Avoids problems with OAM PDUs blocked behind data frames in the MAC Client.											
(4) Will send a positive message to the customers saying that 802.3ah recognizes the importance of OAM in the access environment (enough so that we dedicate a new Ethertype to it)											
Proposed Response						Proposed Response					
<i>SuggestedRemedy</i>											
Actual loop back of data frames should be done in MAC Client. Upon receiving Loopback Control frame, the OAM sublayer will indicate to MAC Client that it should loop back. MAC Client already has Tx queue and Rx queue, so loop back is straightforward.											
This method also solves all issues with P2MP. The size of the Tx queue is reported by the REPORT message. The only difference is that in the loopback mode, the Tx queue is populated by the frames from the Rx queue.											
This method will allow lossless loopback and will not require large buffer in OAM sublayer.											
Thus, for MPCP there will be no difference whether remote device is in a loopback mode or not. The correct state of the Tx queue will be reported to the OLT every time.											
Several supporting slides will be submitted to the OAM STF chair.											
Proposed Response						Proposed Response					
<i>Response Status</i>											

P802.3ah Draft 1.0 Comments

CI 55	SC 4.2	P79	L45	# 147
Kramer, Glen		Teknovus		
Comment Type	T	Comment Status	D	
In loopback mode, frames received by the local device should not be sunk in OAM layer. Data frames originate in MAC Client sublayer, and should be sunk in the same sublayer no matter whether they were loopbacked or not.				
For example, the local MAC Client may need to analyze the contents of all looped-back frames to understand which frames were lost, etc. OAM layer cannot be flexible enough to know what to do with loopbacked frames.				
<i>SuggestedRemedy</i>				
Modify clause 55.4.2 and Figure 55-3 to show that the loopbacked frames are passed to local MAC Client (through MA_DATA.indication)				
Proposed Response		Response Status	O	

CI 55	SC 5.6.3.2	P95	L1718	# 109
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Need to broaden the scope of the events referenced.				
<i>SuggestedRemedy</i>				
Change "to alert the remote device of link-related OAM events defined in 55.2.2." to "to alert the remote device of the OAM events defined in 55.2".				
Proposed Response		Response Status	O	

CI 55	SC 55	P73	L23	# 15
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Tabs missing in Revision History section.				
<i>SuggestedRemedy</i>				
Add tabs for readability.				
Proposed Response		Response Status	O	

CI 55	SC 55.1.1	P74	L1619	# 334
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
The first 2 sentences of the third paragraph are a repeat of information found in the first 2 paragraphs.				
<i>SuggestedRemedy</i>				
Remove the first 2 sentences of the third paragraph.				
Proposed Response		Response Status	O	

CI 55	SC 55.1.1	P74	L5	# 943
Richard Brand		Nortel Networks		
Comment Type	T	Comment Status	D	
Delete the words "an optional" in this line.				
<i>SuggestedRemedy</i>				
replace with the then add the following sentence to the paragraph at the end of line 9 (p. 74): "OAM is intended as an option for IEEE 802.3 physical layer devices, however implementation of OAM functionality is mandatory for subscriber access devices defined in Clauses 58, 59, 62 and 63.				
Proposed Response		Response Status	O	

CI 55	SC 55.1.1	P74	L5	# 69
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Line 5 says "This clause defines an optional Operations.". The wording "optional OAM" is also used on page 75 line 22, page 75 line 33, page 76 line 1. Finally on page 76 lines 39-41 it is stated that "Implementation of OAM functionality is mandatory for subscriber access devices defined in Clauses..." I'm concerned that after reading four times that OAM is optional, someone might not read any further and miss that it is actually mandatory for some PHYs.				
<i>SuggestedRemedy</i>				
Suggest changing p.74 line 5 "This clause defines an optional Operations," to "This clause defines the Operations," and then copy and paste p.76 lines 39-41 to follow p.74 line 9. Then at least the context has been set early, so that when reading the wording "optional OAM" afterwards it should be clear there are exceptions.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.1.2	P74	L 24	# 157
Romascanu, Dan		Avaya Inc.		
Comment Type	E	Comment Status	D	
Text in lines 24 and 26 is redundant and confusing				
SuggestedRemedy				
delete text in line 26				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.3	P74	L 33	# 16
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Introductory sentence could be stated more simply.				
SuggestedRemedy				
Change				

"This section provides additional details on the functional requirements for OAM in Ethernet networks. Each of the objectives is clarified with a number of statements, and any additional miscellaneous clarifications are also detailed."

to:

"This section provide additional details and functional requirements for the OAM objectives."

Cl 55	SC 55.1.3	P74	L 34	# 335
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
The second sentence of the first paragraph doesn't add anything				
SuggestedRemedy				
Remove the second sentence of the first paragraph				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.3	P74	L 47	# 70
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording clarification.				
SuggestedRemedy				
Change "to support a frame-level loopback mode." to "to support a data link layer frame-level loopback mode."				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.3	P74	L 48	# 158
Romascanu, Dan		Avaya Inc.		
Comment Type	E	Comment Status	D	
Data Link Layer Text does not belong to 'remote loopback'				
SuggestedRemedy				
Move line 48 under d) Miscellaneous				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.3.a.2	P74	L 39	# 23
Veerayah, Kumaran		ICR		
Comment Type	E	Comment Status	D	
The term "unidirectional" is introduced here without being defined, or having any reference.				
SuggestedRemedy				

Change to "Subscriber access physical layer devices, defined in Clauses 59, 62, and 63 have the unidirectional support, which is the capability to send OAMPDU while the receive path is non-operational. Hence, OAM remote fault indication is allowed during fault conditions."

OR

Change to "Subscriber access physical layer devices, defined in Clauses 59, 62, and 63 have support unidirectional operation to allow OAM remote fault indication during fault conditions (See Tables 55-6 and 55-10)."

Proposed Response		Response Status	O
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P802.3ah Draft 1.0 Comments

Cl 55	SC 55.1.5	P75	L	# 596
Shin, Yoshida		Sumitomo Electric		
Comment Type	T	Comment Status	D	
In P2MP system, it is difficult to assign bandwidth to send OAMPDUs and OAM loopback frames precisely when needed, in the current OAM architecture.				
<i>SuggestedRemedy</i>				
I would like to propose a modified OAM architecture which introduces				
- OAM Client				
- MA_OAM.request and MA_OAM.indication primitives				
- OAM loopback at MAC Client				
Refer to the attached file.				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.5	P76	L 13	# 71
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Is it just me or does this paragraph say the same thing 3 times?				
<i>SuggestedRemedy</i>				
Change "It is possible to implement the optional OAM sublayer for some ports within a system while not implementing it for other ports; it is not necessary for all ports in a system to be subject to OAM. A conformant implementation is not required to implement the OAM sublayer for every port." to "A conformant implementation may implement the optional OAM sublayer for some ports within a system while not implementing it for other ports."				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.5	P76	L 13	# 336
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
These 3 sentences/phrases all say the same thing.				
<i>SuggestedRemedy</i>				
Recommend removing the second sentence of this paragraph.				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.5	P76	L 2	# 24
Veerayah, Kumaran		ICR		
Comment Type	E	Comment Status	D	
type				
<i>SuggestedRemedy</i>				
"be subject to OAM" to				
"be subjected to OAM"				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.5	P76	L 6	# 25
Veerayah, Kumaran		ICR		
Comment Type	E	Comment Status	D	
Abrupt end to the sentence, and diagram.				
<i>SuggestedRemedy</i>				
Move the diagram to 55.5, where it fits, and remove the sentence, or sentence can make reference to the diagram in 55.5.				
Proposed Response		Response Status	O	

Cl 55	SC 55.1.6.1	P76	L 38	# 337
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
What does this paragraph mean? Does it mean that Clause 58, 59, 60 & 61 PHYs must support OAM to be considered compliant but that systems using these PHYs don't have to turn OAM on? Or does it mean that systems using these PHYs must turn OAM on?				
The only OAM support these PHYs are capable of is unidirectional transmit. All other OAM functions are above the MAC layer so well above these PHYs. Is this what we're talking about?				
<i>SuggestedRemedy</i>				
Please clarify what the intention here is. If I understood it, I'd offer some actual text. Explain it to me and I'll help wordsmith with you!				
Proposed Response		Response Status	O	

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CI 55	SC 55.1.6.1	P76	L40	# 102	
Martin, David		Nortel Networks			
Comment Type	T	Comment Status	D		
Should add 100BASE to list.					
<i>SuggestedRemedy</i>					
Change "defined in Clauses 58, 59, 62 and 63" to "defined in Clauses 58, 59, 60, 62 and 63".					
Proposed Response		Response Status	O		
CI 55	SC 55.1.6.3	P76	L50	# 622	
Healey, Adam		Agere Systems			
Comment Type	TR	Comment Status	D		
MAC control PAUSE is required by multiple P2P fiber applications. These applications would also benefit from OAM, but the recommendation in 55.1.6.3 discourages the co-existence of these functions. It was shown in song_oam_1_0902.pdf that links that use MAC control PAUSE may also support OAM with modest changes to Figure 31B-1.					
<i>SuggestedRemedy</i>					
Modify Figure 31B-1 as recommended in song_oam_1_0902.pdf.					
Remove subclause 55.1.6.3.					
Proposed Response		Response Status	O		
CI 55	SC 55.1.6.3	P76	L52	# 163	
Seto, Koichiro		Hitachi Cable			
Comment Type	TR	Comment Status	D		
'Not recommending the use of OAM with Pause' is ambiguous and misleading. Disallowing the use of Pause operation with OAM is disservice to the users who rely on Pause for reliable packet-loss-less operation. However, if OAM in frame cannot fulfill the requirements and functionalities of OAM when used with Pause, the spec should accept the forthcoming and state the fact clearly.					
<i>SuggestedRemedy</i>					
1) The spec should either - diallow the use of Pause at all by changing the word 'not recommended' to 'prohibited' - place OAM sublayer parallel to MAC control and allow the use of OAM with Pause 2) The fact the OAM in frame would interfere the existing Ethernet operations such as Pause was not discussed when 802.3ah decided to use OAM in Frame over OAM in Preamble. Should we know this fact, many participants may have had a different opinion. Considering the forthcoming, we should consider the addition of OAM method that does not impose such a forthcoming.					
Proposed Response		Response Status	O		

CI 55	SC 55.2.1	P77	L27	# 18	
Daines, Kevin		World Wide Packets			
Comment Type	E	Comment Status	D		
Font size is 9 pt rather than 10 pt.					
<i>SuggestedRemedy</i>					
Bump font size.					
Proposed Response		Response Status	O		
CI 55	SC 55.2.1	P77	L27	# 72	
Martin, David		Nortel Networks			
Comment Type	E	Comment Status	D		
Font.					
<i>SuggestedRemedy</i>					
The text "An unrecoverable local failure condition has occurred." appears to be in a smaller font than the rest of the document, needs a tweak.					
Proposed Response		Response Status	O		
CI 55	SC 55.2.2	P77	L33	# 73	
Martin, David		Nortel Networks			
Comment Type	E	Comment Status	D		
Wording change.					
<i>SuggestedRemedy</i>					
Change the title from "OAM event descriptions" to "Event Indication description".					
Proposed Response		Response Status	O		
CI 55	SC 55.2.2	P77	L35	# 945	
Ho-Sook Lee		ETRI			
Comment Type	E	Comment Status	D		
It is required to describe the purpose and the usage of Table 55-1 in detail.					
<i>SuggestedRemedy</i>					
Proposed Response		Response Status	O		

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CI 55	SC 55.2.2	P77	L35	# 74
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording clarification.				
SuggestedRemedy				
Change "lists the defined OAM events." to "lists the defined OAM events which trigger the Event Indication flag."				
Proposed Response		Response Status	O	

CI 55	SC 55.2.2	P78	L1	# 591
Murakami, Ken		Mitsubishi Electric Cor		
Comment Type	T	Comment Status	D	
There are two comments on Table 55-1 as shown below.				
1)It is not clear how to decide the values of threshold and timed window in the following events.				
- Errored symbol period				
- Severely errored symbol period				
- Errored frame period				
- Severely errored frame period				
2)The actual error(s) corresponding to each event is not clear.				

SuggestedRemedy

1)Need to clarify how to decide the values of threshold and timed window.

And, if their values are constant, the fixed values should be indicated.

2)Need to clarify the actual error(s) corresponding to each event.

For example,

- Code violation corresponds to ...

- Preamble CRC error corresponds to

- FCS error corresponds to ...

and so on.

Proposed Response	Response Status
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O

CI 55	SC 55.2.3	P77	L37	# 75
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording change.				
SuggestedRemedy				
Change the title from "OAM event procedure" to "Event Indication procedure".				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P77	L40	# 682
Ueda, Iori		Matsushita Communic		
Comment Type	T	Comment Status	D	
The procedure of local event sending/receiving is not clear.				
Add the processing procedure performed while the local event continues.				
Add the processing procedure performed when a local event is cleared.				
Also add the flow chart.				
SuggestedRemedy				

Proposed Response	Response Status
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O

CI 55	SC 55.2.3	P77	L40	# 338
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Bullet a) What is the Event Table? I don't see this defined anywhere in the clause.				
SuggestedRemedy				
Add a description of the Event Table.				
Proposed Response	Response Status			

O

CI 55	SC 55.2.3	P77	L40	# 685
Ueda, Iori		Matsushita Communic		
Comment Type	T	Comment Status	D	
Event Table and Remote Event Table need to be define.				
SuggestedRemedy				
define Event Table and Remote Event Table.				
Proposed Response	Response Status			

O

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Cl 55	SC 55.2.3	P 77	L 40	# 184
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
We say "Event Indication flag bit is sent." If there is no PDU, this cannot happen as the EI is part of a frame. I think this step is unnecessary, and instead when we transmit a PDU we set the bit to 0/1 based upon whether the Event Table is empty.				
SuggestedRemedy				
Remove the line saying "Event Indication flag bit is set." Then, on page 74 line 5, change the meaning of Event indication in the table to				
1 = Event table is not empty				
0 = Event table is empty				
Proposed Response		Response Status	O	

Cl 55	SC 55.2.3	P 77	L 4054	# 26
Veerayah, Kumaran		ICR		
Comment Type	TR	Comment Status	D	
With the self-cleared event table, there are few limitations:				
- loss of information if the remote device does not retrieve the data expeditiously.				
- Same event may be retrieved more than once since EI flag does not indicate which event, or how many events are in the event table				
SuggestedRemedy				
Since the event table already has timestamp as an entity in each entry, retrieval of events can be based on it. The local device maintains a timestamp for its last event. The remote device on the other hand maintains a record of timestamps corresponding to the devices. Upon receipt of event notification, remote device can query the last timestamp, followed by retrieval of all events occurred (or registered) between the 2 timestamps (remote's and local's).				
With this, there is no need for self-clearance of event table, and loss of event information is minimized. Retrieval of information for the same event will not be an issue too.				
Proposed Response		Response Status	O	

Cl 55	SC 55.2.3	P 77	L 41	# 76
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Anal wording change.				
SuggestedRemedy				
Change "First, the event" to "The event".				
Proposed Response		Response Status	O	

Cl 55	SC 55.2.3	P 77	L 41	# 687
Arnold, Brian		Cisco Systems		
Comment Type	T	Comment Status	D	
Several details regarding Events and the Event Table need further clarification. For instance, what is the size and structure of the Event Table? Is the size negotiable via OAM Discovery? Must the size be the same on both sides? What happens if the Event Table is overrun with events that have not yet aged out? Is there some indication of an event being dropped or cleared from the Event Table? Presuming both sides have write access to their own and each other's Event Tables (via event entry on local, clear-on-read for remote), do we need to specify a mechanism to prevent race conditions?				
SuggestedRemedy				
Just a placeholder for the group to specify more detail in the Event Notification structure and mechanism. Request to keep solution as simple as possible, software-implementation-friendly, and keeps OAMPDU traffic to a minimum.				
Proposed Response		Response Status	O	

Cl 55	SC 55.2.3	P 77	L 41	# 159
Romascanu, Dan		Avaya Inc.		
Comment Type	E	Comment Status	D	
Event Table seems to refer to table 55-1. However, this is not clear, and table 55-1 is called differently				
SuggestedRemedy				
- refer to table 55-1 in linwe 41				
- change name of table 55-1 to 'Event Table'				
Proposed Response		Response Status	O	

Cl 55	SC 55.2.3	P 77	L 42	# 77
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Anal wording change.				
SuggestedRemedy				
Change "Event Indication flag bit set." to "The Event Indication flag bit is set."				
Proposed Response		Response Status	O	

P802.3ah Draft 1.0 Comments

CI 55	SC 55.2.3	P 77	L 42	# 186
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
"Optionally, an Evnet Notification OAMPDU may be sent" seems redundant (optionally, may).				
<i>SuggestedRemedy</i>				
Remote "optionally."				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 77	L 43	# 688
Arnold, Brian		Cisco Systems		
Comment Type	T	Comment Status	D	
If an optional Event Notification OAMPDU is sent by the local side, and contains one or more Variable Containers that includes the same or more information than would be contained in the local Event Table for this event, is it a requirement that the remote side query the local Event Table (line 52)? Is it sufficient for the remote to allow the local Event to self-clear without having been read?				
Additionally, is it strictly necessary to place the Event information in the Event Table if the Event Notification OAMPDU contains all the interesting information available, and if it is not crucial that the interesting information arrive intact (one of the original motivations for the Event Table, I believe)?				
<i>SuggestedRemedy</i>				
Suggest that the group evaluate the benefits of our current Event mechanism versus its complexity and either reaffirm that this is the model we really want or come up with something less complex that still meets our primary requirements of remote failure indication, loopback, and link monitoring.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 77	L 46	# 78
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Really anal wording change.				
<i>SuggestedRemedy</i>				
Change "Event self-clears from Event Table" to "The event self-clears from the Event Table".				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 77	L 48	# 79
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording change.				
<i>SuggestedRemedy</i>				
Change "when a remote event is detected:" to "when an OAMPDU is received with the Event Indication flag active."				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 77	L 49	# 185
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Bullet (a) confusing in that it looks like the remote event is stored in the local event table.				
<i>SuggestedRemedy</i>				
Change "reflects the state that Event Table has at least one Event" to "reflects the state that the remote Event Table has at least one Event."				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 77	L 50	# 80
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording clarification.				
<i>SuggestedRemedy</i>				
Change "First, the remote event is detected by sensing the Event Indication flag bit set. Event Indication reflects the state that Event Table has at least one Event." to "A remote event is detected by sensing an active Event Indication flag in a received OAMPDU. The active Event Indication flag reflects that the corresponding Event Table has at least one active event."				
Proposed Response		Response Status	O	

P802.3ah Draft 1.0 Comments

<i>Cl</i> 55	<i>SC</i> 55.2.3	<i>P</i> 77	<i>L</i> 50	<i>#</i> 187
Squire, Matt		Hatteras Networks		
<i>Comment Type</i>	TR	<i>Comment Status</i>	D	
Procedures for remote events confuse me.				
<i>SuggestedRemedy</i>				
New procedures:				
a) The local device sets the variable XXsomethingXX to the value of the Event Indicator flag in every received PDU.				
b) Whenever the variable XXsomethingXX is set, the local device should query the remote device for the value of its event table (via a Variable Request OAMPDU) at least every 3 seconds.				
Question: How do we address "many" events happening? Limit the size of the PDU?				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 55	<i>SC</i> 55.2.3	<i>P</i> 77	<i>L</i> 50	<i>#</i> 686
Arnold, Brian		Cisco Systems		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
A commenter referencing 55.2.3.a (for instance) without referencing the line number will be making an ambiguous reference due to two instances of a-c under 55.2.3.				
<i>SuggestedRemedy</i>				
Re-label a), b), and c) on lines 50, 52, and 54, as e), f), and g), respectively.				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 55	<i>SC</i> 55.2.3	<i>P</i> 77	<i>L</i> 52	<i>#</i> 623
Healey, Adam		Agere Systems		
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
Subclause states that upon detection of a remote event, local device queries the "Remote Event Table". It is currently unclear how this will be achieved since the "Remote Event Table" does not appear in the clause 30 management definition nor is an OAMPDU for this purpose defined in this clause.				
<i>SuggestedRemedy</i>				
Define "Event Table" management object in clause 30 and link to clause 55 with details of how each member of "Event Table" is set (Table 55-1 looks like the intended starting point). Presumably, the event table would then be read with Variable Request PDU.				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 55	<i>SC</i> 55.2.3	<i>P</i> 77	<i>L</i> 52	<i>#</i> 81
Martin, David		Nortel Networks		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
Wording change.				
<i>SuggestedRemedy</i>				
Change "Remote Event Table is queried within 3 seconds of detecting the Event Indication flag. Event Table entry self-clears when read." to "The local device must query the remote device Event Table within 3 seconds of detecting the Event Indication flag. The Event Table entry self-clears when read."				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 55	<i>SC</i> 55.2.3	<i>P</i> 77	<i>L</i> 53	<i>#</i> 339
Brown, Benjamin		AMCC		
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
Bullet b) What happens if the "Variable Response" is lost? Is the event lost for good?				
Also, shouldn't the "event" bit be clear in this Variable Response so the local device doesn't think there's yet another event to read from the table?				
<i>SuggestedRemedy</i>				
Describe the effects of these conditions.				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 55	<i>SC</i> 55.2.3	<i>P</i> 77	<i>L</i> 54	<i>#</i> 82
Martin, David		Nortel Networks		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
Wording change.				
<i>SuggestedRemedy</i>				
Change "Queries are repeated as long as Event Indication flag is set." to "The local device queries the remote device Event Table as long as the received Event Indication flag is set."				
<i>Proposed Response</i>		<i>Response Status</i>	O	

P802.3ah Draft 1.0 Comments

CI 55	SC 55.2.3	P78	L1	# 83
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording change.				
SuggestedRemedy				
Change the title "OAM Events" to "Event Indication Flag Triggers".				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P78	L11	# 86
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Wording change and proposal for period and threshold values.				
SuggestedRemedy				
Change "Errored frame period" to "Errored frame second".				
Change "Defined threshold and timer. If non-zero and below threshold in timed window, errored." to "An Errored Frame Second is defined as a 1 second interval with less than X errored frames for a Y rate Ethernet link. Where X=128 for Y=1000BASE; X=13 for Y=100BASE, X=1 for Y=10BASE". See attached spreadsheet for arithmetic. Will need to discuss 1 sec period versus 3 sec query period.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P78	L14	# 87
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Wording change and proposal for period and threshold values.				
SuggestedRemedy				
Change "Severely errored frame period" to "Severely errored frame second".				
Change "Defined threshold and timer. If exceed threshold in timed window, severely errored." to "A Severely Errored Frame Second is defined as a 1 second interval with X or more errored frames for a Y rate Ethernet link. Where X=128 for Y=1000BASE; X=13 for Y=100BASE, X=1 for Y=10BASE." See attached spreadsheet for arithmetic. Will need to discuss 1 sec period versus 3 sec query period.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P78	L17	# 189
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
Not a fan of power/temperature alarms. These seem outside the scope of 802.3 and can just as easily be covered in vendor specific.				
SuggestedRemedy				
Remove power/temperature.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P78	L22	# 690
Arnold, Brian		Cisco Systems		
Comment Type	E	Comment Status	D	
Table 55-1. The phrase "PHY-aggregated loops" is technically accurate and conveys the correct meaning, but the copper track seems to have altered their nomenclature by calling this "PHY PMI Aggregation" in 61.2.2 among other places. If the "Loop Fault" row in Table 55-1 is referring to the copper PHY PMI Aggregation, this text could be similarly altered.				
SuggestedRemedy				
Purely at the discretion of the editor, the references to "PHY loop aggregation" in Clause 55 may be altered to be consistent with the new nomenclature referenced in Clause 61.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P78	L24	# 190
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Aggregated loop errors not detected by OAM PDUs. Only signaled by PDUs.				
SuggestedRemedy				
Replace loop fault comment with:				
In an PHY using PMI Aggregation as described in XXX, the LoopFault event indicates that at least one of the loops within that aggregated set is failed. The specific loop(s) that failed should be signaled within an Event Notification PDU or may be retrieved from the far end Event Table.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 78	L 5	# 188
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
The event table is difficult to understand.				
SuggestedRemedy				
Suggestions:				
1) Replace the lines "if non-zero..." with				
"				
An ErroredSymbolPeriod error occurs the number of symbol errors (xxVARIABLEExx) within				
a window of xxVARIABLEExx duration exceeds zero but is less than xxVARIABLEExx.				
"				
2) Add numbers for events so they can be identified in PDUs.				
3) Add MIB like names for events in table.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 78	L 6	# 84
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Wording change and proposal for period and threshold values.				
SuggestedRemedy				
Change "Errored symbol period" to "Errored symbol second".				
Change "Defined threshold and timer. If non-zero and below threshold in timed window,				
errored." to "An Errored Symbol Second is defined as a 1 second interval with less than X				
symbol errors for a Y rate Ethernet link. Where X=125 for Y=1000BASE; X=25 for				
Y=100BASE; X=10 for Y=10BASE." See attached spreadsheet for arithmetic. Will need to				
discuss 1 sec period versus 3 sec query period.				
Proposed Response		Response Status	O	

CI 55	SC 55.2.3	P 78	L 9	# 85
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Wording change and proposal for period and threshold values.				
SuggestedRemedy				
Change "Severely errored symbol period" to "Severely errored symbol second".				
Change "Defined threshold and timer. If exceed threshold in timed window, severely				
errored." to "A Severely Errored Symbol Second is defined as a 1 second interval with X or				
more symbol errors for a Y rate Ethernet link. Where X=125 for Y=1000BASE; X=25 for				
Y=100BASE, X=10 for Y=10BASE." See attached spreadsheet for arithmetic. Will need to				
discuss 1 sec period versus 3 sec query period.				
Proposed Response		Response Status	O	

CI 55	SC 55.3	P 78	L 31	# 20
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Grammar problem.				
SuggestedRemedy				
Change "the OAM sublayer send a Ping Request" to "the OAM sublayer sends a Ping				
Request".				
Proposed Response		Response Status	O	

CI 55	SC 55.3	P 78	L 32	# 341
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
wrong word				
SuggestedRemedy				
Replace "send" with "sends"				
Proposed Response		Response Status	O	

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Cl 55	SC 55.3	P78	L 3536	# 88
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording clarification.				
SuggestedRemedy				
Change "The link remains in an operational state while the OAM sublayer multiplexes Ping Request and Ping Response OAMPDUs into the subordinate sublayer." to "The link remains in an operational state while the local device OAM sublayer multiplexes Ping Request OAMPDUs with MAC Client data and the remote device OAM sublayer multiplexes Ping Response OAMPDUs with MAC Client data".				
Proposed Response		Response Status	O	

Cl 55	SC 55.3	P78	L 37	# 21
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Verb tense should be changed.				
SuggestedRemedy				
Change "will be" to "is".				
Proposed Response		Response Status	O	

Cl 55	SC 55.3	P78	L 40	# 191
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
I think the text here conflicts with my recollection of what David wanted to put in clause 30, where the size and contents of the ping cannot be set by management, only the triggering of the ping.				
SuggestedRemedy				
Resolve any conflict(s) with text and ping operation.				
Proposed Response		Response Status	O	

Cl 55	SC 55.3	P78	L 42	# 22
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Change verb tense.				
SuggestedRemedy				
Remote "will".				
Proposed Response		Response Status	O	

Cl 55	SC 55.3	P78	L 42	# 342
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Is this the place to put a shall on the content of the Ping Response				
SuggestedRemedy				
Replace "will" with "shall" unless this is being taken care of somewhere else. If it's somewhere else then, simply remove the word "will".				
Proposed Response		Response Status	O	

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Cl 55	SC 55.3.3.2 and 56.3.4	P74 and 122	L	# 99042	
Jin Kim		Samsung			
Comment Type	TR	Comment Status	R	D1.0 #166	
It is important to provide the fairness between user stations. The current REPORT message only reports total queue size in ONU, and which can not guarantee the fairness.					
One way of doing this is ONU provides to OLT how many user stations are currently active.					
SuggestedRemedy					
There are two possible ways.					
1) Use 2 bytes in the current MPCP REPORT message for the ONU _j 's active user station number.					
2) Use 2 bytes in the current OAM Keep Alive message for the ONU _j 's active user station number.					
Proposed Response		Response Status	W		
REJECT.					
Clause 55 will be kept media/topology independent. As such, the commenter should pursue the first suggested remedy with the P2MP STF.					
Note: The EFM OAM Editor copied the P2MP Chair and Editor on this comment, as the comment sort likely didn't parse the dual sub-clauses and page numbers.					

25	6	5			
Cl 55	SC 55.4	P78	L47	# 343	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
missing comma					
SuggestedRemedy					
Replace "mode which is" with "mode, which is"					
Proposed Response		Response Status	O		

Cl 55	SC 55.4	P78	L48	# 27	
Veerayah, Kumaran		ICR			
Comment Type	E	Comment Status	D		
Comma missing					
SuggestedRemedy					
"After loopback mode is exited the statistics from both the local and remote device...." to "After loopback mode is exited, the statistics from both the local and remote devices...."					
Proposed Response		Response Status	O		

Cl 55	SC 55.4	P78	L48	# 192	
Squire, Matt		Hatteras Networks			
Comment Type	E	Comment Status	D		
The sentence "During loopback, a device is permitted to send variable length frames, with varying data fields" doesn't seem useful. You can always do this.					
SuggestedRemedy					
yank the sentence.					
Proposed Response		Response Status	O		

Cl 55	SC 55.4	P78	L49	# 851	
Thatcher, Jonathan		World Wide Packets			
Comment Type	T	Comment Status	D		
Sentence "After loopback... compared" unnecessarily implies that loopback statistics can only be read on exit from loopback.					
SuggestedRemedy					
Clarify that statistics can be read at any time. Make sure state machines allow this, especially under error conditions.					
Proposed Response		Response Status	O		

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CI 55	SC 55.4	P82	L	# 202
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
State diagram covers only "Active" mode.				
SuggestedRemedy				
Include another initialization state that says "PASSIVE_WAIT" (or something) at the top where a passive node sits and waits till it gets an information OAM PDU from the peer, and then it goes to SEND_LOCAL_REMOTE_1. Also need to show the SEND_LOCAL_ONLY applies just to Active mode.				
Proposed Response		Response Status		
		O		

CI 55	SC 55.4	P85	L	# 203
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
We need to reset mr_oam_satisfied whenever we lose connectivity.				
SuggestedRemedy				
See comment. Might want to include 3 states: unknown, true, and false.				
Proposed Response		Response Status		
		O		

CI 55	SC 55.4	P85	L	# 204
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
Maybe we should separate out loopback states from initialization states.				
SuggestedRemedy				
Two different states: oam_state, oam_lb_state, each controlled by a different diagram, each half of the current 55-4.				
Proposed Response		Response Status		
		O		

CI 55	SC 55.4	P85	L 1	# 200
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
link_loss_timer_done not defined.				
SuggestedRemedy				
Define timer in previous section(s). Also need to include it in transitions back to the initial state.				
Proposed Response		Response Status		
		O		

CI 55	SC 55.4	P85	L 10	# 201
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Can't read "1" at the end of "SEND_LOCAL_REMOTE_1".				
SuggestedRemedy				
Center text.				
Proposed Response		Response Status		
		O		

CI 55	SC 55.4.1	P79	L 22	# 946
Ho-Sook Lee		ETRI		
Comment Type	E	Comment Status	D	
It will be better to elaborate the loop-back procedure in the remote site and the termination procedure of the loop-backed frames in the local site.				
SuggestedRemedy				
Proposed Response		Response Status		
		O		

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Cl 55	SC 55.4.1	P79	L 2331	# 355
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
No description is provided of a loopback timer in the remote device nor when and how it gets loaded with the Loopback_Time value from the Loopback Control OAMPDU				
SuggestedRemedy				
Add this description:				
"Upon receipt of a valid Loopback Control OAMPDU, the remote device starts a timer for the length of time specified by the Loopback_Time value in the OAMPDU (see 55.6.3.3). The value of the variable lb_timer_DONE is set to false upon the setting of the lb_timer to a non-zero value. The value of the variable lb_timer_Done is set to true when the timer reaches zero (i.e., the timer expires). If the received Loopback Control OAMPDU indicates a Loopback_Time value of zero, the value of lb_timer_DONE is set to true immediately.				
The receipt of a valid Loopback Control OAMPDU will cause the lb_timer to be set according to the Loopback_Time value in the newly received OAMPDU, regardless of the current setting of the lb_timer, i.e. the new Loopback_Time value overrides an earlier value."				
This text is loosely copied from 31B.3.3.				
This requires a new lb_timer timer in the Timer section, 55.5.2.1.5.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.1	P79	L 24	# 89
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Add that Management may request a loopback.				
SuggestedRemedy				
Add "Management may request an OAM loopback." The corresponding additions to clause 30 will be required. David Law has a draft presentation from the September meeting with the proposed changes. I have a comment for this against Clause 30.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.1	P79	L 25	# 344
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
In reference to the second sentence of this first paragraph:				
Why? It should be up to the MAC Client to control this since the MAC Client is the source of the loopback frames. It should stop data until loopback is turned on or resolving counters may be difficult but it can choose to do anything it wants.				
SuggestedRemedy				
Remove this sentence, along with the word "Also" at the start of the next sentence.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.1	P79	L 25	# 852
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
2nd sentence is not clear that intent is to ensure that no frames are sent until confirmation is received that the remote side is in loopback mode (because there is no way to know what will happen with them).				
SuggestedRemedy				
...is blocked until confirmation is received that the remote side is in loopback mode.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.1	P79	L 2526	# 90
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Incorrect statement.				
SuggestedRemedy				
Delete the sentence "When this request is sent, the path from the MAC Client to the OAM sublayer in the local device is blocked."				
Proposed Response		Response Status	O	

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CI 55	SC 55.4.1	P79	L28	# 624
Healey, Adam		Agere Systems		
Comment Type	T	Comment Status	D	
Subclause specifies that Information PDU indicating loopback must be received within 1 second of transmission of OAM loopback PDU. However, OAM entity may be configured to transmit as slow 1 frame per second and, accounting for MAC, PHY, and media delay, a compliant implementation may not be able to meet the specified response time. This could create redundant and unnecessary loopback requests.				
This same issue would apply to Variable Request / Response transactions.				
<i>SuggestedRemedy</i>				
Increase timeout to 2 s second to prevent spurious additional requests.				
Proposed Response		Response Status	O	

CI 55	SC 55.4.1	P79	L30	# 135
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	T	Comment Status	D	
Whether the local device retransmits the loopback request or not should be an implementation matter.				
<i>SuggestedRemedy</i>				
"may" should be inserted between "device" and "retransmits".				
Proposed Response		Response Status	O	

CI 55	SC 55.4.1	P79	L30	# 401
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Missing text.				
<i>SuggestedRemedy</i>				
After "retransmits the loopback request" add "and restarts the timer."				
Proposed Response		Response Status	O	

CI 55	SC 55.4.2	P70	L42	# 28
Veerayah, Kumaran		ICR		
Comment Type	T	Comment Status	D	
The "sunk" in lines 42, and 45 is not descriptive. Is this sunk meant to be a sink state, or reaching the sink location.				
<i>SuggestedRemedy</i>				
Change to either sink state, or reach the sink (whichever is the right one).				
Proposed Response		Response Status	O	

CI 55	SC 55.4.2	P79	L26	# 193
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
I dont think we have a state or a variable covering the condition where the local device has sent a loopback request to the far end and needs to block traffic from the MAC client.				
<i>SuggestedRemedy</i>				
Add variable, state, and modify the NTT diagram.				
Proposed Response		Response Status	O	

CI 55	SC 55.4.2	P79	L33	# 118
Takashi, Ezawa		Oki Electric Industry C		
Comment Type	T	Comment Status	D	
It isn't mentioned clearly about the point where loopback test frames are generated and about the point where they are checked.				
According to figure 55-3, in the local device, the loopback test frames are passed from MAC Client to the subordinate sublayer.				
On the other hand, the loopback test frames from the subordinate sublayer are blocked at the OAM sublayer in the local device.				
From this point of view, how to check the normality of the loopback test frames isn't mentioned.				
These should be mentioned more clearly in this subclause.				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	

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Cl 55	SC 55.4.2	P79	L39	# 931
Seyoun LIM		SAMSUNG ELECTRO		
Comment Type	T	Comment Status	D	
In the text, Remote Device loops back every frame that does not contain one of the sixteen multicast addresses reserved for bridge protocols. Frames that contain one of the sixteen multicast addresses reserved for bridge protocols are passed to the MAC client. Because Slow Protocolj's DA is also one of sixteen multicast addresses reserved, the text of draft means OAM PDUs looped back are all passed to the MAC client.				
SuggestedRemedy				
OAM PDUs are expected to loop back in the loopback mode. Frames that contain one of the sixteen multicast addresses reserved for bridge protocols are passed to the MAC client except OAM PDUs.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.2	P79	L40	# 402
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Text warns of frames containing reserved multicast address. This restriction is limited to the DA, not the entire frame.				
SuggestedRemedy				
Reword b) as follows:				
"Within the OAM sublayer, the remote device loops back every frame that has a destination address other than one of the sixteen reserved multicast addresses. OAMPDUs received by the remote device are parsed, acted upon and sunk. Non-OAMPDU frames with destination addresses equal to one of the sixteen reserved multicast addresses are passed to the MAC Client."				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.3	P79	L45	# 625
Healey, Adam		Agere Systems		
Comment Type	T	Comment Status	D	
In loopback mode, the entity to source frames should be the entity that sinks the frames. It is currently defined that MAC Client sources the frames, so the MAC Client should sink the frames to facilitate data pattern verification and complete loopback coverage.				
SuggestedRemedy				
Alter item (d) and Figure 55-3 to show that loopback frames terminate at the local MAC client, and not OAM sublayer.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.3	P79	L53	# 194
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
Seems like we should talk about what triggers a local device to leave loopback rather than from the remote view.				
SuggestedRemedy				
Exiting loopback:				
A device that is put into loopback mode by its OAM peer stays in loopback until:				
a) the loopback time expires				
b) the device receives a Loopback Control OAMPDU with a loopback time of zero				
Not sure where the (c) one comes from.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.3	P79	L54	# 136
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	T	Comment Status	D	
According to 55.4.3 c), the remote device may decide to exit loopback, while it is still in loopback mode. But this event is not described in the state machine in Figure55-4. It is not clear how "lb_timer" is handled when the remote device decides to terminate loopback mode.				
SuggestedRemedy				
There is no definition on timer "lb_timer" in the draft. There should be a definition of "lb_timer". The definition also should address how "lb_timer" is handled when the remote device decides to terminate loopback mode.				
When the remote device decides to terminate loopback mode, it should first set "lb_timer" zero(0), then transit to the next state.				
Proposed Response		Response Status	O	

Cl 55	SC 55.4.3	P79	L54	# 403
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Missing "				
SuggestedRemedy				
Add " "				
Proposed Response		Response Status	O	

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CI 55	SC 55.4.3	P79	L54	# 404
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Text regarding 'exiting loopback' should be added comparable to the text about 'initiating loopback.'				
SuggestedRemedy				
In a new line after bullet c) add "When this occurs, the remote device sends an Information OAMPDU indicating it has exited loopback mode and is waiting for acknowledgement from the local device. When the local device acknowledges this, the two devices resume normal link operation."				
Proposed Response		Response Status	O	

CI 55	SC 55.4.3	P79	L55	# 595
Yamada, Naoshi		Fujikura.Ltd		
Comment Type	T	Comment Status	D	
Retransmission of Loopback Control OAMPDU with a loopback time of 0 by the local device should be permitted.				
SuggestedRemedy				
Add "If remote device is still loopback mode after the local device transmitted loopback control OAMPDU with a loopback time of 0, then the local device may retransmits the OAMPDU."				
Proposed Response		Response Status	O	

CI 55	SC 55.4.4	P80	L10	# 345
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Add a sentence to the end of the first paragraph				
SuggestedRemedy				
At the end of the first paragraph, add the following sentence:				
"Also, OAMPDU frames inserted by the remote device impacts the bandwidth available to loopback data."				
Proposed Response		Response Status	O	

CI 55	SC 55.4.4	P80	L11	# 853
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
Add note regarding rate that ensures no loss (if necessary, include assumption on buffer size). In short, make it clear that the local side has the ability to avoid packet loss in loopback.				
SuggestedRemedy				
As you wish.				
Proposed Response		Response Status	O	

CI 55	SC 55.4.4	P80	L12	# 405
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Qualify warning about reserved multicast addresses.				
SuggestedRemedy				
Change paragraph to read as follows: "Care should be given to ensure that the destination address of any loopback test frames do not use one of the sixteen multicast addresses reserved for bridge protocols. Non-OAMPDU frames with a destination address equal to one of the sixteen multicast addresses reserved for bridge protocols are not looped back and instead are passed up to the MAC Client in the remote device."				
Proposed Response		Response Status	O	

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CI 55	SC 55.4.4	P 80	L 14	# 195
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
The exceptions for bridges bother me, i.e.:				
"Care should be given to ensure that any loopback test frames do not use one of the sixteen multicast addresses reserved for bridge protocols. Frames with one of the sixteen multicast addresses reserved for bridge protocols are not looped back and instead are passed up to the MAC Client in the remote device."				
First, its a layering violation for the MAC to know whats important to bridges.				
Second, its a big problem if 802.1D changes the set of "important" MACs.				
Third, these should not be echoed back up to the bridge anyway, and they're not any more dangerous than OSPF, RIP, or other control protocols being echoed back.				
<i>SuggestedRemedy</i>				
Yank that part (affects state diagrams as well).				
Proposed Response		Response Status	O	

CI 55	SC 55.4.4	P 80	L 69	# 92
Martin, David		Nortel Networks		
Comment Type	TR	Comment Status	D	
I have a big problem with this text - it contradicts the purpose of a loopback: "Depending upon the remote device's implementation of loopback, not every frame received is guaranteed to be looped back to the local device. Clock differences between the local and remote devices may also be a source of lost frames, as the delta in the rate of frames transmitted and received may overrun buffers within either device." The purpose of a loopback in commissioning a service is to verify that every frame sent comes back OK. The purpose of a loopback in the fault isolation of an existing service is to identify where in the system frames are being corrupted. The remote device loopback mechanism must guarantee that every frame received is looped back towards the local device.				
<i>SuggestedRemedy</i>				
That being said, I understand that there may be a desire to implement the loopback function in S/W. I suggest the way to address this is to add text to this clause that clearly limits the local device transmitted frame rate, so there is ample time for a remote device S/W process to perform the loopback function. In order to determine what that max local device transmitted frame rate should be, I suggest that the experts in the room discuss it and come to a consensus value.				
Proposed Response		Response Status	O	

CI 55	SC 55.4.4	P 80	L 56	# 91
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Wording clarification.				
<i>SuggestedRemedy</i>				
Change "MAC Client frames originating from the remote device may be lost," to "MAC Client frames originating from the remote device are not transmitted by the subordinate OAM sublayer".				
Proposed Response		Response Status	O	

CI 55	SC 55.4.4	P 80	L 9	# 93
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording change.				
<i>SuggestedRemedy</i>				
Change "In addition, frames that incur errors during transit will be dropped" to "As always, frames that incur errors during transit will be dropped".				
Proposed Response		Response Status	O	

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Cl 55	SC 55.5	P80	L	# 933
Seyoun LIM		SAMSUNG ELECTRO		
Comment Type	T	Comment Status	D	
I'd like to comment about loopback mode in case of point to multipoint. In the topology which is composed of one OLT and three ONUs, All ONUs(ONU1, ONU2 and ONU3) are in service. OLT try to send loop control message to ONU1 for loopback test. At the this moment, I think other ONUs are possible to be still in service.				
SuggestedRemedy I think it should be mentioned in the draft/standard that, in case of point to multipoint, OLT should control Loopback mode is applied to each ONU independently.				
Proposed Response		Response Status	O	

Cl 55	SC 55.5	P80	L 19	# 930
Seyoun LIM		SAMSUNG ELECTRO		
Comment Type	T	Comment Status	D	
At Loopback mode & Unidirectional mode, OAM PDUs are guaranteed to be transmitted as soon as be generated because path of OAM:MADR is blocked and MUX:MADR is only transmitted However, other OAM PDUs is not guaranteed to be transmitted as soon as they are generated				
SuggestedRemedy OAM PDUs should be given higher priority in transmission than MAC client data frames at control multiplexer block. During transmitting MAC client Data frame, if an OAM PDU is generated, it's supposed to be inserted in the transmission of MAC client data frame				
Proposed Response		Response Status	O	

Cl 55	SC 55.5	P80	L 21	# 426
Cravens, George		Mindspeed		
Comment Type	E	Comment Status	D	
Link Aggregation was renamed PMI Aggregation during the New Orleans interim meeting (Copper STF).				
SuggestedRemedy Replace the term Link Aggregation with PMI aggregation each time it appears in the clause.				
Proposed Response		Response Status	O	

Cl 55	SC 55.5	P80	L 24	# 94
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Function clarification. SuggestedRemedy Add "When in loopback mode, this block passes to OAM Control every frame that does not contain one of the sixteen multicast addresses reserved for bridge protocols. Frames that contain one of the sixteen multicast addresses reserved for bridge protocols are passed to the MAC Client."				
Proposed Response		Response Status	O	

Cl 55	SC 55.5	P80	L 27	# 95
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Function clarification. SuggestedRemedy Add "This block is also responsible for performing the loopback function: accepting received frames from the Control Parser, swapping the SA / DA values, and sending those frames to the Control Multiplexer."				
Proposed Response		Response Status	O	

Cl 55	SC 55.5	P80	L 28	# 196
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Do we need a Discovery block description? SuggestedRemedy Add discovery function description.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.5.1	P80	L 39	# 160
Romascanu, Dan		Avaya Inc.		
Comment Type	TR	Comment Status	D	
An active / passive mode is described here. However, this is not reflected in the state machines, or variable passed at the interface, and it is not clear if it is needed				
SuggestedRemedy				
Delete paragraph f) under 55.5.1				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.1	P80	L 41	# 347
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Use shall for requirements				
SuggestedRemedy				
Replace "Nor may a passive" with "Nor shall a passive"				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.1	P80	L 4142	# 346
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
Be consistent with case when referring to OAMPDU frames: ping, loopback, variable requests. Information				
SuggestedRemedy				
Use an upper case for the first letter of all OAMPDU frames				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.1	P80	L 45	# 348
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Use shall for requirements				
SuggestedRemedy				
Replace "must not be" with "shall not be"				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2	P80	L 49	# 406
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Capitalization				
SuggestedRemedy				
Change sub-clause title to read "Service interfaces"				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.1	P81	L 23	# 407
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Missing word.				
SuggestedRemedy				
Change line to read: "The value of the Code field for Information OAMPDUs."				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.1	P81	L 28	# 408
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Font change impacted the indentation on the constants, variables, functions and messages within 55.5.2.1.				
SuggestedRemedy				
Fix indentation.				
Lines 28, 33, 36, 42 on pg 81.				
Lines 5, 13 on pg 82.				
Lines 11, 23, 30, 33, 41, 44 on pg 83.				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.1	P81	L 522	# 197
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
"Code field for OAMPDUs" is confusing.				
SuggestedRemedy				
Replace with "Code field for Information OAM PDUs as defined in Section XXX."				
Proposed Response		Response Status	O	

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CI 55	SC 55.5.2.1.2	P81	L	# 684	
Ueda, Iori		Matsushita Communic			
Comment Type	E	Comment Status	D		
mr_oam_event need to be define Because mr_oam_event is used by the line 12 Fig.55-5.					
<i>SuggestedRemedy</i> define mr_oam_event.					
Proposed Response		Response Status	O		
CI 55	SC 55.5.2.1.2	P81	L49	# 349	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
From 2.3.2.2: The semantics of the primitive are as follows: MA_DATA.indication (destination_address, source_address, m_sdu, reception_status)					
<i>SuggestedRemedy</i> Replace "status" with "ind_reception_status"					
Fix usage on page 83, line 34					
Proposed Response		Response Status	O		
CI 55	SC 55.5.2.1.2	P82	L	# 915	
Tom Mathey		Independent			
Comment Type	T	Comment Status	D		
It is a long step to go from the MIB clause in 30.11.x.y.z to a state diagram variable. To provide interoperability, the variable mr_oam_rest should be accessible via a clause 45 register and bit.					
<i>SuggestedRemedy</i> Add clause 45 bit for variable mr_oam_rest. Also for several other bits referenced back to clause 30. Also for variables such as local_state.					
Proposed Response		Response Status	O		

CI 55	SC 55.5.2.1.2	P82	L1	# 350	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
From 2.3.1.2: The semantics of the primitive are as follows: MA_DATA.request (destination_address, source_address, m_sdu, service_class)					
<i>SuggestedRemedy</i> Since you've chosen to precede all the other variables with "req", replace "service_class" with "req_service_class"					
Fix usage on page 83, line 41					
Proposed Response		Response Status	O		
CI 55	SC 55.5.2.1.2	P82	L13	# 352	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
missing word					
<i>SuggestedRemedy</i> Replace "machine reflect" with "machine to reflect"					
Proposed Response		Response Status	O		
CI 55	SC 55.5.2.1.2	P82	L13	# 409	
Daines, Kevin		World Wide Packets			
Comment Type	E	Comment Status	D		
Grammar.					
<i>SuggestedRemedy</i> Change "reflect" to "reflecting".					
Proposed Response		Response Status	O		

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Cl 55	SC 55.5.2.1.2	P 82	L 18	# 353
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
missing word				
SuggestedRemedy				
Replace "received non-zero" with "received a non-zero"				
Same thing for page 83, line 5				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.2	P 82	L 18	# 354
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
What is lb_value? I don't see it defined anywhere?				

SuggestedRemedy
Replace "lb_value" with "Loopback_Time" as this is the name of the field from the Loopback Control OAMPDU

Same thing for page 83, line 5
Proposed Response **Response Status** **O**

Cl 55	SC 55.5.2.1.2	P 82	L 21	# 96
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Wording change.				
SuggestedRemedy				
The wording in this line "terminated remote loopback" I think means "exited remote loopback". If my understanding is correct then I suggest using "exited" rather than "terminated", which also aligns with the section 55.4.3 wording. Then again, maybe I'm just overly sensitive to the word 'terminated' these days.				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.2	P 82	L 2342	# 356
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
The use of mr_ should be used only for MDC/MDIO register bits. Use oam_for these Clause 30 attributes				
SuggestedRemedy				
Replace "A" with "B"				
A	B			
mr_dying_gasp	oam_dying_gasp			
mr_oam_reset	oam_reset			
mr_oam_code	oam_code			
mr_oam_satisfied	oam_satisfied			
mr_send_pdu	oam_send_pdu			
remote_state	oam_remote_state			
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.2	P 82	L 26	# 198
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
"Dying Gasp"s don't really occur unless you mean that a PDU with dying gasp bit set was sent. I think you mean that a fatal event has occurred.				
SuggestedRemedy				
Replace "Dying gasp has occurred" (or not occurred) with "An unrecoverable local failure has occurred" (or not occurred).				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.2.1.2	P 82	L 38	# 220
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
How does management determine if it is satisfied? How do we make information available to it?				
SuggestedRemedy				
Need to add method to Clause 30 to address making OAM information available to management entity.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.5.2.1.2	P82	L 4750	# 357
Brown, Benjamin		AMCC		
Comment Type T	Comment Status D			
Use Local_State field in definition of oam_lb variable				
<i>SuggestedRemedy</i>				
Replace: "FALSE; OAM Loopback is disabled" with "False; OAM Local_State [2:0] not equal to 010"				
Replace: "True; OAM Loopback is enabled" with "True; OAM Local_State [2:0] equal to 010"				
Proposed Response	Response Status O			

Cl 55	SC 55.5.2.1.2	P82	L 48	# 420
Daines, Kevin		World Wide Packets		
Comment Type T	Comment Status D			
The management variable "oam_lb" should be the state LB_STABLE. They are similar in behaviour and function, but it is preferable to use the state machine variable.				
<i>SuggestedRemedy</i>				
Remove oam_lb. Change prior references to oam_lb to LB_STATE.				
Proposed Response	Response Status O			

Cl 55	SC 55.5.2.1.2	P82	L 8	# 351
Brown, Benjamin		AMCC		
Comment Type T	Comment Status D			
The description of the link_fault variable is not complete				
<i>SuggestedRemedy</i>				
Replace "A boolean value based on remote fault as per 30.5.1.1.4" with "A boolean value based on any of the remote fault indications as per 30.5.1.1.4"				
Proposed Response	Response Status O			

Cl 55	SC 55.5.2.1.2	P83	L 10	# 359
Brown, Benjamin		AMCC		
Comment Type E	Comment Status D			
fix name to match usage in RxOAMPDU				
<i>SuggestedRemedy</i>				
Replace "subtype" with "req_subtype"				
Proposed Response	Response Status O			

Cl 55	SC 55.5.2.1.2	P83	L 10	# 199
Squire, Matt		Hatteras Networks		
Comment Type E	Comment Status D			
Don't think "subtype" is used anywhere. "req_subtype" is used, not sure if thats what this should be.				
<i>SuggestedRemedy</i>				
Delete it if its unused, or fix the variable name.				
Proposed Response	Response Status O			

Cl 55	SC 55.5.2.1.2	P83	L 19	# 358
Brown, Benjamin		AMCC		
Comment Type T	Comment Status D			
Need additional variables/Clause 30 attributes				
<i>SuggestedRemedy</i>				
oam_pdu_arrived - indicates to STA that an oampdu has arrived at the OAM Control block				
oam_rx_pdu - contains the content of the received OAMPDU for STA.				
oam_remote_state_available - indicates that an Information OAMPDU has arrived and that remote state is available to be used by the Discovery process				
Proposed Response	Response Status O			

CI 55	SC 55.5.2.1.2	P84	L	# 137	
Hirai, Hideyuki	Sumitomo Electric				
Comment Type	T	Comment Status	D		
The definition of "minimum OAMPDU rate" and "maximum OAMPDU rate" are not clear. According to 55.5.2.1.5, any kind of OAMPDUs should be sent at least at a minimum rate. But according to Figure55-5, information OAMPDUs should be sent at least at a minimum rate.					
Also, according to 55.5.2.1.5, the duration of "min_rate_timer" is 1 sec. This means information OAMPDUs can be sent at most once in 1 second. But according to Table55-11, as "Minimum_PDU_Rate" can be 0 to 10, it seems the draft allows OAM to send at a minimum of 10 OAMPDUs in a second.					
<i>SuggestedRemedy</i>					
In 55.5.2.1.5, clarify that a minimum OAMPDU rate counts just information OAMPDUs. Also, duration of "min_rate_timer" should be defined as 100msec.					
In Table55-7, add a sentence "Minimum_PDU_Rate" should be one(1) or greater, if the system expects information OAMPDUs to be sent periodically.					
Also, In Figure55-5, to make it possible to send Information OAMPDUs periodically, change the conditional sentence					
"mr_dying_gasp=FALSE * mr_send_pdu=FALSE *(mr_oam_event * max_rate_timer_done) + min_rate_timer_done) " to					
"mr_dying_gasp=FALSE * ((mr_send_pdu=FALSE * mr_oam_event * max_rate_timer_done) + min_rate_timer_done)"					
Also, add a sentence "Maximum_PDU_Rate should be greater than Minimum_PDU_Rate, to make it possible to send OAMPDUs other than information OAMPDUs."					
Proposed Response		Response Status	O		
<i>SuggestedRemedy</i>					
Change to ReqOAMPDU					
Proposed Response		Response Status	O		

CI 55	SC 55.5.2.1.5	P83	L53	# 410	
Daines, Kevin	World Wide Packets				
Comment Type	E	Comment Status	D		
Capitalization.					
<i>SuggestedRemedy</i>					
Change "OAMPDUS" to "OAMPDUs".					
Proposed Response		Response Status	O		
<i>SuggestedRemedy</i>					
Replace "less than" with "not greater than"					
Proposed Response		Response Status	O		
<i>SuggestedRemedy</i>					
The max_rate_timer should guarantee that OAMPDUs are emitted at not greater than the max rate, not simply less than the max rate					
<i>SuggestedRemedy</i>					
Replace "less than" with "not greater than"					
Proposed Response		Response Status	O		
<i>SuggestedRemedy</i>					
link_loss_timer is never started.					
Proposed Response		Response Status	O		
<i>SuggestedRemedy</i>					
In all instances in Figures 55-4, 55-7 where an OAMPDU is received, add "Start link_loss_timer" to the action list.					
Proposed Response		Response Status	O		

CI 55	SC 55.5.2.1.4	P83	L43	# 207	
Squire, Matt	Hatteras Networks				
Comment Type	E	Comment Status	D		
RxOAMPDU is confusing as this isn't a receive but a request. Its also not symmetrical in definition to TxOAMPDU. Note that in Figure 55-7, it is a received OAMPDU, but not here.					
<i>SuggestedRemedy</i>					
Change to ReqOAMPDU					
Proposed Response		Response Status	O		

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CI 55	SC 55.5.3	P84	L35	# 411
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Add description of remote device unilaterally terminating loopback.				
<i>SuggestedRemedy</i>				
Change sentence				
"Once the timer reaches zero (either by counting down to zero or by being reset via a subsequent Loopback Control OAMPDU), the local device transitions to the LOOPBACK_END_1 state."				
to:				
"Once the timer reaches zero (either by counting down to zero or by being reset via a subsequent Loopback Control OAMPDU or by management resetting the timer), the local device transitions to the LOOPBACK_END_1 state."				
Proposed Response		Response Status	O	

CI 55	SC 55.5.3.1	P84	L47	# 97
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
What is the point of having this subsection heading alone? The state diagram was already referenced in the previous subsection.				
<i>SuggestedRemedy</i>				
Delete the subsection.				
Proposed Response		Response Status	O	

CI 55	SC 55.5.3.1	P85	L	# 119
Takashi, Ezawa		Oki Electric Industry C		
Comment Type	T	Comment Status	D	
Figure 55-4 isn't mentioned about following. In the SEND_ANY_OAM state, if the local device initiates remote loopback, remote_state will change to LB_STABLE. And the local device will remain in the same state. This transfer line should be depicted in this diagram for clarify whether the state changes or not. Figure 55-4 isn't reflected enough about loopback states. These should be depicted more clearly in the loopback state diagram.				
<i>SuggestedRemedy</i>				

Proposed Response		Response Status	O	
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CI 55	SC 55.5.3.1	P85	L1	# 628
Healey, Adam		Agere Systems		
Comment Type	T	Comment Status	D	
Use of undefined variable "code" used in transition from SEND_LOCAL_ONLY to SEND_LOCAL_REMOTE.				
<i>SuggestedRemedy</i>				
Add definition of "code" to 55.5.2.1.2				
Proposed Response		Response Status	O	

CI 55	SC 55.5.3.1	P85	L1	# 627
Healey, Adam		Agere Systems		
Comment Type	E	Comment Status	D	
Figure 55-4, entering state SEND_LOCAL_ONLY, link_loss_timer should be lost_link_timer per 55.5.2.1.5 or vice versa.				
<i>SuggestedRemedy</i>				
Change to make consistent.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.5.4	P85	L	# 363
Brown, Benjamin		AMCC		
Comment Type T	Comment Status D			
Remove this section per my OAM Control presentation				
<i>SuggestedRemedy</i>				
<i>Proposed Response</i>				
		<i>Response Status O</i>		

Cl 55	SC 55.5.4	P85	L 41	# 98
Martin, David		Nortel Networks		
Comment Type T	Comment Status D			
States that "Per management's request, any OAMPDU may be transmitted".				
<i>SuggestedRemedy</i>				
This will require additions to clause 30 to include Actions for the remaining OAMPDU types (Ping Request / Response are there now). David Law has a draft presentation from the September meeting with proposed changes. I have comments against Clause 30 for actions for Loopback, Variable Request, Event Notification. I don't think it was intended that Management could request sending an Information PDU (?)				
<i>Proposed Response</i>				
		<i>Response Status O</i>		

Cl 55	SC 55.5.4	P85	L 42	# 205
Squire, Matt		Hatteras Networks		
Comment Type T	Comment Status D			
OAM can send frames in response to received frames				
<i>SuggestedRemedy</i>				
Add another justification for OAM transmit.				
<i>Proposed Response</i>				
		<i>Response Status O</i>		

Cl 55	SC 55.5.4	P85	L 45	# 206
Squire, Matt		Hatteras Networks		
Comment Type E	Comment Status D			
Would help to keep the diagrams and text on the same page. I.e. 55.5.4.1 looks empty because the diagram is a page later.				
<i>SuggestedRemedy</i>				
Keep figures with text.				
<i>Proposed Response</i>				
		<i>Response Status O</i>		

Cl 55	SC 55.5.4.1	P85	L 48	# 99
Martin, David		Nortel Networks		
Comment Type E	Comment Status D			
What is the point of having this subsection heading alone? The state diagram was already referenced in the previous subsection.				
<i>SuggestedRemedy</i>				
Delete this subsection.				
<i>Proposed Response</i>				
		<i>Response Status O</i>		

Cl 55	SC 55.5.4.1	P86	L 1	# 630
Healey, Adam		Agere Systems		
Comment Type T	Comment Status D			
Undefined variable "mr_oam_event" used in transition from SEND_ANY to SEND_INFORMATION.				
<i>SuggestedRemedy</i>				
Define mr_oam_event in 55.5.2.1.2.				
<i>Proposed Response</i>				
		<i>Response Status O</i>		

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Cl 55	SC 55.5.4.1	P 86	L 1	# 629
Healey, Adam		Agere Systems		
Comment Type	T	Comment Status	D	
Time-qualified transmission does not begin until local_state and remote_state are both stable. This would imply initial Information OAMPDU exchange can happen at arbitrarily slow or fast rates.				
<i>SuggestedRemedy</i>				
Re-work state machine so that timer qualifications limit Information OAMPDU exchanges to 1 to 10 frames/s.				
Proposed Response		Response Status	O	
Cl 55	SC 55.5.5	P 85	L	# 364
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Replace figure 55-6 per my OAM Control presentation				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	
Cl 55	SC 55.5.5	P 86	L 24	# 692
Arnold, Brian		Cisco Systems		
Comment Type	T	Comment Status	D	
The prioritization of OAMPDUs being readied for transmit could be explained better. For instance, if more than one OAMPDU is ready for transmit within a max_rate period, does one type of OAMPDU have any precedence over another if both are ready, or shall it be a FIFO where the OAMPDU that was the second to be ready has to wait, or shall there be a different prioritization scheme?				
<i>SuggestedRemedy</i>				
Suggest the group consider the relative priorities of OAMPDUs ready for transmit and either: a)decide that the current draft captures this sufficiently well already, b)decide that additional explanatory text in 55.5.5 and/or changes to Figure 55-5 are necessary, or c)decide that it is not necessary to prioritize OAMPDUs ready for transmit.				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.5	P 86	L 30	# 221
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
On a link on which OAM is enabled, do we require satisfactory negotiation of OAM capabilities to bring the link up? I.e. is an OAM stable state a pre-cursor to LINK_UP state? Or should the MUX entity only pass data if OAM is in a STABLE state?				
<i>SuggestedRemedy</i>				
Would just like an answer on this issue. Currently it doesn't seem so, though in the past its been discussed that if OAM cannot come up then we shouldn't pass traffic. Easiest thing to do would be to change the multiplexor diagram so that we discard frame if not in the stable state.				
Proposed Response		Response Status	O	
Cl 55	SC 55.5.6	P 86	L	# 365
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Replace Figure 55-7 per my OAM Control presentation				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	
Cl 55	SC 55.5.6	P 86	L 52	# 100
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
Wording clarification.				
<i>SuggestedRemedy</i>				
Change "passes OAMPDUs to the OAM Control function" to "passes OAMPDUs and loopback frames to the OAM Control function".				
Proposed Response		Response Status	O	

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Cl 55	SC 55.5.7	P87	L	# 366
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Replace this entire section per my OAM Control presentation				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.7	P87	L 24	# 101
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Typo.				
<i>SuggestedRemedy</i>				
Change "The Control Parser shall implement" to "The OAM Control block shall implement".				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.7	P87	L 24	# 130
Yoshimura, Minoru		NEC		
Comment Type	E	Comment Status	D	
"The Control Parser shall..." is error in editing.				
<i>SuggestedRemedy</i>				
"The Control Parser shall..." should be "The OAM Control shall..."				
Proposed Response		Response Status	O	

Cl 55	SC 55.5.7	P87	L 44	# 854
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
In loopback, there is no transfer of the RxOAMPDU to the Multiplexer. Or, there is no loopback at all. Starts in F55-7, but never makes it to F55-6.				
<i>SuggestedRemedy</i>				
TxOAMPDU=TRUE is wrong. Fix.				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.1	P88	L 13	# 631
Healey, Adam		Agere Systems		
Comment Type	E	Comment Status	D	
Missing "or".				
<i>SuggestedRemedy</i>				
Change "encoding of (an element of)" or "encoding of (or an element of)".				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.2	P89	L 4	# 947
Ho-Sook Lee		ETRI		
Comment Type	T	Comment Status	D	
Figure 55-9 defines a specific address of "01-80-c2-00-00-02" for the DA of OAMPDU. This way of addressing in OAMPDU is valid only for the point-to-point link. It is not appropriate for the point-to-multipoint link.				
<i>SuggestedRemedy</i>				
We recommend that the DA of OAMPDU be defined to be the destination MAC address of the device terminating the link at the opposite side.				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.2.1	P89	L 28	# 103
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Redundant text. Redundant text.				
<i>SuggestedRemedy</i>				
Change "within two octets, as follows and as shown in" to "within two octets as shown in".				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.2.1	P89	L 42	# 208
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Is there any reason we don't take the flags from one end rather than take both 15 & 0 and go inside out?				
<i>SuggestedRemedy</i>				
Use bit 2 for the event indicator.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.6.2.1	P89	L47	# 691
Arnold, Brian		Cisco Systems		
Comment Type	E	Comment Status	D	
Table 55-2. The comment at the bottom of the table says that the specific faults comprising Link Fault, etc. are outside the scope of clause 55. That's correct, but could it hurt to include a cross reference TBD that eventually says which clauses within those we're currently working on that do (or will) specify which specific faults make up Link Fault, Dying Gasp, and the Event Indications? Basically point to the relevant sections in clause 61, 62, 63 for copper, 56 for P2MP, etc.				
<i>SuggestedRemedy</i>				
Include a sentence indicating the relevant sections within the copper, P2P optics, and P2MP optics clauses where the specific faults are specified.				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3	P90	L22	# 413
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
"Type/Length" field should read "Length/Type". Bad editor.				
<i>SuggestedRemedy</i>				
See Comment.				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3	P90	L23	# 369
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
missing a field in the description of the OAM PDU				
<i>SuggestedRemedy</i>				
Replace "Version field and Code field" with "Version field, Flags field, and Code field"				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3	P90	L25	# 210
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
We should define operation for unknown codes.				
<i>SuggestedRemedy</i>				
We should probably handle unknown OAM opcodes the same way we handle unknown slow protocol types.				
"				
Whenever an implementation receives an OAM PDU with a code it does not understand, it passes that frame to the superior level.				
"				
We can also use this to address our "OAM channel" requirement in that higher entities can send an OAM frame with a unknown opcode that would get passed up to the higher layers on the far end. We'd have to change a few of the state diagrams to do this if desired.				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3	P90	L5	# 29
Veerayah, Kumaran		ICR		
Comment Type	E	Comment Status	D	
Table 55-3: For code 00, "Information" OAM PDU is used, whereas the other sections refer to this as "status" OAM PDU				
<i>SuggestedRemedy</i>				
Change "information" to "status" to be uniform.				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3	P90	L7	# 209
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Use consecutive codes.				
<i>SuggestedRemedy</i>				
Use consecutive codes.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.6.3.1	P90	L27	# 632
Healey, Adam		Agere Systems		
Comment Type	E	Comment Status	D	
Status OAMPDUs are now Information OAMPDUs?				
SuggestedRemedy				
Change title for consistency.				
Proposed Response		Response Status	O	
Cl 55	SC 55.6.3.1	P90	L27	# 211
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Is it the "status" or "informational" PDU?				
SuggestedRemedy				
Just need consistent terminology.				
Proposed Response		Response Status	O	
Cl 55	SC 55.6.3.1	P90	L27	# 104
Martin, David		Nortel Networks		
Comment Type	E	Comment Status	D	
Old PDU name still lingering.				
SuggestedRemedy				
Change "Status OAMPDU" to "Information OAMPDU". Need to search and change throughout this subsection (e.g. p.90, line 29; p.91, line 33 and line 37).				
Proposed Response		Response Status	O	
Cl 55	SC 55.6.3.1	P90	L27	# 120
Takashi, Ezawa		Oki Electric Industry C		
Comment Type	E	Comment Status	D	
We propose that the terminology of "information OAMPDU" shall be used instead of " status OAMPDU " regarding the next five point.				
Page: 90 - Line: 27,29,29,Page: 91 - Line: 33,37				
SuggestedRemedy				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3.1	P90-91	L27	# 932
Seyoun LIM		SAMSUNG ELECTRO		
Comment Type	E	Comment Status	D	
In the last meeting, Status OAMPDU[0x00] was changed into Information OAMPDU[0x00].				
(1) the title of 55.6.3.1 is still Status OAMPDU[0x00].				
(2) Figure 55-10 - status OAMPDU data field is also not changed.				
But Draft v1.1 is not changed yet.				
SuggestedRemedy				
the remedy is				
(1) 55.6.3.1 Information OAMPDU[0x00]				
(2) Figure 55-10 - Information OAMPDU data field				
Proposed Response		Response Status	O	

Cl 55	SC 55.6.3.1	P91	L1	# 212
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
Suggest we put the fixed information in fixed places to expedite processing.				
SuggestedRemedy				
Suggest something like:				
Local State: 1B				
Remote State: 1B				
Local OAM Config: 1B				
Remote OAM Config: 1B				
Local OAMPDU Config: 4B				
Remote OAMPDU Config: 4B				
Local Extensions: Variable (TLV format)				
Remote Extensions: Variable (TLV format)				
Proposed Response		Response Status	O	

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CI 55	SC 55.6.3.1	P91	L50	# 105	
Martin, David		Nortel Networks			
Comment Type	T	Comment Status	D		
I had this in a comment at the September meeting and there was a concern raised that for the multi-vendor case the Management systems at the two ends of the link may have different definitions of what in-service means. However, we are defining vague events like temperature and power. I don't see any difference here. I still think this indicator could be of use to Management. For example, prior to initiating a loopback request, Management would be wise to check that it is receiving an inactive in-service indication. <i>SuggestedRemedy</i> Add a new Local_State bit 3 called "in-service" with the following description: "1 = Management for the Local Device believes the end station is in the in-service state. Tied to MIB variable. 0 = Management for the Local Device believes the end station is not in the in-service state. Tied to MIB variable." <i>Proposed Response</i> <i>Response Status</i> O					

CI 55	SC 55.6.3.1	P92	L8	# 213	
Squire, Matt		Hatteras Networks			
Comment Type	TR	Comment Status	D		
Tables 55-4 and 55-5 seem to indicate we have two states: one for status, one for loopback. The descriptions and state diagrams earlier lent themselves to a single state covering both. <i>SuggestedRemedy</i> Clarify how many states and what they mean. Suggest 2 state approach. <i>Proposed Response</i> <i>Response Status</i> O					

CI 55	SC 55.6.3.1	P93	L	# 131	
Yoshimura, Minoru		NEC			
Comment Type	T	Comment Status	D		
The unit value of Maximum_PDU_rate and Minimum_PDU_rate is not defined. <i>SuggestedRemedy</i> Add definition. <i>Proposed Response</i> <i>Response Status</i> O					

CI 55	SC 55.6.3.1	P93	L16	# 633	
Healey, Adam		Agere Systems			
Comment Type	E	Comment Status	D		
Tables 55-7 and 55-11, the maximum and minimum OAMPDU rate fields should specify units. <i>SuggestedRemedy</i> For bits 7-4, change description to "4-bit field which conveys the maximum number of OAMPDUs that will be sent per second". For bits 3-0, change description to "4-bit field which conveys the minimum number of OAMPDUs that will be sent per second". <i>Proposed Response</i> <i>Response Status</i> O					

CI 55	SC 55.6.3.1	P93	L16	# 689	
Arnold, Brian		Cisco Systems			
Comment Type	T	Comment Status	D		
Table 55-7 and Table 55-11. The 4-bit fields for Maximum_PDU_Rate and Minimum_PDU_Rate have a lowest possible value of 0x0. The meaning of a rate of 0x0 is not clear, as one might infer that it is then permissible to send no OAMPDUs (or stop sending OAMPDUs) when Minimum_PDU_Rate is 0x0, even after OAM has been mutually discovered and activated. <i>SuggestedRemedy</i> Either change the lowest permissible value from 0x0 to 0x1, or explain better why 0x0 is an acceptable value in Table 55-7. This applies as well to the same fields in the Remote_OAMPDU_Configuration field of Table 55-11. <i>Proposed Response</i> <i>Response Status</i> O					

CI 55	SC 55.6.3.1	P93	L1620	# 106	
Martin, David		Nortel Networks			
Comment Type	T	Comment Status	D		
Timer values need to be aligned. <i>SuggestedRemedy</i> Need to be consistent with the Maximum_PDU_Rate / Minimum_PDU_Rate range definitions and the max_rate_timer / min_rate_timer values defined in subsection 55.5.2.1.5 pages 83-84. <i>Proposed Response</i> <i>Response Status</i> O					

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CI 55	SC 55.6.3.1	P93	L 18	# 215
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
The min-pdu-rate has to be less than the max-pdu-rate				
<i>SuggestedRemedy</i>				
Add a sentence to address.				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.1	P93	L 23	# 216
Squire, Matt		Hatteras Networks		
Comment Type	TR	Comment Status	D	
The utility of the local/remote extension field escapes me. What is it for? Wouldn't it be better served with support for generic TLVs rather than only 6B of something?				
<i>SuggestedRemedy</i>				
Clarify use/benefits of extensions.				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.1	P93	L 29	# 161
Romascanu, Dan		Avaya Inc.		
Comment Type	TR	Comment Status	D	
Device_Identifier field might be too small, while Private_Enterprise_Num is too large				
<i>SuggestedRemedy</i>				
Change width of Device_Identifier field to 16 bits, at the expense of reducing Private_Enterprise_Num to 24 bits				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.1	P93	L 45	# 107
Martin, David		Nortel Networks		
Comment Type	T	Comment Status	D	
I had this in a comment at the September meeting and there was a concern raised that for the multi-vendor case the Management systems at the two ends of the link may have different definitions of what in-service means. However, we are defining vague events like temperature and power. I don't see any difference here. I still think this indicator could be of use to Management. For example, prior to initiating a loopback request. Management would be wise to check that it is receiving an inactive in-service indication.				
<i>SuggestedRemedy</i>				
Add a new Remote_State bit 3 called "in-service" with the following description: "1 = Management for the Remote Device believes the end station is in the in-service state. Tied to MIB variable. 0 = Management for the Remote Device believes the end station is not in the in-service state. Tied to MIB variable."				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.1	P93	L 7	# 214
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
The use of the maximum PDU size isn't incorporated into any of the state diagrams or text descriptions.				
<i>SuggestedRemedy</i>				
Need to bring out in diagrams and text what we do with "bigger" frames (ie. violate the max size).				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.1	P94	L 1	# 217
Squire, Matt		Hatteras Networks		
Comment Type	T	Comment Status	D	
Remove potential for conflicts by having a single table definition for configuration and PDU configuration, then applying this to remote/local. Reproducing the tables and definitions just leads to potential problems.				
<i>SuggestedRemedy</i>				
Eliminate tables 55-9, 55-10, 55-11, 55-12, and create a single field format description for both local and remote.				
Proposed Response		Response Status	O	

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Cl 55	SC 55.6.3.1	P94	L32	# 427	
Cravens, George		Mindspeed			
Comment Type	TR	Comment Status	D		
Prior to exchanging Max_PDU_Size parameters, a device sends 128 octet PDUs. However, in 55.6.2 h) it is stated that "Implementations shall support OAMPDUs at least 64 octets in length."					
This means that a device that only supports 64 byte OAMPDUs may not be able to exchange parameters properly.					
<i>SuggestedRemedy</i>					
Either change 55.6.3.1 to state that prior to exchanging Max_PDU_Parameters, a device will send 64 byte OAMPDUs, or change 55.6.2 h) to require support for 128 byte OAMPDUs.					
Proposed Response		Response Status	O		

Cl 55	SC 55.6.3.1	P94	L3741	# 108	
Martin, David		Nortel Networks			
Comment Type	T	Comment Status	D		
Align timer values.					
<i>SuggestedRemedy</i>					
Need to be consistent with the Maximum_PDU_Rate / Minimum_PDU_Rate range definitions and the max_rate_timer / min_rate_timer values defined in subsection 55.5.2.1.5 pages 83-84.					
Proposed Response		Response Status	O		

Cl 55	SC 55.6.3.1	P95	L8	# 162	
Romascanu, Dan		Avaya Inc.			
Comment Type	TR	Comment Status	D		
Width of Device_Identifier field might be too small, while Private_Enterprise_Num is too large					
<i>SuggestedRemedy</i>					
Change width of Device_Identifier field to 16 bits, at the expense of reducing Private_Enterprise_Num to 24 bits					
Proposed Response		Response Status	O		

Cl 55	SC 55.6.3.4	P95	L39	# 948	
Ho-Sook Lee		ETRI			
Comment Type	E	Comment Status	D		
It is required to define fields and procedures to record the transmission delay or the reply time which is to be measured through ping test.					
<i>SuggestedRemedy</i>					
Proposed Response		Response Status	O		

Cl 55	SC 55.6.3.4/55.6.3.5	P95	L37	# 935	
Seyoun LIM		SAMSUNG ELECTRO			
Comment Type	T	Comment Status	D		
In draft v1.1, Ping request/response are defined to perform OAM ping. but the data field is not defined yet. the data field should be defined with good contents properly.					
<i>SuggestedRemedy</i>					
two kinds of data field are below.					
Type I field is composed of Ping Time Value(8bits), Ping Time value Enable(1 bit), Type(1 bit) for indication which one is request or response and Sequence Number(8 bit).					
Type II field is composed of Sequence Number(7 bit) and Type(1 bit) for for indication which one is request or response.					
- Ping time value : local device sets this value to limit response time of remote device.					
- Ping Time value Enable : indicate Ping Time value is enable or disable.					
- Type : indicate Ping request or response OAMPDU.					
Proposed Response		Response Status	O		

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CI 55	SC 55.6.3.4/55.6.3.5	P95	L37	# 934
Seyoun LIM		SAMSUNG ELECTRO		
Comment Type	T	Comment Status	D	
In draft v1.1, Ping Request OAMPDU[0x04] and Ping response OAMPDU[0x05] are used to perform OAM Ping, the remote device which receives Ping Request OAMPDU is going to transmit Ping Response OAMPDU, when remote device response, the information of ping request received is copied to Ping response data field. I don't think two kinds of code are necessary to indicate Ping request/response OAMPDU.				
SuggestedRemedy One bit is used to indicate Ping request/response OAMPDU instead of two kind of code-0x04 for request and 0x05 for response. (example : 0 = OAM Ping request, 1 = OAM Ping response)				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.5	P95	L48	# 218
Squire, Matt		Hatteras Networks		
Comment Type	E	Comment Status	D	
Should say that implementations should try to ping responses fast.				
SuggestedRemedy Change "The response time is unspecified" to "The response time is unspecified, although implementations are suggested to respond quickly as the response time may be measured by the receiver to determine efficiency."				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.5	P95	L48	# 371
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
The ping response time should not be unspecified				
SuggestedRemedy Replace "unspecified" with "1 second", the same response time required for Information OAMPDUs in response to Loopback Control OAMPDUs and the same response time for Variable Response OAMPDUs in response to Variable Request OAMPDUs.				
Proposed Response		Response Status	O	

CI 55	SC 55.6.3.5	P95	L48	# 428
Cravens, George		Mindspeed		
Comment Type	T	Comment Status	D	
Ping Response time is unspecified, yet variable response OAMPDUs must be sent within one second. This seems inconsistent.				
SuggestedRemedy Align Ping Response reply time with the Variable Response reply time (within one second).				
Proposed Response		Response Status	O	

CI 55	SC fig.55-4	P85	L2	# 683
Ueda, Iori		Matsushita Communic		
Comment Type	E	Comment Status	D	
Replace "link_loss_timer_done" with "lost_link_timer_done"				
SuggestedRemedy				
Proposed Response		Response Status	O	

CI 55	SC Figure 55-1	P75	L54	# 17
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
With OAM being mostly media/speed/PHY independent, perhaps a simpler layer stack diagram could be shown.				
SuggestedRemedy Remove 100 Mb/s link segment PHY stack. Remote 1000 Mb/s link segment PHY stack. Remove text "10 Mb/s link segment". Center diagram on page.				
Proposed Response		Response Status	O	

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Cl 55	SC Figure 55-11	P98	L40	# 419
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Consider visual improvement to figure.				
SuggestedRemedy				
Consider hex grouping of bits.				
For instance, "0123 4567" vs. current "0 1 2 3 4 5 6 7".				
For instance, "1110 0000" vs. current "1 1 1 0 0 0 0".				
Proposed Response		Response Status	O	

Cl 55	SC Figure 55-4	P85	L1	# 361
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
wrong timer name				
SuggestedRemedy				
Replace "link_loss_timer_done" with "lost_link_timer_done"				
Proposed Response		Response Status	O	

Cl 55	SC Figure 55-4	P85	L2	# 916
Tom Mathey		Independent		
Comment Type	E	Comment Status	D	
Text "link_loss_timer_done" is incorrect.				
SuggestedRemedy				
Change from "link_loss_timer_done" to "loss_link_timer_done"				
Consider a new name as "loss_link_timer_done" is close to "link_loss_timer_done" and already used in 10BASE-T.				
Proposed Response		Response Status	O	

Cl 55	SC Figure 55-4	P85	L31	# 421
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Exiting LOOPBACK_END_2 state and transitioning to SEND_ANY_OAM state may want to have STA input. For instance, STA may want time to read MAC attributes re: the loopback test. STA may want to query the local counters for Tx and Rx frames and determine if any were lost. Based on results STA may allow link to resume operation or do something else...				
SuggestedRemedy				
Condition "remote_state = STABLE" may need to be augmented.				
Proposed Response		Response Status	O	

Cl 55	SC Figure 55-4	P85	L7	# 362
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Change transition from SEND_LOCAL_ONLY to SEND_LOCAL_REMOTE_1				
SuggestedRemedy				
Replace "Parser:MADI * code=Information_OAMPDU" with "oam_remote_state_available=TRUE"				
Proposed Response		Response Status	O	

Cl 55	SC Figure 55-6	P86	L45	# 917
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
For remote loopback to work, the receive frame parameters need to be assigned to a transmit frame. I have searched for but can not find some text or drawing which does an assignment of OAM:MADI parameters to the OAM:MADR parameters.				
SuggestedRemedy				
Is this missing?				
Proposed Response		Response Status	O	

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Cl 55	SC Figure 57-4	P 170	L 1	# 380
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
I believe the intent is to replace the preamble with the LLID and CRC-8 but I don't see where this is happening in the state machine.				
<i>SuggestedRemedy</i>				
Add states for replacing preamble with LLID & CRC-8				
Proposed Response		Response Status	O	

Cl 55	SC Figure55-4	P 85	L	# 141
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	T	Comment Status	D	
The definition of "lost_link_timer" is not clear.				
<i>SuggestedRemedy</i>				
In 55.5.2.1.5, add a sentence that "if no information OAMPDUs are received by the time "lost_link_timer" expires, Discovery process is restart."				
Proposed Response		Response Status	O	

Cl 55	SC Figure55-4	P 85	L	# 139
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	T	Comment Status	D	
In case both nodes of a link are Active mode nodes, if both nodes send a Loopback Control OAMPDU simultaneously, both node transit to LOOPBACK_START state. This state is meaningless and should be avoided.				
<i>SuggestedRemedy</i>				
There should be loopback states of LOOPBACK_START2 and LOOPBACK_END2 for the node which requests loopback operation.				
Proposed Response		Response Status	O	

Cl 55	SC Figure55-4	P 85	L	# 138
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	T	Comment Status	D	
Figure55-4 and Figure55-5 describe only the state diagram of Active mode node. In Figure55-4, name of state "SEND_LOCAL_ONLY" is not appropriate for Passive mode node, because Passive mode node will not send any OAMPDUs before it receives information OAMPDU from the peer.				
In Figure55-5, there are two SEND_INFORMATION state defined in the state diagram. Although the two SEND_INFORMATION states execute same thing, the conditions to transit to the two states are different.				
Also, the condition to transit to SEND_INFORMATION state(upper one) is applicable only for Active mode node.				
<i>SuggestedRemedy</i>				
To make the document easily understandable, there should be Discovery state diagrams of Active mode node and that of Passive mode node. Also, there should be Transmit state diagrams of Active mode node and that of Passive mode node.				
In Discovery state diagram for Passive mode node, name of state "SEND_LOCAL_ONLY" should be changed to "WAIT_FOR_RECEIVE_INFORMATION".				
SEND_INFORMATION states in Transmit OAMPDU state diagrams should be SEND_INFORMATION1 and SEND_INFORMATION2 states.				
Proposed Response		Response Status	O	

Cl 55	SC Figure55-5	P 86	L	# 140
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	T	Comment Status	D	
Figure55-5 does not consider the process while a node is in loopback mode. Therefore, a node in loopback mode transit to SEND_INFORMATION state(upper), and cannot send OAMPDUs except information OAMPDUs.				
<i>SuggestedRemedy</i>				
A node in loopback mode should be remain in SEND_ANY state. That is Figure55-5 should describe that a node remains in SEND_ANY state, if "loacl_state" and "remote_state" are LB_STABLE, LB_UNSTABLE or LB_COMPLETE.				
Proposed Response		Response Status	O	

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CI 55	SC Figure 55-8	P 87	L	# 142
Hirai, Hideyuki		Sumitomo Electric		
Comment Type	E	Comment Status	D	
"Generate Mux:MADl to..." should be "Generate Mux:MADR to..."				
<i>SuggestedRemedy</i>				
Change MADl to MADR				
Proposed Response		Response Status	O	

CI 55	SC Table 55-1	P 78	L 1	# 19
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Font size in Comment column is inconsistent. 9 pt/10 pt.				
<i>SuggestedRemedy</i>				
Make font sized consistent in table.				
Proposed Response		Response Status	O	

CI 55	SC Table 55-1	P 78	L 3	# 340
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
There are different fonts in the text of this table				
<i>SuggestedRemedy</i>				
clean up fonts				
Proposed Response		Response Status	O	

CI 55	SC Table 55-12	P 95	L 11	# 417
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Inconsistency of field names.				
<i>SuggestedRemedy</i>				
Change "Private_Enterprise_Num" to "Enterprise_Identifier" to be consistent with "Device_Identifier" and "Version_Identifier".				
Proposed Response		Response Status	O	

CI 55	SC Table 55-15	P 97	L 13	# 418
Daines, Kevin		World Wide Packets		
Comment Type	T	Comment Status	D	
Bits are wrong.				
<i>SuggestedRemedy</i>				
Reword "Description" to read:				
When bit 23 = 1, bits 22:16 represent a Variable Error indication. Refer to Table 55-16 for the encoding of bits 22:16.				
When but 23 = 0, bits 22:15 represent the length of the Variable Value field in octets. An encoding of 0x00 equals 128 octets. All other encodings represent actual lengths.				
Proposed Response		Response Status	O	

CI 55	SC Table 55-15	P 97	L 13	# 372
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
When bit 7 = 1, how many Variable Value bytes follow? Is it always exactly 1 or 0? The description of Variable Value says form 1 to 128.				
<i>SuggestedRemedy</i>				
Specify that exactly 1 byte follows and that its content should be 0x00.				
Proposed Response		Response Status	O	

CI 55	SC Table 55-2	P 89	L 4146	# 367
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
Add references to bit descriptions				
<i>SuggestedRemedy</i>				
Dying Gasp gets reference to 30.11.x.y.z Link Fault get reference to 30.5.1.1.4				
Proposed Response		Response Status	O	

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Cl 55	SC Table 55-3	P90	L 6	# 368
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
Don't need to keep code 01 reserved				
<i>SuggestedRemedy</i>				
Collapse this table, so that event notification get code 01...				
Proposed Response		Response Status	O	

Cl 55	SC Table 55-3	P90	L 7	# 412
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Italics.				
<i>SuggestedRemedy</i>				
Change "Reserved" to italics", repeat on line 17.				
Proposed Response		Response Status	O	

Cl 55	SC Table 55-4	P91	L 52	# 414
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Capitalizations.				
<i>SuggestedRemedy</i>				
Change "loopback" to "Loopback" on line 52.				
Change "stable" to "Stable" on line 54.				
Proposed Response		Response Status	O	

Cl 55	SC Table 55-7	P93	L 1619	# 370
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Missing description of what the value refers to				
<i>SuggestedRemedy</i>				
For Maximum_PDU_Rate, replace "4-bit field which conveys maximum rate OAMPDUs will be sent" with "4-bit field that conveys the maximum number of OAMPDUs sent per second"				
For Minimum_PDU_Rate, replace "4-bit field which conveys minimum rate OAMPDUs will be sent" with "4-bit field that conveys the minimum number of OAMPDUs sent per second"				
Make the same changes to Table 55-11.				
Proposed Response		Response Status	O	

Cl 55	SC Table 55-8	P93	L 32	# 415
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Inconsistency of field names.				
<i>SuggestedRemedy</i>				
Change "Private_Enterprise_Num" to "Enterprise_Identifier" to be consistent with "Device_Identifier" and "Version_Identifier".				
Proposed Response		Response Status	O	

Cl 55	SC Table 55-9	P93	L 47	# 416
Daines, Kevin		World Wide Packets		
Comment Type	E	Comment Status	D	
Capitalizations.				
<i>SuggestedRemedy</i>				
Change "loopback" to "Loopback" on line 47.				
Change "stable" to "Stable" on line 49.				
Proposed Response		Response Status	O	

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Cl 55	SC Table55-16	P97	L	# 145
Hirai, Hideyuki		Sumitomo Electric		
Comment Type T	Comment Status D			
There is no specific explanation on each error indication.				
SuggestedRemedy				
Add a specific description on each error indication, or point a sentence which describe the error indication in detail.				
Proposed Response		Response Status O		
Cl 55	SC Table55-2	P89	L	# 143
Hirai, Hideyuki		Sumitomo Electric		
Comment Type E	Comment Status D			
Table55-2, Table55-4(p91), Table55-6(p92), Table55-7 and 9(p93), Table55-10 and 11(p94)				
There is no description on reserved fields of the tables above.				
SuggestedRemedy				
add description to each table that "reserved field should be set to zero when sending a OAMPDU, and should be ignored on reception."				
Proposed Response		Response Status O		
Cl 55	SC Table55-5	P92	L	# 144
Hirai, Hideyuki		Sumitomo Electric		
Comment Type E	Comment Status D			
"xx" in the table is not understandable.				
SuggestedRemedy				
Replace "xx" with "Don't care"				
Proposed Response		Response Status O		

Cl 56	SC	P107	L	# 149
Kramer, Glen		Teknovus		
Comment Type T	Comment Status D			
(At editor's discretion the designation of this comment may be changed to Editorial)				
SuggestedRemedy				
Any sublayer located above (G)MI (media-independent interface) is media-independent. In the title of clause 56 "Optical Multi-Point" the reference to a particular media type is inappropriate.				
SuggestedRemedy				
1. Rename the clause 56 to "Multi-Point Control"				
2. Change all references from Optical Multi-Point (OMP) to Multi-Point Control (MPC)				
Proposed Response		Response Status O		
Cl 56	SC	P113	L3	# 754
Dolors, Sala		Broadcom		
Comment Type TR	Comment Status D			
The MAC control frames initiated at teh MAC control client have the client interface enabled. Therefore, this sentence is only applicable to MAC control frames initiated in the multiplexing control.				
See my earlier comment on line 2.				
SuggestedRemedy				
Elimante the sentence. It is not correct.				
Proposed Response		Response Status O		

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<i>Cl 56</i>	<i>SC</i>	<i>P 116</i>	<i>L</i>	<i># 764</i>
Dolors, Sala		Broadcom		
<i>Comment Type</i>	<i>TR</i>	<i>Comment Status</i>	<i>D</i>	
the definition of the variable multipoint_transmission_in_progress is an AND operation of all TransmitEnables				
The state diagram in Figure 56-7 never resets de variables.				
The transmitDone coming from the MAC j should disable the TransmitEnable j				
<i>SuggestedRemedy</i>				
It is very difficult to describe in an isolated state diagram this operation. This should be incorporated in the state diagram of transmit a frame.				
TransmitPending is generated by MA_control or MA_DATA				
TransmitEnable is set to on by a scheduler				
multipoint_transmission_in_progress = AND(TransmitEnable[1..n])				
TransmitEnable is turn off by the end of frame transmission signal given by the corresponding MAC.				
The process can be put in a state diagram.				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	

<i>Cl 56</i>	<i>SC</i>	<i>P 117</i>	<i>L</i>	<i># 765</i>
Dolors, Sala		Broadcom		
<i>Comment Type</i>	<i>E</i>	<i>Comment Status</i>	<i>D</i>	
What is the OMP service interface in figure 56-8				
Service interfaces are defined by interlayer communication. Within a layer we should define functions or signals.				
<i>SuggestedRemedy</i>				
Rename OMP.indication to specific signals and for consistency with other boxes show the arrows to the left side of the box to indicate they are output of this box.				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	

<i>Cl 56</i>	<i>SC</i>	<i>P 119</i>	<i>L</i>	<i># 767</i>
Dolors, Sala		Broadcom		
<i>Comment Type</i>	<i>E</i>	<i>Comment Status</i>	<i>D</i>	
Figure 56-10 shows an input signal called "register"				
According to later definition it seems it should say "registered"				
<i>SuggestedRemedy</i>				
replace "register" by "registered"				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	

<i>Cl 56</i>	<i>SC</i>	<i>P 119</i>	<i>L</i>	<i># 768</i>
Dolors, Sala		Broadcom		
<i>Comment Type</i>	<i>E</i>	<i>Comment Status</i>	<i>D</i>	
The arrows below without touching the box are confusing.				
<i>SuggestedRemedy</i>				
TransmitEnable and multipoint_tx_progress are inputs so I would suggest to put them in the right side of the box as the other inputs.				
The transmitPending is an output. I would put this at the right side of the box as output				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	

<i>Cl 56</i>	<i>SC</i>	<i>P 119</i>	<i>L</i>	<i># 766</i>
Dolors, Sala		Broadcom		
<i>Comment Type</i>	<i>TR</i>	<i>Comment Status</i>	<i>D</i>	
The laser control signal is a global variable that the parser/multiplexer does not need to know.				
The laser control belongs to the Multiplexing control, and the parser uses the TransmitEnable variable to know if it can transmit.				
<i>SuggestedRemedy</i>				
Eliminate Laser control signal in all section 2.4.1 including the figures and move it to section 56.2.2				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	

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Cl 56	SC		P 119	L 47	# 769
Dolors, Sala			Broadcom		
Comment Type	TR	Comment Status	D		
The local time is a global variable. It should be moved to Multiplexing control.					
Still it can be accessed by all MACs. But this avoids confusion on mismatch of updates of the multiple copies if there is one per MAC.					
<i>SuggestedRemedy</i>					
Move local time from this section to section 56.2.2					
Proposed Response		Response Status	O		

Cl 56	SC		P 120	L 1	# 770
Dolors, Sala			Broadcom		
Comment Type	TR	Comment Status	D		
Master is a global variable. It should be moved to Multiplexing control.					
Having more than one can create confusion on errors because different MACs could potentially have it differently.					
<i>SuggestedRemedy</i>					
Move Master from this section to section 56.2.2					
Proposed Response		Response Status	O		

Cl 56	SC		P 120	L 29	# 771
Dolors, Sala			Broadcom		
Comment Type	T	Comment Status	D		
The transmission in progress variable is not needed. The way to detect that the transmission is done is by the signal returned by the MAC transmit done.					
If there is a TransmitEnable means there is a transmission in progress. And it finishes by this indication of the MAC.					
In figure 56-11 the transmission in progress is set but not used. It seems it can be eliminated					
<i>SuggestedRemedy</i>					
eliminate the variable					
Proposed Response		Response Status	O		

Cl 56	SC		P 120	L 34	# 772
Dolors, Sala			Broadcom		
Comment Type	E	Comment Status	D		
Multipoint_transmission_progress is not used in this block					
<i>SuggestedRemedy</i>					
eliminate it					
Proposed Response		Response Status	O		

Cl 56	SC		P 121	L	# 774
Dolors, Sala			Broadcom		
Comment Type	TR	Comment Status	D		
Fig 56-11 should only deal with TransmitEnable instead of laser control. This state diagram describes the transmission of a frame when the interface is enabled.					
<i>SuggestedRemedy</i>					
Eliminate states Laser on and gated and all connecting arrows.					
Connect wait and signal states with :					
(MA_DATA.request or MA_Control.request) AND TransmitEnablej					
Proposed Response		Response Status	O		

Cl 56	SC		P 121	L	# 775
Dolors, Sala			Broadcom		
Comment Type	TR	Comment Status	D		
Figure56-11 state send OMP frame sets the time stamp but doesn't uses it					
<i>SuggestedRemedy</i>					
Add a function to timestamp the Msdu:					
timestamp(msdu, local_time)					
the definition is:					
timestamp(msdu, local_time){					
msdu[1..n]=local_time					
}					
Proposed Response		Response Status	O		

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Cl 56	SC	P 125	L 16	# 779
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
the OMP indication(Error) seems to be a management alarm variable instead of a service interface.				
<i>SuggestedRemedy</i>				
Make this a variable and make the communication to the client through management				
Proposed Response		Response Status	O	

Cl 56	SC	P 128	L 2	# 781
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
this definitions still need to be modified to avoid the need of more opcodes as agreed on.				
<i>SuggestedRemedy</i>				
Please add editor's comment indicating pending to modify				
Proposed Response		Response Status	O	

Cl 56	SC	P 129	L 8	# 782
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
The local time is a global variable. It should be moved to Multiplexing control.				
Still it can be accessed by all MACs. But this avoids confusion on mismatch of updates of the multiple copies if there is one per MAC.				
<i>SuggestedRemedy</i>				
Move local time from this section to section 56.2.2				
Proposed Response		Response Status	O	

Cl 56	SC	P 132	L 50	# 785
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
There is an indication to the MAC client for every message sent into the wire. Therefore the client can know with these indications if the ONU is registered. There is no need of more messages.				

In general, the entire discovery process has too many new messages. But since the state diagrams still need to be split I will not describe all because it will change any one. This one is just an example.

SuggestedRemedy

Eliminate this MAC_control indicate

Proposed Response	Response Status	O
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Cl 56	SC	P 139	L 10	# 786
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
There is no requirement of periodicity of REPORT messages. The requirement is the periodicity of MPCP control messages. The timer should be reset everytime a MPCP frame is sent.				

Therefore, this means option 2 in this editor's is more appropriate

SuggestedRemedy

when state diagrams are modified incorporate option 2

Proposed Response	Response Status	O
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Cl 56	SC	P 149	L 32	# 720
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
"A report frame may hold": This description is a part of "d) Number of requests." so that there should be a single paragraph and itemize "e)" should be the next description:"Pad/Reserved".				

SuggestedRemedy

@It will be a single paragraph from "d) Number of requests." to "as specified in the Number of requests fields".

@Current itemize "e)" should be deleted.

@The next itemize "f)" should be change into the itemize "e)".

Proposed Response	Response Status	O
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Cl 56	SC ???	P ???	L ???	# 911
Tom Murphy		Infineon		
Comment Type	TR	Comment Status	D	
Several burst-mode receiver designs require a hard-wired Reset signal. This is particularly true if fast receiver times are to be implemented, now or in the future. This comment is intended to generate discussion of this topic in the MPCP group.				
<i>SuggestedRemedy</i>				
Provision for a receiver reset signal in the MPCP				
Proposed Response		Response Status	O	

Cl 56	SC 1.1	P 108	L 39	# 749
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
Since agreement was reached that only one LLID is used per ONU, then the multiple MACs and clients only are allowed at OLT. Hence it should be specific that this only applies to OLT.				
<i>SuggestedRemedy</i>				
replace sentence by:				
Support of multiple MACs and MAC clients at the OLT				
Proposed Response		Response Status	O	

Cl 56	SC 1.1	P 108	L 40	# 750
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
There is no need for dynamic binding between MACs and ports. This is implementation dependent and can be "set" at development time.				
A particular implementation supports a fixed number of MACs, and no more.				
Something different is the assignment of an LLID number to these MACs.				
I think this sentence tries to say: Support of dynamic binding of LLID number to MACs. But I think this is an implementation issue and there is no need to say it.				
<i>SuggestedRemedy</i>				
Eliminate sentence				
Proposed Response		Response Status	O	

Cl 56	SC 1.2	P 109	L	# 748
Dolors, Sala		Broadcom		
Comment Type	E	Comment Status	D	
Figure 56.1 shows the general layer stack with the MAC control layer and indicating that it is an optional layer. Since this figure represents just the layering of the PON system, I think it will be more useful to indicate the layering of PON and hence call this Multipoint MAC control and eliminate the optional comment.				
<i>SuggestedRemedy</i>				
Add Multipoint in the Mac control layer box				
Eliminate the word optional in the same box				
Proposed Response		Response Status	O	

Cl 56	SC 1.2	P 110	L	# 751
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
Figure 56-2 needs explanation. We have to give guidelines of why these multiple MACs are needed and how many are needed.				
I did write this part but not all the text made it to the draft.				
The suggested text below was submitted to the editor.				
I do not know why it was not incorporated in the draft, I think it is needed.				
<i>SuggestedRemedy</i>				
Add the following text:				

As depicted in Figure 56-2, the layered system may instantiate multiple MAC entities, using a single physical layer. A different MAC instance is used at the OLT to communicate with an ONU. The individual MAC instances offer a Point-to-point emulation service between the OLT and the ONU. An additional MAC is instantiated to communicate to all ONUs at once. This instance takes maximum advantage of the broadcast nature of the downstream channel by sending a single copy of a frame and this frame is being received by all ONUs. This MAC instance is referred to as Single Copy Broadcast (SCB). The total number of MAC instances and clients an OLT supports is N+1 where N is the total number of ONUs in the network.

The ONU only requires one MAC instance since frame filtering operations are done at the RS layer before reaching the MAC. Therefore, MAC and layers above are Emulation agnostic at the ONU.

Editor's note: To be removed prior to publication. The ONU layer specification is pending on confirmation from the group of defining one LLID per ONU.

Proposed Response	Response Status
	O

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Cl 56	SC 113	P 2	L	# 753
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
MPCP can generates frames without MAC control intervention.				
Therefore we need to decide if the MPCP message has priority over a MAC control client frame.				
For more tighter reaction of MPCP, I suggest to give multiplexing MAC control frames priority over MAC control client frames.				
SuggestedRemedy				
Change sentence in line 2-3				
"Frames generated... MA_DATA primitive."				
by the paragraph:				
Frames generated in the Multiplexing MAC control without client intervention (i.e. empty reports) are given priority over MAC control client frames (i.e. Pause), this is, the MAC control initiated frame must be the next frame to be transmitted after completing the trasmission currently in progress, if any. For the trasmission of this frame, the Multiplexing control instructs the multiplexer to enable the corresponding MAC interface but not the Client interface. Therefore, no client interface is enabled.				
Proposed Response		Response Status	O	

<i>Cl</i> 56	<i>SC</i> 2	<i>P</i> 112	<i>L</i>	<i>#</i> 150
Kramer, Glen		Teknovus		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
Throughout the text "Multiplexing MAC Control", "Multi-Point MAC Control", and "Multipoint MAC Control" is used interchangeably.				
<i>SuggestedRemedy</i>				
Change all occurrences of "Multiplexing MAC Control", "Multipoint MAC Control", to "Multi-Point MAC Control".				
<i>Proposed Response</i>		<i>Response Status</i>	O	

Cl 56	SC 2	P 112	L 18	# 758
Dolors, Sala				
Broadcom				
Comment Type	TR	Comment Status	D	
This OMP is in teh MAC instance. Therefore it can perform the MPCP operations that are MAC instance specific.				
SuggestedRemedy				
Change definition for the following one:				
This block is responsible for handling the MPCP MAC dependent operations				
Proposed Response		Response Status	O	

Cl 56	SC 2	P 112	L 4	# 759
Dolors, Sala				
Comment Type	TR	Comment Status	D	
MPCP has global control operations. Since this is the only global block they will need to be defined here.				
SuggestedRemedy				
Add the following sentence at the end of this paragraph:				
In addition, it also performs the MPCP control operations that are global and not MAC dependent				
Proposed Response		Response Status	O	

<i>Cl</i> 56	<i>SC</i> 2	<i>P</i> 112	<i>L</i> 51	<i>#</i> 752
Dolors, Sala				
Broadcom				
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
line 51 and 52 use the word assertion instead of enabled.				
Even if this functions/interfaces are asserted the frame cannot passed if it is not allowed.				
<i>SuggestedRemedy</i>				
Replace "assertion" by "enabling"				
<i>Proposed Response</i>		<i>Response Status</i>	O	

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Cl 56	SC 2	P 115	L 32	# 320
Khansari, Masoud		Centillium Communicat		
Comment Type T	Comment Status D			
Select function should reset transmitPending[j] before passing the index value to Enable State				
SuggestedRemedy				
TransmitPending[j] variable is defined but not used in State diagram of Multiplexing Control state machine. Make the require changes in state diagram and description of select() function.				
Proposed Response		Response Status O		
Cl 56	SC 2.1	P 113	L 21	# 756
Dolors, Sala		Broadcom		
Comment Type TR	Comment Status D			
For consistency with MAC control notation "subtype" should be called "opcode". This is not a new field but it is the opcode defined in MAC control				
SuggestedRemedy				
change "subtype" for "opcode" in this line and everywhere referring the same thing.				
Proposed Response		Response Status O		
Cl 56	SC 2.1	P 113	L 29	# 757
Dolors, Sala		Broadcom		
Comment Type TR	Comment Status D			
Not all MAC control frames are generated by a previous MA_Control.request.				
An example is a report that doesn't contain a request but it has to be sent to meet timing sync requirements				
SuggestedRemedy				
Add at the end of sentence c):				
or as a result of an MPCP event that generates a frame				
Proposed Response		Response Status O		

Cl 56	SC 2.1	P 113	L 50	# 760
Dolors, Sala		Broadcom		
Comment Type TR	Comment Status D			
MAC handler has not been used so far. For clarity it should use the same description as used so far. For consistency on the description so far this should say MAC interface				
SuggestedRemedy				
Modify line 50 from : "it enables.... any frames"				
to the following:				
"It enables the transmission of only one MAC interface such that all other interfaces cannot transmit any frame."				
Proposed Response		Response Status O		
Cl 56	SC 2.1	P 113	L 6	# 755
Dolors, Sala		Broadcom		
Comment Type TR	Comment Status D			
For clarity of the operation of the interfaces, the process to guarantee one frame at a time with multiple interfaces is needed.				
SuggestedRemedy				
Add the text between first and second paragraph in this page (at line 6)				
The reception of a frame in MACi enables the ReceiveFrame interface of MACi. Note that only one receive MAC interface will be enabled at any given time since there is only one PHY interface. If the received frame is a data frame the MA_DATA.indication interface of client i interface is enabled. If it is a control frame the MA_CONTROL.indication is enabled. The forwarding of the receiving frame from the enabled MAC interface to the enabled Client interface follows the normal procedures of the MAC control specification. Data frames are directly passed to the enable client interface. Control frames are processed by the MAC control and the corresponding control function is performed before passing the indication to the client.				
Proposed Response		Response Status O		

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Cl 56	SC 2.2	P 113	L	# 773
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
This section should describe the mechanism that avoids fragmentation. In other words the multiplexing control should enable an interface if the frame can be completely transmitted because it fits in the remaining of the grant.				
in fact this is the gate function description in section 3.6				
<i>SuggestedRemedy</i>				
Move gate operation (section 3.6) in here				
Proposed Response		Response Status	O	

Cl 56	SC 2.2	P 113	L 53	# 761
Dolors, Sala		Broadcom		
Comment Type	T	Comment Status	D	
The sharing of a PHY is not only for P2PE. SCB also shares a PHY with P2PE.				
<i>SuggestedRemedy</i>				
Replace last sentence of this paragraph with the following:				
The purpose of the multiplexing control is to avoid collision of frames from different MAC clients at the RS layer and below when multiple clients share a single PHY.				
Proposed Response		Response Status	O	

Cl 56	SC 2.2	P 114	L	# 762
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
The transmit enable and transmit in progress variables must be duplicated to have one per data and one per control.				
The multiplexing control does not have enough information in knowing there is a frame ready in client i. It needs to know if it is a MAC control or data frame.				
This can be extended two ways.				
1) add another variable FrameType which indicates what type of frame is ready. If both are ready, the control frame will be indicated following the MAC control priority.				
2) duplicate the function and have one for data and one for control for each instance.				
Since both are just flags anyway. Option 2 gives more information. So I would recommend to add a signal for each interface.				
<i>SuggestedRemedy</i>				
Have a TransmitPendingData and a TransmitPendingControl for each instance.				
Following MAC control priority, the TransmitEnable does not need to be duplicated.				
Proposed Response		Response Status	O	

Cl 56	SC 2.2	P 114	L	# 763
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
Figure 56-5 has inverted the multipoint_transmission_in_progress and transmission_in_progress sides. The multipoint version is the output of this block and not the input.				
<i>SuggestedRemedy</i>				
Reverse side of this two variables in the block.				
Proposed Response		Response Status	O	

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Cl 56	SC 3	P 122	L 3	# 776
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
There is common control operation and state in MPCP. This was approved in the baseline and ratified with the refined layer model.				
SuggestedRemedy take out the sentence in line 3 replace the "may be" in line 2 for "is"				
Proposed Response		Response Status	O	

Cl 56	SC 3.1	P 122	L 48	# 777
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
the network is only maintain in one place. The global place is multiplexing control.				
SuggestedRemedy Eliminate sentence in line 48 and move it to section 2.2. Another comment already relates to this.				
Proposed Response		Response Status	O	

Cl 56	SC 3.3	P 122	L 46	# 152
Kramer, Glen		Teknovus		
Comment Type	E	Comment Status	D	
OMP Parser/Multiplexor is not a sublayer but a functional block.				
SuggestedRemedy Change "sublayer" to "functional block"				
Proposed Response		Response Status	O	

Cl 56	SC 3.3	P 124	L 1	# 778
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
The indications OMP request and OMP indication interact with a client. Therefore they have to follow exact definition of clause 2 service interface.				
I am not sure why they are not exactly the clause 2 interface.				
SuggestedRemedy Please clarify.				
Proposed Response		Response Status	O	

Cl 56	SC 3.4	P	L	# 789
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
The capability vector is used on the decision flow of discovery operation. But it is not defined and interpreted by the client. Information can be passed to the client without specification. But if it is involved in the operation decision it must define.				
SuggestedRemedy To guarantee the capability vector must either be defined or eliminated of the decision flow. Temporarily it should be add an editor's note. And eventually a decision needs to be made on this.				
Proposed Response		Response Status	O	

Cl 56	SC 3.4	P 127	L	# 780
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
The concept "end stations" has a meaning of stations behind the ONU. MPCP does not deal with registration of devices behind ONUs.				
For consistency of the entire clause "end-stations" should be "ONUs"				
SuggestedRemedy replace "end-station" for "ONU"				
Proposed Response		Response Status	O	

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Cl 56	SC 3.4.1	P 131	L 48	# 784
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
An editor's note saying that the contention resolution was still under study was supposed to be added somewhere in the discovery section.				
But it is no there.				
This note should be maintained until a motion deciding on the contention resolution is passed.				
SuggestedRemedy				
Add an editor note:				
the contention resolution is under study.				
Proposed Response		Response Status	O	

Cl 56	SC 3.4.1.4	P 131	L 39	# 783
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
there is no need than one timer per ONU. Since this is already in a MAC instance, there is no needed of an array of SA.				
SuggestedRemedy				
Elimanate [SA] reference of this timer				
Proposed Response		Response Status	O	

Cl 56	SC 3.4.1.6	P 134	L	# 156
Kramer, Glen		Teknovus		
Comment Type	T	Comment Status	D	
Discovery Processing Slave State Diagram I (Fig. 56-17) employs two contention resolution mechanisms: random delay and binary exponential backoff. Simulation-based analysis revealed that this combination always results in performance worse than just random delay method.				
Simulation results were posted on the reflector.				
SuggestedRemedy				
Remove DEFERRAL state from the Discovery Processing Slave State Diagram I.				
Proposed Response		Response Status	O	

Cl 56	SC 3.6	P	L	# 787
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
The gate processing is a global operation and not MAC specific. It should be moved to Multiplexing Control block section 2.2				
SuggestedRemedy				
move gate operation to section 2.2				
Proposed Response		Response Status	O	

Cl 56	SC 4	P 152	L	# 325
Khansari, Masoud		Centillum Communicat		
Comment Type	T	Comment Status	D	
Destruct option in the flag field of REGISTER_REQ MPCPDU is not sufficiently explained. For example, it is not clear if OLT has to acknowledge this message and if yes how.				
Similarly Forced registration option in the flag field of REGISTER MPCPDU. Is it necessary for ONU to acknowledge this? What if ONU never receives this message? Does OLT retransmit another REGISTER message?				
SuggestedRemedy				
Verify all the corner cases in the case of Destruct and Forced registration options and include them in the state diagrams of Figure 56-16 and 56-17.				
Figures 5-16, 5-17, 5-18 regarding the master's and slave's discovery procedure requires a major over-hual. At moment, it is not clear that we have covered all the corner cases and the presentation of these diagrams make this even more difficult.				
Proposed Response		Response Status	O	

<i>Cl</i> 56	<i>SC</i> 4.2	<i>P</i> 146	<i>L</i>	<i>#</i> 153
Kramer, Glen		Teknovus		

Comment Type **T** *Comment Status* **D**

For protocol robustness GATE and REPORT messages should be symmetrical. If the REPORT reports 8 queue lengths, so should the GATE be able to assign transmission lengths for 8 queues.

THERE IS NO LAYERING VIOLATION IN DOING SO!

Here is the suggested mechanism:

1. Scheduler (MAC Control Client) in OLT creates a GATE message with 8 slot lengths - LENGTH[0..7] and a total length TOTAL_LENGTH

TOTAL_LENGTH = LENGTH[0] + ... + LENGTH[7]

2. ONU receives the GATE. MPCP will read the TOTAL_LENGTH and program aggregated slot. MPCP indicates GATE message to MAC Control Client.

3. MAC Control Client makes sure (optionaly) that each queue i transmits what is specified by LENGTH[i].

As one can see, queue assignemnt and selection is done in the MAC Control Client. GATE message is only a transport for this information, similarly to REPORT transporting it in the opposite direction.

What if it is not done? Then either ONU's algorithm should be standardized, so that OLT knows exactly what ONU will do (i.e., priority queueing, wighted fair queueing, deficit-based queueing, etc.). Or else both the OLT and ONU should be SLA-aware to make sure that (a) OLT grants a proper slot to the ONU, and (b) ONU divides it between queues according to SLAs.

SuggestedRemedy

Modify GATE format to include slot_lengths for up to 8 queues and the total length.

GATE format slide will be submitted to the STF editor.

Proposed Response *Response Status* **O**

<i>Cl</i> 56	<i>SC</i> 4.2	<i>P</i> 146	<i>L</i>	<i>#</i> 154
Kramer, Glen		Teknovus		

Comment Type **T** *Comment Status* **D**

The standard currently presents an inconsistent view on the MPCP. On the one hand STF made sure that scheduling algorithm remain vendor-specific. On the other hand formats of GATE and REPORT messages are fixed and do not allow any algorithm-specific information to be passed between scheduler (OLT) and consumers (ONUs). Unavoidably, once and again new proposals would appear calling for custom fields to be included in the message format.

That inconsistency must be resolved.

SuggestedRemedy

I see two options.

1. Allow custom fields to be included in the message format. The fields would have Type-Length-Value format. Type should be unique (use vendor ID?)

2. Allow OLT and ONUs by mutual agreement to switch to custom message format.

This option would require a "format ID" or "rev ID" field in the message.

(This is not a specific solution. Provided that the STF has a chance to discuss this issue and identify better approach, the commenter may/will withdraw this comment and resubmit a new one with only one solution)

Proposed Response *Response Status* **O**

<i>Cl</i> 56	<i>SC</i> 4.5	<i>P</i> 153	<i>L</i> 6	<i>#</i> 788
Dolors, Sala		Broadcom		

Comment Type **TR** *Comment Status* **D**

The MAC should not be destroyed when an LLID is de-registered. It just becomes inactive. The mac still exists. This implies the description and does not change functionality.

Why is this destruct indication defined? this seems to be a unregister operation. It would be helpful to change the name destruct for unregister or something similar to describe the functionality.

SuggestedRemedy

Eliminate the sentence "subsequently the MAC is destroyed.

Proposed Response *Response Status* **O**

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Cl 56	SC 56	P	L	# 99000
Diab, Wael William		Cisco Systems		
Comment Type	TR	Comment Status	A	D1.0 #672
There is no mention on the constraint for the local time stamping. I believe that there is an inherent assumption that the delay through the MAC & Phy is relatively constant. This needs to be explicitly stated in the draft.				
SuggestedRemedy				
Please add a timing constraint for the time stamping mechanism to eliminate any variability through the MAC and Phy. For instance, a min and max time between processing to transmission.				
Proposed Response		Response Status	U	
ACCEPT IN PRINCIPLE. Transmission/reception delay can not be distinguished from propagation delay. Specification needs to constrain delay variations not necessarily delay.				

Cl 56	SC 56	P 107	L 1	# 918
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
The Optical Multi-Point clause is completely missing a system level topology clause.				
SuggestedRemedy				
Add. See existing 802.3 topology clauses for guidance. Include such items as number of splices, splice location vs link length, db losses, start-up and turn-off limitations, test parameters, min/max distances between splices and/or groups of splices, etc. Include test criteria.				
Proposed Response		Response Status	O	

Cl 56	SC 56.1	P 111	L 53	# 700
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
It is hard for me to understand how OLT and ONU process a Discovery, Gate and Report.				
SuggestedRemedy				
How about add some "Sequence chart"s which is written in Baseline document . For example, make a new chapter:"56.1.5 Sequence Chart".				
Proposed Response		Response Status	O	

Cl 56	SC 56.1 &2	P	L	# 994
Ajung Kim		Samsung Elec		
Comment Type	T	Comment Status	D	
Most of the confusion and misinterpretations arise from explaining two different systems (OLT, ONU) by one universal model and diagram. For example, the objective b) in 56.1.1 applies only to OLTs, and it was neither an objective, nor in draft 1.0.				
SuggestedRemedy				
Split the state and block diagrams for ONU and OLT, reflecting the facts that; - the objective b) is supposed to be 1LLID/ONU as a result of the Sep. meeting. - LaserControl is applicable only to ONUs, as OLT PMD has no interface for the LaserControl. - The parts referring to 'multiple clients and underlying MACs' in Multiplexing MAC control can apply only to OLTs.				
Proposed Response		Response Status	O	

Cl 56	SC 56.1.2	P 110	L 4	# 599
Benmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
ONU model is missing				
SuggestedRemedy				
Add ONU Layered system diagram				
Proposed Response		Response Status	O	

Cl 56	SC 56.1.3	P	L	# 936
Jaeyeon Song		Samsung		
Comment Type	T	Comment Status	D	
Figure 56-3, the interface of MAC Control Client and Control multiplexeris not clear. It is related to Control multiplexer state diagram(56.2.4.1), too.				
SuggestedRemedy				
Clarify the interface and show in the diagram				
Proposed Response		Response Status	O	

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Cl 56	SC 56.1.3	P 111	L 30	# 950
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
Most of the important functions in generating grants, or using grants is all performed aggregate for all links. This holds true in OLT and ONU(when ONU has multiple MAC instances)				
So OMP should better be represented as a common block for all instantiated emulated links. not many instantiation.				
SuggestedRemedy				
represent the functional block diagram of optical multipoint as a single entity with many instantiated service interfaces up and down.				
Proposed Response		Response Status	O	

Cl 56	SC 56.1.3	P 111	L 4	# 597
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
It is not very clear how/whether the different functions shown in figure 56-3 apply to the OLT vs. the ONU.				
The behavior is different and needs to be explicitly discussed in the context of OLT vs. ONU.				
SuggestedRemedy				
Throughout Clause 56, add OLT vs. ONU clarifications whenever a function is being discussed.				
Proposed Response		Response Status	O	

Cl 56	SC 56.1.4	P 111	L 45	# 392
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
This section describes what conventions are used for the state machines. I recommend these conventions be reviewed and the state machines cleaned up accordingly.				
SuggestedRemedy				
Clean up the state machines according to the conventions cited.				
Proposed Response		Response Status	O	

Cl 56	SC 56.1.4	P 111	L 46	# 388
Brown, Benjamin				
Comment Type	E	Comment Status	D	
"is comprised of" doesn't make sense				
SuggestedRemedy				
Replace all instances of "is comprised of" with "comprises"				
Proposed Response		Response Status	O	

Cl 56	SC 56.2	P 112	L	# 606
Bemmel, Vincent	Alloptic			
Comment Type	T	Comment Status	D	
Please clarify the operation at the ONU as well. E.g., it is not clear from the text that at the ONU the number of parsers/mux instances is equal to one.				
SuggestedRemedy				
Add under the paragraph of line 23 the following:				
"At the ONU, a single MAC instance is used to communicate with each MAC instance at the OLT. In that case, the Multiplexing MAC Control contains only one instance of the Parser/Multiplexer function."				
Proposed Response		Response Status	O	

Cl 56	SC 56.2	P 112	L 10	# 390
Brown, Benjamin				
Comment Type	T	Comment Status	D	
Is there 1 copy of Multiplexing MAC Control or 1 per MAC? Figure 56-4 makes it look like just 1 copy but the text makes it sound like there is 1 copy per MAC.				
SuggestedRemedy				
Please clarify				
Proposed Response		Response Status	O	

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Cl 56	SC 56.2	P 112	L 14	# 391
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
The description for bullet b (by the way, the bullet numbering/lettering needs to be cleaned up) isn't a proper sentence, or at least I can't understand it.				
<i>SuggestedRemedy</i>				
Please clean up the sentence.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2	P 112	L 6	# 389
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
What is a handler?				
<i>SuggestedRemedy</i>				
Define what a handler is to those of us not accustomed to software terms.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.1	P	L	# 937
Jaeyeon Song		Samsung		
Comment Type	E	Comment Status	D	
In Figure56-3, Figure 56-4, Figure 56-6, 'multiplexing MAC Control' in the title.				
<i>SuggestedRemedy</i>				
Not multiplexing MAC Control , but multipoint MAC Control				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.1	P 112	L 20	# 732
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the "Multiplexing Control", there is not the mention when multiple transmit request happen at the same time.				
<i>SuggestedRemedy</i>				
How about add following description. "Scheduling algorithm is out of scope of 802.1ah in the case of multiple transmit request happen at the same time".				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.1	P 113	L 2	# 600
Bemmel, Vincent		Alloptic		
Comment Type	E	Comment Status	D	
Typo: "Frames generated at the MAC Control are given priority..."				
<i>SuggestedRemedy</i>				
"Frames generated at the MAC Control Client are given priority..."				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.1	P 113	L 20	# 393
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
bullet b) the frame should be parsed according to the DA as well as the length/type				
<i>SuggestedRemedy</i>				
Add DA into this description				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.2	P	L	# 938
Jaeyeon Song		Samsung		
Comment Type	E	Comment Status	D	
OMP_n function block communicates with the Multi point Gating Control using...				
<i>SuggestedRemedy</i>				
OMP_n function block communicates with the Multiplexing Control using...				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.2	P 114	L 17	# 734
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the description, "transmitEnable[j]" and transmission_in_progress[j]" should be a "transmitEnable[n]" and transmission_in_progress[n]".Because they are used by OMP_n block.				
<i>SuggestedRemedy</i>				
How about change "transmitEnable[j]" and transmission_in_progress[j]" into "transmitEnable[n]" and transmission_in_progress[n]"?				
Proposed Response		Response Status	O	

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CI 56	SC 56.2.2	P 114	L 17	# 900
Sio Peng GOI		Institute for Communic		
Comment Type E	Comment Status D			
In Figure 56-6, the blocks are Instance n and Multiplexing Control. And they communicate with transmitEnable and transmitPending.				
<i>SuggestedRemedy</i>				
Change to :Multiplexing MAC Control instance n communicates with the Multiplexing Control using transmitEnable[] and transmitPending[] state variables...				
Proposed Response	Response Status O			

CI 56	SC 56.2.2.1.2	P 115	L 1	# 394
Brown, Benjamin		AMCC		
Comment Type E	Comment Status D			
Using separate sections for Variables/Constants/Functions etc. can lean to redundancy.				
<i>SuggestedRemedy</i>				
Combine all the Variables/Constants/Functions etc. for each group of state machines.				
Proposed Response	Response Status O			

CI 56	SC 56.2.2.1.2	P 115	L 10	# 395
Brown, Benjamin		AMCC		
Comment Type E	Comment Status D			
Mixing ON/OFF and TRUE/FALSE				
<i>SuggestedRemedy</i>				
Pick the values for a variable and be consistent with them				
Proposed Response	Response Status O			

CI 56	SC 56.2.3.1.6	P 95	L 13	# 99001
Jonathan Thatcher		World Wide Packets		
Comment Type TR	Comment Status A			
Logic needs to be completely specified. For example, to the left of the "PARSE" block there must be Length_Type == MAC Control and l(subtype in (GATE,REPORT ,...,				
Better to explicitly describe the logic than use "else."				
<i>SuggestedRemedy</i>				
Scrub and fix all state diagrams				
Proposed Response	Response Status U			
ACCEPT. same as #174				

CI 56	SC 56.2.4	P	L	# 939
Jaeyeon Song		Samsung		
Comment Type E	Comment Status D			
Figure 56-8 Control parser/multiplexer service interface				
Figure 56-10 Control parser/multiplexer service interface				
Control Parser and multiplexer is divided into 2 diagrams ; fig56-8, fig 56-10				
<i>SuggestedRemedy</i>				
-Figure 56-8 Control parser/multiplexer service interface				
--> Figure 56-8 Control parser service interface				
-Figure 56-10 Control parser/multiplexer service interface				
--> Figure 56-10 Control multiplexer service interface				
Proposed Response	Response Status O			

CI 56	SC 56.2.4	P 118	L 33	# 903
Sio Peng GOI		Institute for Communic		
Comment Type E	Comment Status D			
Message from MAC Control client is MA_CONTROL.request.				
<i>SuggestedRemedy</i>				
Given multiple MA_DATA.request from MAC Client, and MA_CONTROL.request from the MAC Control Client,...				
Proposed Response	Response Status O			

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Cl 56	SC 56.2.4	P 119	L 10	# 893
Sio Peng GOI		Institute for Communic		
Comment Type	E	Comment Status	D	
The variable "register" in Figure 56-10 is not consistent with that defined in Clause 56.2.4.1.2				
SuggestedRemedy				
Rename the variable "register" in Figure 56-10 to "registered"				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.4.1	P 119	L 24	# 741
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	

SuggestedRemedy
The title:"Control Parser/Multiplexer state diagram" of the section 56.3.3.1, it should be a "Control Multiplexer state diagram".

Proposed Response **Response Status** **O**

Cl 56	SC 56.2.4.1.6	P	L	# 941
Jaeyeon Song		Samsung		
Comment Type	T	Comment Status	D	
Figure 56-11, the location of 'transmitPending=false' is not correct.				
SuggestedRemedy				
it should be in CLEAN state. In other words, changing the value after transmission is better.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.4.1.6	P	L	# 940
Jaeyeon Song		Samsung		
Comment Type	T	Comment Status	D	
Figure 56-11, it seems to be a GATED state if TxAllowed signal would be true. In other words, TxAllowed signal can decide GATED or not-GATED. It will give a confusion of meaning.				
In addition, the definition of GATE state is not clear.				
SuggestedRemedy				
Remove of the GATE state, TxAllowed signal.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.4.1.6	P 121	L Figure 56-	# 974
Jin Kim		Samsung Electronics		
Comment Type	T	Comment Status	D	
The multipoint_transmission_in_progress should be determined by state of all transmission_in_progress[] signals. Therefore, there is no necessary of checking both multipoint_transmission_in_progress and transmission_in_progress signals in CLEAN state.				
SuggestedRemedy				
Remove transmission_in_progress signal in CLEAN state.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.4.1.6	P 121	L Figure 56-	# 973
Jin Kim		Samsung Electronics		
Comment Type	T	Comment Status	D	
It seems like TXAllowed and transmitEnable are duplicated signals.				
SuggestedRemedy				
Remove TXAllowed signal.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.4.1.6	P 121	L Figure 56-	# 972
Jin Kim		Samsung Electronics		
Comment Type	T	Comment Status	D	
Since the laser is always on in OLT, OLT does not have to have a LaserControl.				
SuggestedRemedy				
Separate Figure 56-11 into OLT and ONU, and remove LaserControl from OLT state diagram.				
Proposed Response		Response Status	O	

Cl 56	SC 56.2.4.1.6	P 121, 119	L Figure 56-	# 975
Jin Kim		Samsung Electronics		
Comment Type	T	Comment Status	D	
It is not clear how each instance know that there is transmit pending in the MAC Client.				
SuggestedRemedy				
Remove transmitPending signal and SIGNAL state.				
Proposed Response		Response Status	O	

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Cl 56	SC 56.2.6.1.6	P 113	L 11	# 99002	
Bharati, Barnali		Wipro Technologies			
Comment Type	TR	Comment Status	A	D1.0 #188 discovery	
In 'PERIODIC TRANSMISSION' state should there not be a check if variable 'register == true'? So that no report is sent until registration is complete or if the ONU has been deregistered.					
<i>SuggestedRemedy</i>					
Proposed Response	Response Status				
ACCEPT.	U				

Cl 56	SC 56.3	P 122	L 3	# 396	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
This section describes how the mechanism for coordinating the synchronization of multiple MACs using the OMP procedures is outside the scope of the document. Isn't this function integral to the success of P2MP?					
<i>SuggestedRemedy</i>					
Am I missing something here?					
Proposed Response	Response Status				
	O				

Cl 56	SC 56.3.1	P 122	L 10	# 601	
Bemmel, Vincent		Alloptic			
Comment Type	T	Comment Status	D		
This section mixes OLT and ONU functions which makes it confusing. It is e.g., not clear whether 'MAC gating' is done within the OLT, or between ONUs (TDMA). Different functions have different interpretations in the OLT vs. ONU.					
<i>SuggestedRemedy</i>					
Rewrite section to clearly identify what is at the ONU vs OLT.					
Proposed Response	Response Status				
	O				

Cl 56	SC 56.3.1	P 122	L 25	# 397	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
What is a network feeder?					
<i>SuggestedRemedy</i>					
Add a description for "network feeder" or use a different term.					
Proposed Response	Response Status				
	O				

Cl 56	SC 56.3.1	P 122	L 28	# 696	
Diab, Wael William		Cisco Systems			
Comment Type	TR	Comment Status	D		
The specification calls for a constant delay through the MAC and Phy to maintain the correctness of the timestamping mechanism.					
This is a valid requirement, however, a more numeric treatment of the meaning of "constant" is needed.					
<i>SuggestedRemedy</i>					
Add a section that deals with the numerical accuracy of "constant delay". This would be helpful to the reader and would allow for compliance testing.					
Proposed Response	Response Status				
	O				

Cl 56	SC 56.3.3.1.3	P 124	L 30	# 398	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
These functions aren't required if the timer conventions of 14.2.3.2 are used, as stated in 56.1.4.					
<i>SuggestedRemedy</i>					
Remove these functions and use the conventions of 14.2.3.2.					
Proposed Response	Response Status				
	O				

P802.3ah Draft 1.0 Comments

CI 56	SC 56.3.3.1.6	P	L	# 942	
Jaeyeon Song		Samsung			
Comment Type	T	Comment Status	D		
Figure 56-13, in PARSE INDICATION state, the order and fields assignment is not correct ; Timestamp is in front of opcode?					
<i>SuggestedRemedy</i>					
-subtype=m_sdu[0:1] -timestamp=m_sdu[2:5] -m_sdu=m_sdu[6:50]					
Proposed Response		Response Status	O		

CI 56	SC 56.3.3.1.6	P 126	L 9	# 951	
Chan Kim		ETRI			
Comment Type	T	Comment Status	D		
the case where the keep alive time out is not important is when it is for OLT or when the ONU is not registered yet. (here we assume that me == broadcast_ID means that the ONU is not yet registered)					
<i>SuggestedRemedy</i>					
how about changing it to if not (Master or me == broadcast_ID), it should be 'or' not 'and'.					
Proposed Response		Response Status	O		

CI 56	SC 56.3.4	P 127	L 25	# 399	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
Discovery appears (based on the 3 pages of state diagrams) to be a fairly complicated process. It deserves significantly more text description than is currently available					
<i>SuggestedRemedy</i>					
Add text description for Discovery.					
Proposed Response		Response Status	O		

CI 56	SC 56.3.4.1	P 128	L 25	# 592	
Murakami, Ken		Mitsubishi Electric Cor			
Comment Type	T	Comment Status	D		
The definition of length parameter in MA_CONTROL.request from Discovery Process to Gate Process at the TX side is not clear.					
<i>SuggestedRemedy</i>					

On the OLT side, not only the length of allocated discovery window but also the length of discovery gate should be indicated by the client.
Two types of MA_CONTROL.request (create_discovery_window) should be specified. One is for OLT, another is for ONU.
MA_CONTROL.request (create_discovery_window) primitive for the OLT should have additional parameter grant_length which indicates the length of the discovery gate in time_quantia. This parameter is mapped into length parameter in A_CONTROL.request primitive in SEND REGISTER WINDOW state.
The client calculates the length of the discovery gate based on the length of allocated discovery window, the round trip propagation delay of the farthest ONU, and the length of REGISTER_REQ including IPG and preamble.
Besides MA_CONTROL.request (create_discovery_window), MA_CONTROL.request primitive in SEND REGISTER WINDOW state should be defined.
Please see the attached file.
The file name is murakami_1_1102.pdf.

Proposed Response Response Status O

CI 56	SC 56.3.4.1	P 133	L 33	# 593	
Murakami, Ken		Mitsubishi Electric Cor			
Comment Type	T	Comment Status	D		
The following processes are not clear in D1.1. - RX of REGISTER indicating Nack - TX of REGISTER_ACK indicating Failure - RX of REGISTER_ACK indicating Failure					
<i>SuggestedRemedy</i>					
Add the flag check process in Figure 56-17. Add the process to issue OMP.request of REGISTER_ACK indicating failure in NACK state in Figure 56-17. Add the process to receive REGISTER_ACK indicating failure in COMPLETE DISCOVERY state in Figure 56-16. Add the definition of MA_CONTROL.indication which indicates denied discovery process in section 56.3.4.1.5. Please see the attached file. The file name is murakami_2_1102.pdf.					
Proposed Response		Response Status	O		

P802.3ah Draft 1.0 Comments

Cl 56	SC 56.3.4.1.1	P 128	L 42	# 952
Chan Kim		ETRI		
Comment Type	E	Comment Status	D	
"register_msg timer" was mistakenly placed in the text.				
SuggestedRemedy	remove "register_msg timer".			
Proposed Response		Response Status	O	
Cl 56	SC 56.3.4.1.2	P 129	L 51	# 953
Chan Kim		ETRI		
Comment Type	E	Comment Status	D	
To use the term "sublayer" like in "Discovery Processing sublayer" might not be adequate. There are several instances in the document.				
SuggestedRemedy	how about using "discovery processing block" ?			
Proposed Response		Response Status	O	
Cl 56	SC 56.3.4.1.2	P 141	L 14	# 744
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the description of grant_list, although the statement of insertion is written, there is no statement of deletion.				
SuggestedRemedy	How about add a following statement. "Each time a grant window starts, the current grant element is removed from the list."			
Proposed Response		Response Status	O	
Cl 56	SC 56.3.4.1.3	P 129	L 51	# 954
Chan Kim		ETRI		
Comment Type	E	Comment Status	D	
exponent correct?				
SuggestedRemedy	how about using exp(base,exponent)?			
Proposed Response		Response Status	O	

Cl 56	SC 56.3.4.1.3	P 130	L 28	# 701
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
I heard of that there was an idea that ONU and OLT will auto-negotiate a timing in ONU using a "CapabilityVector". It's value means the time between receiving Grant until being able and being send a Ethernet Packet in the ONU. There is no description of this "negociation mehcanism".				
SuggestedRemedy	If this topic is out of scope of EFM, how about add some description to explain this mechanism in the tail of "56.3.4.1.3 FunctionsAFSupported_Capabilities()".			
Proposed Response		Response Status	O	
Cl 56	SC 56.3.4.1.4	P 131	L 42	# 955
Chan Kim		ETRI		
Comment Type	E	Comment Status	D	
to arrival => since arrival whom must => who must				
SuggestedRemedy	as shown in comment			
Proposed Response		Response Status	O	
Cl 56	SC 56.3.4.1.4	P 131	L 53	# 956
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
since the grant duration includes the idle period and laser turn on,off time, the maximum random delay should consider those values.				
SuggestedRemedy	it should read, discovery window size less the REGISTER_REQ MPCPDU frame size less the idle period and laser turn on and off time.			
Proposed Response		Response Status	O	

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Cl 56 SC 56.3.4.1.5 P132 L34 # 957 Chan Kim ETRI

Comment Type T Comment Status D

what if we don't know the MAC address of the ONU before registration? so the DA parameter should be removed, and it can be extracted later from the register_req message.

SuggestedRemedy

remove the DA argument from the MA_CONTROL.request(create_discovery_window,...).

Proposed Response Response Status O

Cl 56 SC 56.3.4.1.5 P133 L13 # 958 Chan Kim ETRI

Comment Type E Comment Status D

used only in ONU. the service interface diagram of Fig 56-15 might better be divided for OLT and ONU.

SuggestedRemedy

divide the service interface for OLT and ONU.

Proposed Response Response Status O

Cl 56 SC 56.3.4.1.6 P134 L13 # 959 Chan Kim ETRI

Comment Type T Comment Status D

do we really need to specify this 'and me = broadcast ID'?

It's either that the master has always the broadcast ID or it has any value(less probable)

SuggestedRemedy

specify that OLT have 'FFFF' as LLID or OLT has no LLID.

Proposed Response Response Status O

Cl 56 SC 56.3.4.1.6 P134 L16 # 960 Chan Kim ETRI

Comment Type T Comment Status D

In SEND_REGISTER_WINDOW state, own_id should be replaced with broadcast LLID and the DA should contain later-specified special multicast ID.(link constrained)

SuggestedRemedy

change own_id to broadcast_ID. and add a DA which value will be fixed later.

Proposed Response Response Status O

Cl 56 SC 56.3.4.1.6 P134 L34 # 961 Chan Kim ETRI

Comment Type T Comment Status D

In the CHECK_DESTRUCT_ID state, it reads "if me != broadcast_ID". why do we check my ID when register_req with destruct flag?

SuggestedRemedy

change 'me' to 'received LLID' and regardless of the result of this check, the state should go to the idle state.

Proposed Response Response Status O

Cl 56 SC 56.3.4.1.6 P134 L40 # 962 Chan Kim ETRI

Comment Type T Comment Status D

In REGISTER state, the list of items temporally latched from the received REGISTER_REQ doesn't go with the message definition. There is not number of requested ports now.

SuggestedRemedy

fix it for the changed format.

Proposed Response Response Status O

Cl 56 SC 56.3.4.1.6 P134 L48 # 963 Chan Kim ETRI

Comment Type T Comment Status D

the first flag means that the ONU is requesting registration in FIRST OR ADDITIONAL state, the current diagram shows that the state transition is different according to the first_flag checking. But the first_flag shows the the registration is the first one of an ONU. So, it has nothing to do with whether we'll have another REGISTER_REQ messages coming from others ONUs or not.

SuggestedRemedy

change the diagram so that it jumps to INSIDE_REGISTER_WINDOW state in either case.

Proposed Response Response Status O

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Cl 56	SC 56.3.4.1.6	P 136	L 47	# 964
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
The 'DEREGISTER' state is entered from two states. But when it is entered after receiving the REGISTER message with fail indication, the ONU doesn't have to send the REGISTER_REQ with deregister flag.				
<i>SuggestedRemedy</i>				
make the arrow for choice 2 of the switch statement of ARRIVING REGISTER 2 state go to the initial WAIT state.				
Proposed Response		Response Status	O	

Cl 56	SC 56.3.5	P 137	L 1	# 400
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
While not as complicated as Discovery, this section also deserves more text description than is currently available.				
<i>SuggestedRemedy</i>				
Add text description for Report Processing.				
The same thing applies to Gate Processing				
Proposed Response		Response Status	O	

Cl 56	SC 56.3.5	P 137	L 6	# 702
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
When OLT receive a REPORT MPCPDU, in the higher layer, it should re-calculate a RTT with the timestamp of the REPORT MPCPDU.				
<i>SuggestedRemedy</i>				
As a statement of "Report processing", there should be a description the need of RTT recalculation with REPORT MPCPDU.				
For example, how about add a following description?				
"In the higher layer, OLT should calculate a RTT with the timestamp of the REPORT MPCPDU and update it automatically."				
Proposed Response		Response Status	O	

Cl 56	SC 56.3.6	P	L	# 637
Miyoshi, Hidekazu		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
Associated modifications for the extension of the gate message to set thresholds. A presentation, miyoshi_p2mp_exGate.pdf, will be submitted.				
<i>SuggestedRemedy</i>				
Add the arrow of MA_CONTROL.indication(thresholds) from the Gate processing block in figure56-21 on page 140.				
Add the following description in 56.3.6.1.5 Messages.				
MA_CONTROL.indication(thresholds)				
The service indication issued by the Gate Process to notify the MAC Control client and higher layers that the OLT has requested to set or reset thresholds.				
Change "MA_CONTROL.request(grant,local,n,start[4],length[4],discovery,force_report)" to "MA_CONTROL.request(grant,local,n,start[4],length[4],discovery,force_report,thresholds)" in 56.3.6.1.5 Messages.				
Add the following statement in the PROGRAM state in figure 56-22 on page 144.				
If thresholds <> NULL				
MA_CONTROL.indication(thresholds)				

Change
"OMP.indicate(n*(start,length),discovery,force_report)" to
"OMP.indicate(n*(start,length),discovery,force_report,thresholds)" in figure 56-22 on page 144.

Proposed Response		Response Status	O	
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Cl 56	SC 56.3.6	P 139	L 38	# 965
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
rather than directly describing state diagram, explaining the essential ideas in words might be helpful.				
for example, whether the gate converts the idle period and laser on/off time or not is not indicated. (it is assumed that the gate covers all transmission of an ONU including idle period and laser on/off time, but parts of the state diagram seems to be confused in this.)				
<i>SuggestedRemedy</i>				
clearly indicate whehter the gate covers idle pattern transmission time and laser turn-on and off time for ONU or not.				
Proposed Response		Response Status	O	

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Cl 56	SC 56.3.6.1	P 126	L 13	# 99003	
Jonathan Thatcher		World Wide Packets			
Comment Type	TR	Comment Status	A	D 1.0 #689	
There are a number of references to a phantom "higher-layer-entity" within the clause.					
<i>SuggestedRemedy</i>					
Unmask the phantom. Describe, reference, or otherwise expose this "entity."					
Proposed Response		Response Status	U		
ACCEPT.					
Naming convention would be made consistent using "MAC Client" or "MAC Control Client"					

Cl 56	SC 56.3.6.1.2	P 141	L 6	# 949	
Tae-Whan Yoo		ETRI			
Comment Type	T	Comment Status	D		
There are various ways to realize multiple MAC and MAC Control layers. Specifying the recipient of the grant with the destination MAC address DA, which is ONU's MAC address, could restrict the implementation freedom.					
<i>SuggestedRemedy</i>					
We suggest that the 48-bit subfield "DA" in the structure of current_grant be replaced with the 16-bit "LLID".					
Proposed Response		Response Status	O		

Cl 56	SC 56.3.6.1.2	P 142	L 12	# 708	
OGURA, Yasuo		NTT			
Comment Type	E	Comment Status	D		
Until "IDLE_timer" has been expired, there is a description that ONU should transmit an IDLE pattern only. But there is no description in the "56.3.6.1.2 Variables:laser_off_time".					
<i>SuggestedRemedy</i>					
How about add the following description after the end of the description of "laser_off_time". "During the laser_off_time, any data patterns can be transmitted."					
Proposed Response		Response Status	O		

Cl 56	SC 56.3.6.1.2	P 142	L 4	# 707	
OGURA, Yasuo		NTT			
Comment Type	E	Comment Status	D		
In the "56.3.6.1.4 Timers:IDLE_timer", there is description that:"when oly IDLE symbol-pairs are transmitted". But there is no description in the "56.3.6.1.2 Variables:IDLE_time".					
<i>SuggestedRemedy</i>					
How about add the following description after the end of the description of "IDLE_time". "During the IDLE_time, only IDLE patterns can be transmitted."					
Proposed Response		Response Status	O		

Cl 56	SC 56.3.6.1.6	P 144	L 1	# 602	
Bemmel, Vincent		Alloptic			
Comment Type	T	Comment Status	D		
use seperate OLT vs. ONU diagrams					
<i>SuggestedRemedy</i>					
use seperate OLT vs. ONU diagrams					
Proposed Response		Response Status	O		

Cl 56	SC 56.3.6.1.6	P 144	L 37	# 967	
Chan Kim		ETRI			
Comment Type	T	Comment Status	D		
In the state 'SORT'. it checks if the time left until the start time can conver the required idle time and turn-on/off time. But, why do we need to check this? haven't we decided that the grant duration includes the idle period and turn-on.off delay?					
<i>SuggestedRemedy</i>					
remove the line for checking the time left.					
Proposed Response		Response Status	O		

<i>Cl</i> 56	<i>SC</i> 56.3.6.1.6	<i>P</i> 144	<i>L</i> 5	<i>#</i> 966
Chan Kim		ETRI		
<i>Comment Type</i>	<i>T</i>	<i>Comment Status</i>	<i>D</i>	
The statemachines of OMP are generally unnecessarily not-easy-to-understand. rather than having one state, expressing in several sequention states would be better. The gate processing should be divided for receiving and consuming. Because receiving a gate from the OLT, and using the received gate can occur at the same time. The two processes should have separate state space.				
<i>SuggestedRemedy</i> separate the state diagram of Gate Processing to ones for OLT and ONU. Also, receiving the gate and consuming the gate can be separated for ONU.				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	
<i>Cl</i> 56	<i>SC</i> 56.3.6.1.f++	<i>P</i> 126	<i>L</i> 25	<i>#</i> 99004
Jonathan Thatcher		World Wide Packets		
<i>Comment Type</i>	<i>TR</i>	<i>Comment Status</i>	<i>A</i>	<i>D</i> 1.0 #690
Description of "Assigned Ports List" (per Figure 56-22) is missing. Also, suggest dropping the "s" off of "Ports" everywhere.				
<i>SuggestedRemedy</i> Add description				
<i>Proposed Response</i>		<i>Response Status</i>	<i>U</i>	
ACCEPT.				
<i>Cl</i> 56	<i>SC</i> 56.3.7.1	<i>P</i> 128	<i>L</i> 33	<i>#</i> 99005
Jonathan Thatcher		World Wide Packets		
<i>Comment Type</i>	<i>TR</i>	<i>Comment Status</i>	<i>A</i>	<i>D</i> 1.0 #688
Validation of correct registration is an appropriate goal of the registration process. Registration data sent in the "Registration PDU" should be returned in the "Registration Ack" PDU.				
Note, the frequency of registration should not be sufficient to impact overall performance. Saving a few bytes is not worth not being able to validate correct reception.				
<i>SuggestedRemedy</i> Add Capability vector, Assigned port list, etc.				
<i>Proposed Response</i>		<i>Response Status</i>	<i>U</i>	
ACCEPT.				

<i>Cl</i> 56	<i>SC</i> 56.4	<i>P</i> 144	<i>L</i>	<i>#</i> 635
Miyoshi, Hidekazu		Sumitomo Electric Indu		
<i>Comment Type</i>	<i>T</i>	<i>Comment Status</i>	<i>D</i>	
Since the size of MPCP messages is fixed to 64 Byte, information which can be conveyed through MPCP messages is limited. However various types of data may need to be exchanged via MPCP messages for higher efficiency, QoS policy and/or other reasons. In this sense, it would be significant benefits for us to allow MPCP messages to exchange diverse data as additional information.				
A file, miyoshi_p2mp_addInfo.pdf, is attached for discussion.				
<i>SuggestedRemedy</i> Define the additional information fields in MPCP messages as optional.				
Following is one possible definition of the field.				
1: The Number of additional field (8 bits) indicates the number of sets of the code_length field and the add_data field.				
2: Bit 0-3 of the code_length field (8 bits) identifies the specific data type embedded in the add_data field. Bit 4-7 of the code_length field specifies the size of the add_data field in byte.				
3: The add_data field conveys various types of data identified by the code field.				
All MPCP messages may hold multiple sets of the code_length and add_data fields as indicated by the number of additional field. This is an optional field, and a peer may ignore this field.				
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>	

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Cl 56	SC 56.4.2	P 146	L	# 634
Miyoshi, Hidekazu		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
When ONU reports multiple boundaries for each queue, and OLT and ONU use different scheduling algorithms for selecting transmission packets, ONU may not decide the bandwidth allocation properly as expected by OLT, which can cause policy violation and/or slot assignment loss. For example, if we assume that (1) ONU sends a report of QH={300, 100} and QL={350, 150}, (2) OLT chooses 300 for QH and 150 for QL, and (3) OLT grants 450 (300+150=450) to ONU, there would be no way for the ONU to send packets properly: ONU may interpret 450 as 100 from QH and 350 from QL. In addition, OLT never knows its policy was violated: OLT doesn't know the ONU's decision for selecting transmission packets. A file, miyoshi_p2mp_qgrant.pdf, is attached for discussion. SuggestedRemedy Add an optional field indicating grant length per queue as shown below. Grant bitmap. This is an 8 bit flag register that indicates which queues are represented in this REPORT MPCPDU. Queue_grant[i]. Length of the signaled grant for priority queue #i, this is an 16 bit unsigned field. The length is counted in 16 bit time increment. This mechanism works as follows. 1. Scheduler (MAC Control Client) in OLT creates a GATE message with 8 slot lengths, QUEUE_GRANT[0..7], each indicates grant length for a priority queue, and total grant length. 2. ONU receives the GATE. MPCP will read the TOTAL_GRANT and program aggregated slot. MPCP indicates GATE message to MAC Control Client. 3. MAC Control Client makes sure (optionally) that each queue transmits what is specified by QUEUE_GRANT[i]. Proposed Response Response Status O				

Cl 56	SC 56.4.2	P 146	L	# 636
Miyoshi, Hidekazu		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
Threshold values set in queues in ONU affect upstream bandwidth efficiency. There is, however, no standard mechanism to convey thresholds from OLT to ONU, which can lead to an interoperability issue. I propose a mechanism by extending the gate message. A presentation, miyoshi_p2mp_exGate.pdf, will be submitted. SuggestedRemedy Add the following statements. Number of thresholds. This field specifies the number of sets of threshold_flag and threshold_value fields in the Gate message. x) Threshold_flag. The threshold_flag field is an optional 8 bit field that contains information for the threshold as shown below. Bit 0: action. The action flag field indicates the action, set or reset, for the threshold specified by the queue number and threshold id fields. Bit 1-3: queue number. The queue number field specifies the queue to which the threshold is set or reset. Bit 4-7: threshold id. The threshold id field identifies the threshold. x) Threshold_value. The threshold_value field is an optional 16 bit field that conveys the value of threshold. The granularity of threshold is 2 octets. Proposed Response Response Status O				

Cl 56	SC 56.4.2	P 146	L 37	# 603
Bemmel, Vincent		Alloptic		
Comment Type	E	Comment Status	D	
'GRANT MPSPDU' should be 'GATE MPCPDU' SuggestedRemedy Replace 'GRANT MPSPDU' with 'GATE MPCPDU' Proposed Response Response Status O				

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Cl 56	SC 56.4.2	P 147	L 24	# 968
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
The force_report flag is to ask the ONU to issue a REPORT message at the corresponding grant period				
<i>SuggestedRemedy</i>				
is it after the grant period or at the beginning of the grant period? We have to decided. It is not clearly expressed.				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.2	P 147	L 26	# 745
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
When OLT will pack multiple grants into a GATE MPCPDU, it will set them with time-sequential order. I feel the behavior is simple.				
<i>SuggestedRemedy</i>				
In the description "d) Grant#n Start Time", how about adding the following statement. "According to the value of the Start Time, OLT should set Grant#1...4 with time-sequential order."				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.2	P 147	L 25	# 729
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There is no description in the case of "Force Report flag = 0". I think that ONU can decide if it sends a REPORT MPCPDU or not.				
<i>SuggestedRemedy</i>				
For example, how about adding the following description to the end of the description: "the Force report flag fields".				
"When 'Force Report flag = 0' is set, ONU may send a REPORT MPCPDU or not."				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.2	P 147	L 26	# 970
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
how about putting a reserved byte after the number of grants/flags?				
This will make the boundaries of the fields 16 bits aligned.				
<i>SuggestedRemedy</i>				
put a reserved byte after the "number of grants/flags" field of GATE message.				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.2	P 147	L 25	# 718
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There is no description when ONU will not send a REPORT MPCPDU in the "GATE description".				
<i>SuggestedRemedy</i>				
How about adding the following description.				
"If ONU has no traffic in the buffer and force_report_flag == 1, it will send a REPORT MPCPDU with empty content. If force_report_flag == 0, ONU may send a REPORT MPCPDU, but it should send IDLE symbol pairs when not sending a REPORT MPCPDU."				
There is some detail proposed in the attached file: "ogura-51e.ppt".				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.2	P 147	L 26	# 969
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
how about explicitly specifying that the grant length includes the idle period and turn-on/off time? Because it's so simple and clear.				
<i>SuggestedRemedy</i>				
specify if the grant time contains the idle period and laser turn-off/on time.				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.2	P 147	L 40	# 897
Sio Peng GOI		Institute for Communication		
Comment Type	E	Comment Status	D	
The Pad/Reserved field length differs from that in Figure 56-24				
<i>SuggestedRemedy</i>				
Change the length of the Pad/Reserved field to vary in length from 11 to 33 accordingly				
Proposed Response		Response Status	O	

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Cl 56	SC 56.4.3	P 149	L 30	# 604
Bemmel, Vincent		Alloptic		
Comment Type	E	Comment Status	D	
The term "Number of Requests" is confusing. This is still ONE request, containing multiple reported queue sets. We could use a better name.				
<i>SuggestedRemedy</i>				
"Number of Queue Sets"				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.3	P 149	L 31	# 719
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
d) "This field specifies the the number of requests" :The first "the" should be deleted.				
<i>SuggestedRemedy</i>				
After being modified, "d) Number of requests. This field specifies the number of"				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.3	P 149	L 34	# 721
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
P.149 L.34 f)"Pad/Reserved2" : "2" should be deleted.				
<i>SuggestedRemedy</i>				
After being modified, "f) Pad/Reserved. This is an empty field"				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.3	P 149	L 36	# 722
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
"Length from 7 0 to 39": The number should be a "0 -39" so that "7" should be deleted.				
<i>SuggestedRemedy</i>				
After being modified, "and accordingly varies in length 0 to 39."				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.4	P 152	L 14	# 971
Chan Kim		ETRI		
Comment Type	T	Comment Status	D	
how about putting a reserved byte after the flags in register_req message to make them 16 bit aligned?				
<i>SuggestedRemedy</i>				
put a reserved byte after the Flags field of REGISTER_ACK message.				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.5	P 153	L 30	# 724
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the item "I)", "Echoed urn off delay" should be a "Echoed turn off delay".				
<i>SuggestedRemedy</i>				
After being modified, "I) Echoed turn off delay".				
Proposed Response		Response Status	O	

Cl 56	SC 56.4.5	P 153	L 6	# 605
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
Table 56-5 has the following definition: "'Destruct' is a request to destroy the port and free the LLID. Subsequently, the MAC is destroyed"				
Notice that the REGISTER is sent from the OLT to the ONU upon receiving a REGISTER_REQUEST. At this point the ONU is not registered yet, and hence this definition is not correct.				
<i>SuggestedRemedy</i>				
Remove "Destruct" from table 56-5				
Proposed Response		Response Status	O	

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Cl 56	SC 56.4.6	P 154	L 52	# 725
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the item "a)", "REGISTER MPCPDU" should be a "REGISTER_ACK MPCPDU".				
SuggestedRemedy				
After being modified, "a) Opcode. The opcode for the REGISTER_ACK MPCPDU is 00-06".				
Proposed Response		Response Status	O	

Cl 56	SC 56-16	P 134	L	# 905
Sio Peng GOI		Institute for Communic		
Comment Type	T	Comment Status	D	
timer ONU_timer is set in REGISTER state but not cleared anywhere.				
SuggestedRemedy				
in COMPLETE DISCOVERY state, add:remove(ONU_timer[MAC])				
Proposed Response		Response Status	O	

Cl 56	SC 57.1	P 163	L 27	# 614
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
PLS is not shown in the figure, but referred to later in the text (e.g., 57.1.1 k). Refer to Figure 35-1 for an example.				
SuggestedRemedy				
Add PLS to figure 35-1, or remove reference to this as a layer				
Proposed Response		Response Status	O	

Cl 56	SC 65.1.1	P 108	L 39	# 598
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
Please refer to Draft 1.0 comment #515. It was agreed to rewrite the objective:				
"b) Support multiple LLID per physical ONU"				
in order to reflect a single LLID per ONU.				
However, the new text:				
"b) Support multiple MAC and MAC Clients"				
does NOT address the desired objective. The issue at hand is the # LLIDs per ONU.				
SuggestedRemedy				
Per the Draft 1.0 review, please modify the text to reflect a single LLID per ONU.				
Replace				
"b) Support multiple MAC and MAC Clients"				
with:				
"b) support a single LLID per ONU"				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-1	P 109	L	# 899
Sio Peng GOI		Institute for Communic		
Comment Type	E	Comment Status	D	
GMI1 not shown in Figure 56-1. P2MP not mentioned.				
SuggestedRemedy				
Remove GMI1=.... Add P2MP=Point-to-Multipoint.				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-10	P 119	L 12	# 894
Sio Peng GOI		Institute for Communic		
Comment Type	E	Comment Status	D	
Figure 56-10 should be Control Multiplexer				
SuggestedRemedy				
Change all Control Parser/Multiplexer to Control Multiplexer				
Proposed Response		Response Status	O	

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Cl 56	SC Figure 56-11	P 108	L	# 99007
Bharati, Barnali		Wipro Technologies		
Comment Type	TR	Comment Status	A	D1.0 #185
State 'CHECK DESTRUCT ID' can appear before 'INDICATE DEREGISTER'; otherwise it might lead to unnecessary indication.				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	U	
ACCEPT.				
Cl 56	SC Figure 56-11	P 108	L	# 99006
Bharati, Barnali		Wipro Technologies		
Comment Type	TR	Comment Status	A	D1.0 #182 discovery
OMP indication REGISTER_ACK can arrive in the 'INSIDE REGISTER WINDOW' state before timeout of 'register_window_size'. This is missing.				
<i>SuggestedRemedy</i>				
Arrival of REGISTER_ACK in the 'INSIDE REGISTER WINDOW' state, should trigger a state change to 'COMPLETE DISCOVERY'				
Proposed Response		Response Status	U	
ACCEPT. see #181				

Cl 56	SC Figure 56-11	P 108	L 25	# 99008
Bharati, Barnali		Wipro Technologies		
Comment Type	TR	Comment Status	A	D1.0 #181 discovery
ONU_timer[SA] can expire in the 'INSIDE REGISTER WINDOW' state.				
<i>SuggestedRemedy</i>				
On expiry of 'ONU_timer' in state 'INSIDE REGISTER WINDOW', state can change to IDLE state.				
Proposed Response		Response Status	U	
ACCEPT. Comment is valid. Solution confuses IDLE state which is an OLT state (performing discovery or not) with the ONU state governed by the timer. Should consider adding additional state-machine with ONU perspective				

Cl 56	SC Figure 56-11	P 108	L 35	# 99009
Bharati, Barnali		Wipro Technologies		
Comment Type	TR	Comment Status	A	D1.0 #184
If OLT ever receives an OMP indication (subtype=REGISTER_REQ, destruct_flag=true, SA=broadcast_ID), OLT need not call END function. As this would require a reset of the state machine.				
<i>SuggestedRemedy</i>				
OLT can just ignore the indication and transit to 'IDLE' state.				
Proposed Response		Response Status	U	
REJECT. This is exactly what happens in state CHECK DESTRUCT ID in figure 56-11				

Cl 56	SC Figure 56-11	P 121	L	# 317
Khansari, Masoud		Centillium Communicat		
Comment Type	T	Comment Status	D	
Variable "transmitEnable" is never reset to FALSE.				
<i>SuggestedRemedy</i>				
Clearly identify this in the state diagram and definition of "transmitEnable" in Page 120. One solution is to set this variable FALSE in the "CLEAN" state.				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-11	P 121	L	# 321
Khansari, Masoud		Centillium Communicat		
Comment Type	E	Comment Status	D	
request should read "request" in GATED--> SIGNAL and TRANSMIT READY-->SEND DATA FRAME state transitions				
<i>SuggestedRemedy</i>				
Make the appropriate changes				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-11	P 121	L	# 318
Khansari, Masoud		Centillium Communicat		
Comment Type	T	Comment Status	D	
Variable TXAllowed is not defined in the list of variables for this state diagram				
<i>SuggestedRemedy</i>				
Clearly define TXAllowed in 56.2.4.1.2				
Proposed Response		Response Status	O	

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Cl 56	SC Figure 56-11	P 121	L 16	# 173
Bharati, Barnali		Wipro Technologies		
Comment Type	E	Comment Status	D	
TXAllowed is missing from the variable list.				
<i>SuggestedRemedy</i>				
<i>Proposed Response</i>				
		<i>Response Status</i>	O	

Cl 56	SC Figure 56-11	P 121	L 25	# 172
Bharati, Barnali		Wipro Technologies		
Comment Type	T	Comment Status	D	
Once transmitEnable[] is set to 'On' in multiplexing control state diagram so that only one MAC controller instance may be able to transmit, it needs to be reset to flase (or off) in fig 56-11.				
<i>SuggestedRemedy</i>				
transmitEnable needs to be set to flase (or off) in 'CLEAN' state in Fig 56-11				
<i>Proposed Response</i>				
		<i>Response Status</i>	O	

Cl 56	SC Figure 56-12	P 123	L	# 906
Sio Peng GOI		Institute for Communic		
Comment Type	T	Comment Status	D	
In Figure 56-3, OMP Parser and Multiplexer are 2 separate blocks while here it is still in 1 block.				
<i>SuggestedRemedy</i>				
Split into a OMP Parser and a OMP Multiplexer, just like Control Parser and Control Multiplexer.				
<i>Proposed Response</i>				
		<i>Response Status</i>	O	

Cl 56	SC Figure 56-13	P 126	L	# 322
Khansari, Masoud		Centillium Communicat		
Comment Type	E	Comment Status	D	
Transition OMP TIMEOUT -> ERROR STATE should read "true" instead of "UCT"				
Transition OMP TIMEOUT -> WAIT FOR RECEIVE should read "flase" instead of "else"				
<i>SuggestedRemedy</i>				
Make the appropriate changes.				
There are many instances within state diagrams that "else" is used instead of "false", etc. e.g. in Figure 56-16 transition from CHECK DESTRUCT ID to IDLE should read "false" and not "else". Please clean up the state diagrams.				
<i>Proposed Response</i>				
		<i>Response Status</i>	O	

Cl 56	SC Figure 56-13	P 126	L	# 904
Sio Peng GOI		Institute for Communic		
Comment Type	T	Comment Status	D	
State WAIT FOR RECEIVE exit trigger:timeout() should have a timer as input, not a constant				
<i>SuggestedRemedy</i>				
Change timeout(max_time_between_omp) to timeout(omp_timer)				
<i>Proposed Response</i>				
		<i>Response Status</i>	O	

Cl 56	SC Figure 56-13	P 126	L 20	# 174
Bharati, Barnali		Wipro Technologies		
Comment Type	T	Comment Status	D	
Rather than set_timer, it would be more appropriate to call this function reset_timer. So that old timer made to reset rather than creating a fresh timer all the time.				
<i>SuggestedRemedy</i>				
<i>Proposed Response</i>				
		<i>Response Status</i>	O	

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Cl 56	SC Figure 56-17	P 135	L	# 155
Kramer, Glen		Teknovus		
Comment Type	T	Comment Status	D	
Transition from state REGISTERING to state CHECK UNICAST should be marjied as MA_CONTROL.indication, rather than MA_CONTROL.request				
<i>SuggestedRemedy</i>				
Change "indication" to "request"				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-18	P 136	L 12	# 175
Bharati, Barnali		Wipro Technologies		
Comment Type	T	Comment Status	D	
Upon reception of OMP.indication (subtype=REGISTER, destruct_flag=true), transition from 'ARRIVING REGISTER 2' to 'DEREGISTER' state is triggered (see 2 true). This will send another REGISTER_REQ with destruct_flag set to true, instead of an REGISTER_ACK				
<i>SuggestedRemedy</i>				
May create a new state 'DEREGISTER_ACK' and actions in this new states are:				
1) OMP.request (SA, DA, subtype=REGISTER_ACK, destruct_flag = true)				
2) Registered = flase				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-18	P 136	L 30	# 176
Bharati, Barnali		Wipro Technologies		
Comment Type	T	Comment Status	D	
Actions in both 'ACK' and 'SUBSEQUENT ACK' states are same.				
<i>SuggestedRemedy</i>				
There is not need of two different states. State 'SUBSEQUENT ACK' can be removed				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-18	P 136	L 47	# 177
Bharati, Barnali		Wipro Technologies		
Comment Type	T	Comment Status	D	
Currently if additional registration is deregistered, states moves from 'REGISTERED WAIT' to 'DEREGISTER' to 'ZERO STATE 2', and variable 'registered' is set to flase. This should not be done unless all registration (first and the additional) has been deregistered.				
<i>SuggestedRemedy</i>				
There should be a mechanism of knowing if all registrations has been deregistered				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-2	P 110	L 3	# 386
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
Where is the reference to Figure 56-2?				
<i>SuggestedRemedy</i>				
Add a reference to this figure and some descriptive text.				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-20	P 139	L	# 323
Khansari, Masoud		Centillium Communicat		
Comment Type	T	Comment Status	D	
There is no need for "Master == flase" condition checking in PERIODIC TRANSMISSION state.				
<i>SuggestedRemedy</i>				
periodic_timer is only set when transmitting a REPORT, which happens when Master == flase.				
Proposed Response		Response Status	O	

Cl 56	SC figure 56-22	P 64	L 34	# 818	
Maislos, Ariel		Passave			
Comment Type	TR	Comment Status	D		
SORT block does not calculate correctly the required offset until the start of grant, and condition check does not correctly compensate for elapsed time and overheads.					
<i>SuggestedRemedy</i>					
Change text of SORT block to:					
current_grant = min_extract(start, grant_list)					
time = min(current_grant.length, max(current_grant.start - local_time+current_grant.length, 0))					
if time > laser_on_time + IDLE_time + laser_off_time					
set_timer(grant_start, max(current_grant.start - local_time, 0))					
else repeat block while lempy(grant_list)					
Proposed Response		Response Status	O		

Cl 56	SC Figure 56-3	P 111	L	# 898	
Sio Peng GOI		Institute for Communic			
Comment Type	E	Comment Status	D		
Messages are sent from the OMP Multiplexer to clients					
<i>SuggestedRemedy</i>					
There should be a link from OMP Multiplexer to the MAC Control Clients to reflect this.					
Proposed Response		Response Status	O		

Cl 56	SC Figure 56-3	P 111	L 4	# 387	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
The arrow from the Control Parser to the MAC should point towards the MAC - see Figure 2-1b.					
<i>SuggestedRemedy</i>					
Change direction of arrow from Control Parser to MAC.					
Proposed Response		Response Status	O		

Cl 56	SC Figure 56-5	P 114	L	# 901	
Sio Peng GOI		Institute for Communic			
Comment Type	T	Comment Status	D		
transmission_in_progress is not output of Multiplexing Control block, instead it determines Multiplexing Control input multipoint_transmission_in_progress.					
<i>SuggestedRemedy</i>					
Remove transmission_in_progress[1..n].					
Proposed Response		Response Status	O		

Cl 56	SC Figure 56-8	P 100	L 11	# 99010	
Bharati, Barnali		Wipro Technologies			
Comment Type	TR	Comment Status	A		
In state 'OMP TIMEOUT', the condition 'if not (Master and me == broadcast_ID)' would force OLT to go to ERROR state in case only one ONU was present and this ONU has sent a REGISTER_ACK with destroy flag set. So no more messages would come from the ONU. This would result in timeout of omp_timer and OLT would transit to ERROR STATE. Not desirable (! presume, variable 'me' would have proper MAC address)					
<i>SuggestedRemedy</i>					
Could 'me == broadcast_ID' be removed from the condition?					
Proposed Response		Response Status	U		

ACCEPT IN PRINCIPLE.
Change UCT transition to True, change else transition to False
Condition is required as OLT would not terminate it's broadcast-lid where is performs discovery. All other LLIDs are currently terminated.
Under proposed layering models, END state would be replaced with 'return to available LLID pool' state

Cl 56	SC Figure 56-8	P 117	L	# 902	
Sio Peng GOI		Institute for Communic			
Comment Type	T	Comment Status	D		
Control Parser's output to OMP Parser/Multiplexer should be MA_CONTROL.indication rather than OMP.indication					
<i>SuggestedRemedy</i>					
Remove OMP.indication					
Proposed Response		Response Status	O		

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Cl 56	SC Figure 56-8	P 117	L	# 895
Sio Peng GOI		Institute for Communic		
Comment Type	E	Comment Status	D	
Figure 56-8 should be Control Parser				
<i>SuggestedRemedy</i>				
Change Control Parser/Multiplexer to Control Multiplexer in caption				
Proposed Response		Response Status	O	

Cl 56	SC Figure 56-8	P 117	L	# 151
Kramer, Glen		Teknovus		
Comment Type	T	Comment Status	D	
Control Parser belongs to an opcode-independent part of Multi-Point MAC Control (see analogy with clause 31.5). As such, it should only generate MA_DATA and MA_CONTROL indications, but not OMP indication.				
<i>SuggestedRemedy</i>				
Remove OMP indication from the Fig. 56-8				
Proposed Response		Response Status	O	

Cl 56	SC Figure 5-9	P 118	L	# 319
Khansari, Masoud		Centillum Communicat		
Comment Type	T	Comment Status	D	
Transition from "WAIT FOR RECEIVE" to "PARSE" states should be clarified				
<i>SuggestedRemedy</i>				
Transition occurs when "ReceiveFrame" signal of MAC service interface is set.				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-10	P 119	L 12	# 740
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
<i>SuggestedRemedy</i>				
The center of the block:"Control Parser/Multiplexer" of the Figure56-10, it should be a "Control Multiplexer".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-10	P 119	L 22	# 739
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
<i>SuggestedRemedy</i>				
The title:"Control Parser/Multiplexer Service Interface" of the Figure56-10, it should be a "Control Multiplexer Service Interface".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-11	P 121	L 24	# 735
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There is a description it turn "transmitEnable" ON, but no description it turn "transmitEnable" OFF.				
<i>SuggestedRemedy</i>				
In the top of the block:"CLEAN", how about add "transmitEnable = OFF".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-13	P 126	L 28	# 713
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the D1.1, ONU will turn the Laser ON everytime when the "start_time" has come. Even if it would not send a "REGISTER_REQ" because of it's "Backoff_wait". It is very bad specification when multiple ONUs are going to do AutoDiscovery at the same time. All ONUs will turn it's Laser ON at the same time, OLT may not be able to process Discovery successfully so that it will detect collisions everytime.				
<i>SuggestedRemedy</i>				
OLT can turn Laser ON/OFF Only in the "GateProcess state Diagram", so that OLT can not turn Laser OFF when it decide not sending a REGISTER_REQ in the "DiscoveryProcess state Diagram".				
I think of that it is good way to solve this problem that:				
@Discovery GATE:				
How about treat it in the only "DiscoveryProcessing state diagram".				
"DiscoveryGATE" --> OLT send to "DiscoveryProcess", while				
"NormalGATE" --> OLT send to "GateProcess" in the OMP parser.				
There is some detail proposals in the attached file:"ogura-49e.ppt".				
Proposed Response		Response Status	O	

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Cl 56	SC Figure56-15	P 128	L 19	# 709
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
There is an arrow which name is "Gate.request(grant)". This comment has already been accepted in the D1.0-No.192.				
SuggestedRemedy I think of that this arrow is "MA_Control.request(gate)" and the direction of arrow should be inverse.				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-17	P 135	L 12	# 710
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the block of the "DEFERENTIAL",there is "Backoff = max(max_deferral, Backoff+1)".I think of that Backoff is almost equal "10", and the value of Backoff_wait is between 0 and 2^10, so that this equation cannot limit the each value of "Backoff" and "Backoff_wait". This comment has already been accepted in the D1.0-No.169.				
SuggestedRemedy How about change to following equation. "Backoff = min(max_deferral, Backoff+1)" .				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-16	P 134	L 27	# 704
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the center of this figure, there is an arrow." OMP.indication(DA_SA, subtype=REGISTER_REQ, requested_port,).				
SuggestedRemedy How about delete "requested_port"?				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-17	P 135	L 35	# 714
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the D1.1, ONU will turn the Laser ON everytime when the "start_time" has come.Even if it would not send a "REGISTER_REQ" because of it's "Backoff_wait".It is very bad specification when multiple ONUs are going to do AutoDiscovery at the same time.All ONUs will turn it's Laser ON at the same time, OLT may not be able to process Discovery successfully so that it will detect collisions everytime.				
SuggestedRemedy OLT can turn Laser ON/OFF Only in the "GateProcess state Diagram", so that OLT can not turn Laser OFF when it decide not sending a REGISTER_REQ in the "DiscoveryProcess state Diagram". I think of that it is good way to solve this problem that:				
@Laser Control: How about control from the "DiscoveryProcessing" and "GateProcessing". Only NormalGATE:OLT turn on/off from "GateProcessing", and DiscoveryGATE: OLT turn on/off from "DiscoveryProcessing". There is some detail proposals in the attached file:"ogura-49e.ppt".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-16	P 134	L 5	# 703
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
When OLT receive a REGISTER_REQ, it calculate a RTT. But there is not calculate a RTT when it receivea REGISTER_ACK.				
SuggestedRemedy In the next line of the "if(state= find_state(SA))<>null", there should be the "state.RTT = timestamp - localtime".Please check the attached file:"ogura-21e.ppt".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-17	P 135	L 35	# 714
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the D1.1, ONU will turn the Laser ON everytime when the "start_time" has come.Even if it would not send a "REGISTER_REQ" because of it's "Backoff_wait".It is very bad specification when multiple ONUs are going to do AutoDiscovery at the same time.All ONUs will turn it's Laser ON at the same time, OLT may not be able to process Discovery successfully so that it will detect collisions everytime.				
SuggestedRemedy OLT can turn Laser ON/OFF Only in the "GateProcess state Diagram", so that OLT can not turn Laser OFF when it decide not sending a REGISTER_REQ in the "DiscoveryProcess state Diagram". I think of that it is good way to solve this problem that:				
@Laser Control: How about control from the "DiscoveryProcessing" and "GateProcessing". Only NormalGATE:OLT turn on/off from "GateProcessing", and DiscoveryGATE: OLT turn on/off from "DiscoveryProcessing". There is some detail proposals in the attached file:"ogura-49e.ppt".				
Proposed Response		Response Status	O	

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Cl 56	SC Figure56-18	P 136	L	# 706
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the Baseline document descriptions, I think of that ONU will process following behavior.				
ONU send a REGISTER_ACK MPCUDU. --> It receive a Normal-Gate MPCPDU as the 1st GATE. : It means a success of AutoDiscovery process.				
ONU send a REGISTER_ACK MPCUDU. --> It receive a Discovery-GATE MPCUDU as the 1st GATE. : It is a failure of AutoDiscovery process.				
But there is no description in the Figure56-18,"Discovery Processing Slave State Diagram2".				
<i>SuggestedRemedy</i>				
How about check and update the Figure56-18.				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-18	P 136	L 30	# 705
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
There is the block:"ADDITIONAL REG".I heard of that it is deleted to add some LLIDs after registration has finished.				
<i>SuggestedRemedy</i>				
How about delete the block:"ADDITIONAL REG"?				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-18	P 136	L 50	# 728
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the block of "ACK", there is a "OMP.request()".				
The 4th parameter:"accepted_capability", it seems stamge for me. Is it "suportted_capability"?				
<i>SuggestedRemedy</i>				
After being modified, "OMP.request(SA, DA, subtype=REGISTER_ACK, supported_capability(master_capability),)".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-2	P 110	L 8	# 736
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There is a "Multipoint MAC Control" in the Figure56-2. But there is a "Multiplexing MAC Control" in the Figure56-6.Are they same meaning?				
I think it is Yes. Because there is a "Operation of the Multiplexing MAC Control sublayer, and the OMP sublayer" in the body of Draft1.1, it's location is P.110 L1.				
<i>SuggestedRemedy</i>				
If they are the same meaning, how about change words "Multipoint MAC Control" into "Multiplexing MAC Control"?				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-22	P 144	L 13	# 715
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the D1.1, ONU will turn the Laser ON everytime when the "start_time" has come.Even if it would not send a "REGISTER_REQ" because of it's "Backoff_wait".It is very bad specification when multiple ONUs are going to do AutoDiscovery at the same time.All ONUs will turn it's Laser ON at the same time, OLT may not be able to process Discovery successfully so that it will detect collisions everytime.				
<i>SuggestedRemedy</i>				
Only NormalGATE:OLT should turn on/off from "GateProcessing", and DiscoveryDATE:OLT should turn on/off from "DiscoveryProcessing".				

If this idea will come true, we should delete some descriptions about DiscoveryGATE from the Figure56-22.In the block of "START_TX", there is "if" statement:" if (current_grant.discovery) MA_CONTROL.request(.....)". I think of that it should be deleted.

Proposed Response		Response Status	O	
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Cl 56	SC Figure56-22	P 144	L 14	# 727
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
In the bottom of the block:"START_TX", there is "GRANT.indication()".				
This comment has already been accepted in the D1.0-No.195.				
<i>SuggestedRemedy</i>				
It should be "MA_CONTROL.indication()", I suppose.				
Proposed Response		Response Status	O	

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Cl 56	SC Figure56-22	P 144	L 31	# 717
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
From WAIT to PROGRAM, "MA_CONTROL.request() with local=true": I cannot understand when and how to use this primitive. In the "56.3.5.1.5 Messages" there is "the grants are intended for local consumption", but I cannot have any images how to use it.				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-22	P 144	L 37	# 711
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the baseline document:"hara_n_1_0302.pdf", there is a description that OLT may overlap the end of ONU1-grant and the head of ONU2-grant. If these grants are allocated to the same ONU1. Can OLT allocate grants with overlapping?				
If they are overlapping, there is not so much margin between two grants, so that the condition:"if time > laser_on_time + IDLE_time + laser_off_time" will not be true.				
<i>SuggestedRemedy</i>				
In the SORT block, we should consider the condition of "if" statement. If two grants are overlapping, it seems difficult to make a inequation with some parameters such as laser_on_time, IDLE_time , laser_off_time.				
How about check the margin is greater than IPG(inter packet gap).				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-22	P 144	L 38	# 716
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
In the D1.1, ONU will turn the Laser ON everytime when the "start_time" has come. Even if it would not send a "REGISTER_REQ" because of it's "Backoff_wait". It is very bad specification when multiple ONUs are going to do AutoDiscovery at the same time. All ONUs will turn it's Laser ON at the same time, OLT may not be able to process Discovery successly so that it will detect collisions everytime.				
<i>SuggestedRemedy</i>				
Only NormalGATE:OLT should turn on/off from "GateProcessing", and DiscoveryDATE:it should turn on/off from "DiscoveryProcessing".				
If this idea will come true, we should delete some descriptions about DiscoveryGATE from the Figure56-22. In the block of "START_TX", there is "if" statement:" if (ldiscovery) MA_CONTROL.indication(....)". I think of that it should be deleted.				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-22	P 144	L 39	# 712
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
Inside of the state:"PROGRAM", ther is a variable:"if request_report". This comment has already been accepted in the D1.0-No.196.				
<i>SuggestedRemedy</i>				
I think of that it should be a "if force_report".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-24	P 148	L	# 747
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
On Figure56-24:"GATE MPCPDU", there is the octet-length on the right-side of each field. For example, Grant#1 Start time --> 2, Grant#1 Length --> 4. But the length is wrong. Start time should be 4 octets and Length should be 2 octets, so that Grant#1 - Grant#4, Number of octets is inverted "Start time" and "Length".				
<i>SuggestedRemedy</i>				
Grant#1: "Start time" should be "4" and "Length" should be "2". Grant#2...4: "Start time" should be "0/4" and "Length" should be "0/2".				
Proposed Response		Response Status	O	

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Cl 56	SC Figure56-25	P 150	L 35	# 723
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
On Figure56-25:"REPORT MPCPDU", there is the octet-length on the right-side of each field. There is the number of bytes of "Pad/Reserved" as "0-38". It should be "0-39".				
SuggestedRemedy				
"Pad/Reserved" --> "0-39".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-28	P 156	L 25	# 726
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
On the Figure56-28, "Pad/Reserved2": The character "2" should be deleted.				
SuggestedRemedy				
After being modified, "Pad/Reserved".				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-5	P 114	L 9	# 742
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
On figure 56-5, even though multiplexing control reads and writes the "multipoint_transmission_in_progress" variable, the arrow of the variable has only one direction (input).				
SuggestedRemedy				
The arrow of "multipoint_transmission_in_progress" should be changed to both directions (input and output).				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-5	P 114	L 9	# 733
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
I think of that the vector:"transmission_in_progress[1..n]" should be deleted from this figure. Because each instance does not use for communication in the figure 56-6.				
SuggestedRemedy				
How about delete the vector:"transmission_in_progress[1..n]" from Figure 56-5:"Multiplexing Control Service Interfaces"?				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-6	P 114	L 30	# 743
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
On figure 56-6, multiplexing control interfaces with instance n. The related variables of the interface are not only "transmitPending[n]" and "transmitEnable[n]", but also "multipoint_transmission_in_progress".				
SuggestedRemedy				
Add the arrow indicating "multipoint_transmission_in_progress" between multiplexing control and each instance 1..n.				
Proposed Response		Response Status	O	

Cl 56	SC Figure56-6	P 117	L 25	# 737
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There is a "Multipoint MAC Control" in the Figure56-2. But there is a "Multiplexing MAC Control" in the Figure56-6.Are they same meaning?				
I think it is Yes. Because there is a "Operation of the Multiplexing MAC Control sublayer, and the OMP sublayer" in the body of Draft1.1, it's location is P.110 L1.				
SuggestedRemedy				
If they are the same meaning, how about change words "Multipoint MAC Control" into "Multiplexing MAC Control"?				
Proposed Response		Response Status	O	

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Cl 56	SC Figure56-8	P 117	L 17	# 738
OGURA, Yasuo		NTT		
Comment Type	E	Comment Status	D	
SuggestedRemedy				
The title:"Control Parser/Multiplexer Service Interface" of the Figure56-8, it should be a "Control Parser Service Interface".				
Proposed Response		Response Status	O	

Cl 56	SC Table 56-2	P 147	L	# 324
Khansari, Masoud		Centillium Communicat		
Comment Type	T	Comment Status	D	
It is possible to send GATE MPCPDU with zero number of Grants. It is not clear from the text why there is a need for such function.				
SuggestedRemedy				
If it is intended as a keep-alive, Grants with zero duration achieve the same functionality. If zero grant GATE messages are allowed then make the required changes in Figure 56-24 (e.g. Pad/Reserved bytes should read 11-39 and also Grant #1 Start time and Length becomes optional). In general, we need to have a coherent approach to issues regarding keep-alive messages. There are many ways to do that at many layers, and we need to address this in the next draft.				
Proposed Response		Response Status	O	

Cl 56	SC Table 56-2	P 147	L 7	# 896
Sio Peng GOI		Institute for Communic		
Comment Type	E	Comment Status	D	
The value of number of grants field in Table 56-2 is not consistent with that illustrated in Figure 56-24				
SuggestedRemedy				
Change the value of number of grants from 0-4 to 1-4				
Proposed Response		Response Status	O	

Cl 56	SC Table56-4	P 151	L 14	# 730
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There should be a description when flag is Reserved.I think of that OLT(or ONU) should discard these received packet with Reserved flag because they will be transmitted from future OLT(or ONU), so that current OLT(ONU) adopted to D1.1 cannot understand how to treat these packets.				
SuggestedRemedy				
In the case of "flag == Reserved", how about add this sentence: "Packet is discarded." in the cell of "comment".				
Proposed Response		Response Status	O	

Cl 56	SC Table56-5	P 153	L 13	# 731
OGURA, Yasuo		NTT		
Comment Type	T	Comment Status	D	
There should be a description when flag is Reserved.I think of that OLT(or ONU) should discard these received packet with Reserved flag because they will be transmitted from future OLT(or ONU), so that current OLT(ONU) adopted to D1.1 cannot understand how to treat these packets.				
SuggestedRemedy				
In the case of "flag == Reserved", how about add this sentence: "Packet is discarded." in the cell of "comment".				
Proposed Response		Response Status	O	

Cl 57	SC	P 163	L 1	# 329
Khansari, Masoud		Centillium Communicat		
Comment Type	E	Comment Status	D	
In the entire clause, sometimes PLS service interface is used with index j, e.g. Figure 57-2, and sometimes it is used without the index. Please be consistent.				
SuggestedRemedy				
Make the required changes all through Clause 57.				
Proposed Response		Response Status	O	

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Cl 57	SC 1	P 164	L 16	# 790
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
this RS layering support a general filtering of frames allowing to support P2PE, SE and SCB services as desired.				
SuggestedRemedy				
Add text at teh end of sentence k)				
" and the emulation service (P2PE, SE, SCB) desired".				
Proposed Response		Response Status	O	
Cl 57	SC 1.3	P 164	L 32	# 791
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
This clause supports more things than P2PE. It differs from clause 22 in that it extends it to transmit and process information in the preamble.				
SuggestedRemedy				
replace "without P2PE" for "without preamble extension"				
Proposed Response		Response Status	O	
Cl 57	SC 2	P 168	L 39	# 328
Khansari, Masoud		Centillium Communicat		
Comment Type	T	Comment Status	D	
ID-m, ID-n, Mode-m and Mode-n needs to be clarified and defined precisely.				
Does Mode-m corresponds to the Mode of the port receiving the frame with (Mode-n, ID-n)?				
Can the same port processes both P2P and broadcast frames? Or broadcast packets are processed through separate port.				
SuggestedRemedy				
Please re-write this section and make the required clarifications.				
Proposed Response		Response Status	O	

Cl 57	SC 2.2	P 168	L	# 792
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
I assume this clause is the general filtering of frames. However, I find it very difficult to interpret.				
SuggestedRemedy				
it seems to be comparing the fields of two tags (n and m). One could be receiving frame and the other the actual LLID of the received MAC. However, I do not understand why the mode comparison.				
Please clarify. It would be helpful using the notation that we have used so far.				
Proposed Response		Response Status	O	
Cl 57	SC 2.2	P 169	L	# 793
Dolors, Sala		Broadcom		
Comment Type	TR	Comment Status	D	
Figure 57-3 should add the filtering operation just after the preamble state and before the SFD. To know if this frame should be received or discarded.				
SuggestedRemedy				
Add state in between Preamble and SFD to decide whether to accept or reject frame as defined by filtering rules.				
Proposed Response		Response Status	O	
Cl 57	SC 57	P 161	L 1	# 618
Bemmel, Vincent		Alloptic		
Comment Type	E	Comment Status	D	
Title contains a page break and is split between 2 pages 161 and 162				
SuggestedRemedy				
fix it				
Proposed Response		Response Status	O	

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Cl 57	SC 57	P 163	L	# 919
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
This clause provides additions to Clause 35, but the additions are not well identified. This clause needs to delete half-duplex text and specifically identify such deletions.				
SuggestedRemedy				
Develop some editorial method to: identify text which is added, identify text which is changed, identify text which is deleted, such as half-duplex.				
Proposed Response		Response Status	O	

Cl 57	SC 57.1	P 163	L 6	# 613
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
Figure 57-1 applies to the OLT. Please clarify that, and how this is done at the ONU.				
SuggestedRemedy				
1. Modify Line 5 to : "Figure 57-1 shows the relationship of the Reconciliation sublayer and GMII to the ISO/IEC OSI reference model at the OLT" 2. Add a note under Figure 57-1 3. Clarify that the ONU model collapses to a single stack above the RS layer				
Proposed Response		Response Status	O	

Cl 57	SC 57.1	P 163	L 8	# 164
Daido, Fumio		Sumitomo Electric Indu		
Comment Type	E	Comment Status	D	
The AUI, MII, MAU and PLS don't exist in the block diagram of Figure 57-1. It seems that the abbreviations of those are redundant for Figure 57-1.				
SuggestedRemedy				
The Abbreviations of AUI, MII, MAU and PLS in Figure 57-1 should be deleted. And the sentences comprising those words need to be deleted throughout this clause. For example, the line 44 of page 164 in "57.1.4 Allocation of functions", the sentence which contains AUI and PLS should be deleted. If this sentence will not be deleted, please replace "Physical Signaling (PLS)" with "Physical Layer Signaling (PLS)".				
Proposed Response		Response Status	O	

Cl 57	SC 57.1	P 163	L 8	# 165
Daido, Fumio		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
I believe clause 57 supports only 1000BASE-PX defined in clause 58 as PMD. So the Figure 57-1 should show that explicitly. And I believe that the carrier extension and half duplex are not supported in the clause 57, the current description associated with the carrier extension and half duplex of clause 57 makes reader confusing.				
SuggestedRemedy				
Replace "1000 Mb/s" in Figure 57-1 with "1000BASE-PX". Delete the sentence associated with the copper, the carrier extension and half duplex throughout this clause. For example, the line 27 of page 164 contains "the copper".				
Proposed Response		Response Status	O	

Cl 57	SC 57.1.1	P 164	L 15	# 34
Yajima, Yusuke		Hitachi Communication		
Comment Type	E	Comment Status	D	
Typo. SuggestedRemedy Change 'extrcted' to 'extracted'.				
Proposed Response		Response Status	O	

Cl 57	SC 57.1.1	P 164	L 16	# 374
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
misspelling SuggestedRemedy Bullet i) Replace "extrcted" with "extracted"				
Proposed Response		Response Status	O	

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Cl 57	SC 57.2.1	P 165	L 11	# 616
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
Not clear how Figure 57-2 applies to an ONU				
SuggestedRemedy				
add note to clarify how Figure 57-2 applies to an ONU				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.1.1.3	P 166	L	# 132
Yoshimura, Minoru		NEC		
Comment Type	T	Comment Status	D	
Variable transmit_PLS used in 57.2.1.1.3 and receive_PLS used in 57.2.1.2.3, 57.2.1.3.3, 57.2.1.4.3, 57.2.1.7.3 are not defined in this clause.				
SuggestedRemedy				
Add definition.				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.1.1.3	P 166	L 5	# 375
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
missing index				
SuggestedRemedy				
Replace "MAC sublayer" with MAC j sublayer"				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.1.2.3	P 166	L 35	# 166
Daido, Fumio		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
The description of the first sentence is not appropriate for this clause, because this primitive is not generated to all MAC sublayer entities in case of the P2MP system.				
SuggestedRemedy				
I would like to show the example as the modified paragraph below.				
"This primitive is generated by the Reconciliation sublayer to MAC j while RX_DV is asserted. Each octet transferred on RXD<7:0> will result in the generation of eight PLS_DATA[j].indicate transactions."				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.1.3	P 166	L 35	# 615
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
PLS_DATA_[j].indicate is generated to all MAC sublayer entities in the network. Not clear how this works in the PON.				
SuggestedRemedy				
Clarify				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.1.3	P 166	L 48	# 376
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
PLS_CARRIER is a half-duplex signal only. I didn't think half-duplex was supported for P2MP EFM so why bother changing this?				
SuggestedRemedy				
Remove 57.2.1.3				
The same thing applies to 57.2.1.4. Remove it as well.				
Proposed Response		Response Status	O	

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Cl 57	SC 57.2.2	P168	L 45	# 377
Brown, Benjamin		AMCC		
Comment Type	E	Comment Status	D	
iff isn't defined				
SuggestedRemedy				
Replace "iff" with "if and only if"				
Proposed Response		Response Status	O	
Cl 57	SC 57.2.2	P168	L 46	# 167
Daido, Fumio		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
The definition of Mode and ID is not written here. And the relationship to "lookup failed" of Figure 57-3 is not clear.				
SuggestedRemedy				
The sentences to explain those need to be added in 57.2.2.				
Proposed Response		Response Status	O	
Cl 57	SC 57.2.2	P168	L 46	# 617
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
Not clear what 'Mode-m' really is. Since LLID number is 'n' and interface number is 'm', what does Mode-n=Mode-m = 0/1 really means?				
SuggestedRemedy				
Clarify or correct this.				
Proposed Response		Response Status	O	
Cl 57	SC 57.2.2	P168	L 4648	# 378
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
Describe Mode-x and ID-x before using them. This is a brand new concept and the fundamentals need some description.				
SuggestedRemedy				
Add a description/definition for Mode-x and ID-x.				
Also, on line 48, replace <> with the sign for not equal from Table 21-1.				
Proposed Response		Response Status	O	

TYPE: TR/technical required T/technical E/editorial COMMENT STATUS: D/dispatched A/accepted R/rejected SORT ORDER: Clause, Page, Line, Subclause
RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

Cl 57	SC 57.2.3	P169	L	# 133
Yoshimura, Minoru		NEC		
Comment Type	T	Comment Status	D	
Function 'CRC()' is not defined in this clause.				
SuggestedRemedy				
Add definition that clarifies the process of CRC-check.				
Proposed Response		Response Status	O	
Cl 57	SC 57.2.3	P169	L 1	# 168
Daido, Fumio		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
I can't understand what does "control registers" in the title of 57.2.3 stand for. I would like to change the title name and split 57.2.3 and add definition of state variables, such as lookup failed, to make reader easy to understand.				
SuggestedRemedy				
The following is my suggestion of change of name and structure for 57.2.3 subclause.				
57.2.3 State variables				
57.2.3.1 Constants				
57.2.3.2 Variables				
57.2.3.3 Functions				
57.2.3.4 Messages				
57.2.4 State diagrams				
57.2.4.1 Receive				
57.2.4.2 Transmit				
Proposed Response		Response Status	O	
Cl 57	SC 57.2.3	P169170	L	# 134
Yoshimura, Minoru		NEC		
Comment Type	T	Comment Status	D	
Variables and functions used on figure57-3, 57-4 are not defined.				
SuggestedRemedy				
Add definition.				
Proposed Response		Response Status	O	

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Cl 57	SC 57.2.4.2.1	P figure 56-1	L	# 99011	
Jaeyeon Song		Samsung Electronics			
Comment Type	TR	Comment Status	A	D1.0 #162 p2pe	
In table 56-1 "preamble definition" tell us the 2 bytes of preamble is allocated to LLID. In baseline we agreed the LLID consist of a mode- bit and PHY_ID fields. The mode-bit represents the two mode, broadcast and unicast, not multicast. In EPON, no protocol of supporting multicast traffic exists. But, multicast traffic will be in the EPON, and we should distinguish multicast traffic from broadcast.					
SuggestedRemedy We should define multicast LLID. In addition, multicast LLID don't have to be allocated through the auto-discovery process. It remains in high layer protocol. we just define the hook of supporting multicast traffic.					
The possible solution is : Using the multicast address in MAC, we can make the multicast LLID by hash function or direct mapping. It is simple, no burden to MAC and RS layer filtering is possible like other LLIDs.					
I will prepare presentation about it.					
Proposed Response	Response Status		U		
REJECT. Multicast MAC address filtering is performed by higher layers.					

Cl 57	SC 57.2.5.2	P 171	L 33	# 594	
Murakami, Ken		Mitsubishi Electric Cor			
Comment Type	T	Comment Status	D		
The preamble may be 7 or 8 octets long on the transmission side because of the PCS function. The PCS performs with 2 octets timing. In both case, SOP code substitute for the first byte. In case of 8 octets long, SFD can be transparently transferred to the receiving side. However, in case of 7 octets long, SFD is overwritten with SOP code. As a result, there is no delimiter which can indicate start of preamble. Please see the attached file. The file name is murakami_3_1102.pdf.					
SuggestedRemedy SFD should be 3 octets long. Preamble CRC should be calculated over the range from 3rd to 7th octets in preamble. 1st and 2nd octets should be excluded. Please see the attached file. The file name is murakami_3_1102.pdf.					
Proposed Response	Response Status		O		

Cl 57	SC 57.2.5.2.1	P 171	L 29	# 381	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
bad word(s) SuggestedRemedy Replace "fortransition" with "for transmission"					
Proposed Response	Response Status		O		

Cl 57	SC 57.2.5.2.1	P 171	L 29	# 169	
Daibo, Fumio		Sumitomo Electric Indu			
Comment Type	E	Comment Status	D		
Typo SuggestedRemedy Replace "fortransition" with "for transition". The space needs to be inserted between two words.					
Proposed Response	Response Status		O		

Cl 57	SC 57.2.5.2.1	P 171	L 46	# 385	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
It is customary to provide a reference (Clause 3's MAC CRC) or a shift register implementation (Clause 49's scrambler & descrambler) when specifying a polynomial SuggestedRemedy Add an implementation shift register figure to show how the preamble bits get passed through and the CRC-8 gets generated.					
Proposed Response	Response Status		O		

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Cl 57	SC 57.2.5.2.2	P 172	L 17	# 170
Daido, Fumio		Sumitomo Electric Indu		
Comment Type	T	Comment Status	D	
The order of bit transmission for the LLID and the preamble CRC in a octet is not clear. In case of the MAC frame, I believe the order of bit transmission is least significant bit (LSB) first except the FCS, only the FCS is most significant bit (MSB) first in a octet. Please see the 3.2.8, 3.3 in 802.3-2002.pdf.				
And the procedure to calculate CRC 8 bits is not sufficient. At this moment only polynomial is shown in this clause. It is not clear the complement to calculate CRC is needed or not.				
SuggestedRemedy				
The sentence to explain the order of bit transmission of LLID and CRC needs to be added in this subclause and the location of bit 15 and bit 0 of LLID, and bit 7 and bit 0 of preamble CRC are shown in Table 57-3.				
The procedure to calculate the preamble CRC 8 bits should be added in this clause like "3.2.8 Frame Check Sequence (FCS) field" in 802.3-2002.pdf.				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.5.2.2	P 172	L 34	# 35
Yajima, Yusuke		Hitachi Communication		
Comment Type	E	Comment Status	D	
The Third Note (C) for Table 57-3 should be changed from 'First octet of SPD' to 'Second octet of SPD'.				
SuggestedRemedy				
Proposed Response		Response Status	O	

Cl 57	SC 57.2.5.2.2	P 172	L 42	# 384
Brown, Benjamin		AMCC		
Comment Type	T	Comment Status	D	
What happens when the first byte of preamble is discarded by the TX PCS in order to align to even? How does the receive RS find the the LLID/CRC-8? I know the first byte is assumed to exist for the purpose of calculating the CRC-8.				
SuggestedRemedy				
Describe exactly how these fields are located by the receive RS. In case there is no clean way to do this, perhaps I can suggest a special value used in octet 4 to tell the receive RS that the LLID follows. That way, the receive RS simply looks for this octet then takes the LLID and CRC-8 from the next 3 bytes.				
Proposed Response		Response Status	O	

Cl 57	SC Figure 57-3	P 169	L	# 326
Khansari, Masoud		Centillum Communicat		
Comment Type	E	Comment Status	D	
Variables, functions of the receive and transmit state diagrams in Figures 57-3 and 57-4 needs to be spelled out!				
SuggestedRemedy				
Be consistent in using state-machine and state diagram. Clause 56 uses state diagram where as Clause 57 uses state-machine.				
Proposed Response		Response Status	O	

Cl 57	SC Figure 57-3	P 169	L 1	# 920
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
Many variables such as receive_PLS, lookup, CRC(preamble), are used in the state diagram without a definition and/or supporting text.				
SuggestedRemedy				
ADD.				
Proposed Response		Response Status	O	

Cl 57	SC Figure 57-3	P 169	L 1	# 921
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
State diagram uses terms not defined by 802.3 in Figure 1-2 or extensions of 21-5.				
SuggestedRemedy				
Do not use such terms as "==" , use assignment within a block. Do use "=" for exit conditions from a block. Scrub entire clause for conformance to state diagram requirements.				
Proposed Response		Response Status	O	

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Cl 57	SC Figure 57-3	P 169	L 1	# 922	
Tom Mathey		Independent			
Comment Type	T	Comment Status	D		
Exit from block COLLECT seems strange. One exit from block COLLECT is labeled UCT, another is labeled RX_DV == true. This can not be.					
<i>SuggestedRemedy</i>					
Resolve.					
Proposed Response		Response Status	O		

Cl 57	SC Figure 57-4	P 170	L	# 327	
Khansari, Masoud		Centillum Communicat			
Comment Type	T	Comment Status	D		
CRC calculation function of the preamble bytes should be added in the PREAMBLE state.					
<i>SuggestedRemedy</i>					
Please make the appropriate changes.					
Proposed Response		Response Status	O		

Cl 57	SC Figures 57-3 & 4	P 169	L 1	# 379	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
Before jumping into the state machines, declarations and descriptions of variables and general flow is customary. At least there ought to be some text that references the figures.					
<i>SuggestedRemedy</i>					
Add descriptive text for state machines. Also, make sure they follow the conventions of 21.5 and any timers follow the conventions of 14.2.3.2 or be thorough about describing new conventions.					
Proposed Response		Response Status	O		

Cl 57	SC General	P	L	# 373	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
Isn't this clause simply an extension of 35? I think it would be a lot easier to determine the variations from 35 if it was part of 35. Isn't the current Clause 35 a special case of 1 MAC to 1 PHY, where this new Clause 35 the case of X MACs to 1 PHY?					
<i>SuggestedRemedy</i>					
Merge this into Clause 35.					
Proposed Response		Response Status	O		

Cl 57	SC Table 57-1	P 171	L 39	# 382	
Brown, Benjamin		AMCC			
Comment Type	T	Comment Status	D		
Why are 16 bits used for the 2 octet SPD field but only 8 bits for the 3 octet reserved field?					
How does the LLID field map to LLID[15:0] from Table 57-2?					
<i>SuggestedRemedy</i>					
Rather than use a table for this section, perhaps an example LLID & CRC-8 could be generated along with a full binary representation of the transmit data as in page 171, line 23.					
Proposed Response		Response Status	O		

Cl 57	SC Table 57-1	P 171	L 42	# 923	
Tom Mathey		Independent			
Comment Type	T	Comment Status	D		
A bit more work is needed for the CRC.					
<i>SuggestedRemedy</i>					
Include test to completely describe the crc operation, such as initial state.					
Proposed Response		Response Status	O		

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CI 57	SC Table 57-3	P 172	L 18	# 924	
Tom Mathey		Independent			
Comment Type	T	Comment Status	D		
Text states "First octet of SPD that might not be received".					
SuggestedRemedy					
Add text to standard to provide some clue to implementators for how to determine if the first octet is present or missing.					
Proposed Response		Response Status	O		

CI 57	SC Table 57-3	P 172	L 30	# 383	
Brown, Benjamin		AMCC			
Comment Type	E	Comment Status	D		
The 3rd column of bit values should use a value of 0 for RXD7.					
SuggestedRemedy					
Fix this entry.					
Proposed Response		Response Status	O		

CI 58	SC 14.2.3	P 194	L 33	# 890	
John George		OFS			
Comment Type	E	Comment Status	D		
Redundant with 58.14.1					
SuggestedRemedy					
Delete 58.14.2.3					
Proposed Response		Response Status	O		

CI 58	SC 58.13.1	P 193	L 13	# 912	
Tom Murphy		Infinion			
Comment Type	TR	Comment Status	D		
The Channel Insertion Loss Tables need to be completed. However, before this (and other related issues) can be approached, the fibre attenuation must be identified. This comment is intended to generate discussion of fibre characterisation at the November meeting.					
SuggestedRemedy					
Agree on the fibre attenuation, then complete these tables for the next meeting.					
Proposed Response		Response Status	O		

CI 58	SC 58.13.1	P 193	L 16	# 910	
Tom Murphy		Infinion			
Comment Type	T	Comment Status	D		
The PON link budgets are based on minimum losses of 5 dB for Type A and 10dB for Type B. This is not immediately apparent from the existing text. These tables could be used to reflect this assumption					
SuggestedRemedy					
Include a minimum loss value in Table 18 and 19, 5 and 10 dB, respectively					
Proposed Response		Response Status	O		

CI 58	SC 58.14.2.3	P 194	L 33	# 128	
Koji, Shino		NTT			
Comment Type	E	Comment Status	D		
58.14.2.3 is the same as 58.14.1.					
SuggestedRemedy					
Delete line 33 to 35					
Proposed Response		Response Status	O		

CI 58	SC 58.2.1	P 179	L 14	# 473	
Swanson, Steve		Coming Incorporated			
Comment Type	T	Comment Status	D		
Missing diagram.					
SuggestedRemedy					
Add diagram similar to 1000BASE-EX block diagram in Figure 59-1.					
Proposed Response		Response Status	O		

CI 58	SC 58.2.1	P 179	L 4	# 871	
Tom Murphy		Infinion			
Comment Type	T	Comment Status	D		
The majority of BiDi devices use a pigtail construction. Hence, a patch cord is not needed for this measurement.					
SuggestedRemedy					
...is defined as the output end of a patch cord or pigtail (TP2)....					
Proposed Response		Response Status	O		

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Cl 58	SC 58.2.1	P 179	L 4	# 872
Tom Murphy		Infineon		
Comment Type	E	Comment Status	D	
Patch cord length has been agreed upon				
SuggestedRemedy				
x=0.5, y=2 m				
Proposed Response		Response Status	O	

Cl 58	SC 58.2.4	P 179	L 54	# 475
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Text on signal detect not harmonized with other clauses.				
SuggestedRemedy				
Add the last 2 paragraphs of 59.2.4 in clause 58.2.4				
Proposed Response		Response Status	O	

Cl 58	SC 58.2.4	P 180	L 3	# 619
Onishi, Kazumi		OkI Electric Industry C		
Comment Type	T	Comment Status	D	
Regarding 1000BASE-PX-OLT Type A and 1000BASE-PX-OLT Type B, the received signal condition is different from the condition of the other optical PMDs e.g. 1000BASE-PX-ONU, 1000BASE-LX or 1000BASE-SX, because 1000BASE-PX-OLT receives time shared signals from multi-point ONUs, whereas the other optical PMDs receive signals from a single station. So 1000BASE-PX-OLT should indicate signal detect separately for each ONU, but this function cannot be applied because 1000BASE-PX-OLT does not know which ONU the signal comes from.				
For the above reason, OLT Type A signal detect function(58.2.4.1.1) and OLT Type B signal detect function(58.2.4.2.1) shouldn't be supported.				
SuggestedRemedy				
Delete "58.2.4.1.1 OLT Type A Signal Detect" and "58.2.4.2.1 OLT Type B Signal Detect".				
Proposed Response		Response Status	O	

Cl 58	SC 58.2.4	P 184	L 7	# 99043
Dawe, Piers		Agilent		

Comment Type	TR	Comment Status	A	D1.0 #333 Refer
Signal detect: it's universal at present in continuous-mode receivers (point to point) but the everyday signal detect approach in clause 38 won't be fast enough to detect individual bursts in a head end burst mode receiver. Further, if EFM is to aspire to a first mile in a consumer market, every pin and mW needs to be scrutinised and possibly jettisoned, especially in the continuous-mode CPE receiver. See GR-253 for how PMD signal detect need not be mandatory. The standard does not have enough reason for demanding that the function be implemented in the PMD (although implementers may choose to use it), nor that the signal detect status be reported in duplicate, though a physical pin and through a management interface. Signal detect is not the primary way of detecting breaking links; these are detected by noting a "run of zeroes" (coding violation). However, an optional signal detect may be useful in near-term mid-price equipment and even for confirming cabling failures between the head end and the splitter in a PON. In the suggested remedy I have assumed that 1000BASE-PX will use Clause 45 MDIO.				
Also it's nice if signal detect operates below sensitivity.				
I wonder if clause 36 is compatible with PON operation. If the bursts cause SD chatter, will this foul up the PCS?				

SuggestedRemedy

Check that 36 as modified is compatible with the following. I think the state machine Figure 36-9 and 36.2.5.1.4 (signal_detectCHANGE) will work with (a conceptual, non-existent, cheap) SD hard wired to OK.

Check that clause 36 is compatible with PON operation. If the bursts cause SD chatter, will this foul up the PCS?

Suggested text for 59.2.4:

The signal detect function is traditionally implemented in the transceiver, although it may be implemented elsewhere, e.g. in association with the PMA, or not implemented. If implemented within the PMD, the PMD Signal Detect status shall be reported either or both of two ways. The PMD Signal Detect function may report to the PMD service interface, using the message PMD_SIGNAL.indicate(SIGNAL_DETECT) which is signaled continuously. PMD_SIGNAL.indicate is intended to be an indicator of optical signal presence. Or the status may be reported via the management interface. If the MDIO interface is implemented, the value of SIGNAL_DETECT may contribute to the latching link status register bit 1.2 described in 22.2.4.2.13.

If implemented, the value of the SIGNAL_DETECT parameter shall be generated according to the conditions defined in Table 60-1. If signal detect is not implemented, the value of the SIGNAL_DETECT parameter conveyed to the upper layers and management functions shall be "OK". The PMD receiver is not required to verify whether a compliant signal is being received. This standard imposes no response time requirements on the generation of the SIGNAL_DETECT parameter. It is preferable for the signal detect thresholds to be below the rated sensitivity of the receiver; they must be below the Receiver sensitivity (max) in this standard.

As an unavoidable consequence of the requirements for the setting of the SIGNAL_DETECT parameter, implementations must provide adequate margin between the input optical power level at which the SIGNAL_DETECT parameter is set to OK, and the inherent noise level of the PMD due to cross talk, power supply noise, etc.

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Various implementations of the Signal Detect function are permitted by this standard, including implementations that generate the SIGNAL_DETECT parameter values in response to the amplitude of the modulation of the optical signal and implementations that respond to the average optical power of the modulated optical signal. Full Ethernet implementations which do not use a PMD signal detect, or which do not use any signal detect, must avoid noise, chatter or crosstalk creating a bogus signal with the characteristics of a real signal, which is not otherwise identified as bogus.

Proposed Response *Response Status* **W**
ACCEPT IN PRINCIPLE.

Comment is referred to Ariel Maislos for consideration within P2MP. PMD group would like requirements (or lack of) for Signal Detect: For instance, speed (fast vs.slow), optional/mandatory etc.

<i>Cl</i> 58	<i>SC</i> 58.2.4.1.1	<i>P</i> 180	<i>L</i> 13	# 873
Tom Murphy		Infinion		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
The sign in the first line of the table is incorrect, needs to be corrected in four tables				
<i>SuggestedRemedy</i>				
Change >= to <=				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.2.4.1.1	<i>P</i> 180	<i>L</i> 14	# 476
Swanson, Steve		Corning Incorporated		
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
Incorrec table entry				
<i>SuggestedRemedy</i>				
"Input_optical_power >=xx dBm" should read "Input_optical_power <=30 dBm"				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.2.4.1.1	<i>P</i> 180	<i>L</i> 17	# 477
Swanson, Steve		Corning Incorporated		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
Clarification needed.				
<i>SuggestedRemedy</i>				
Add after "...Receive sensitivity..." the following text: "(max) in Table 58-9."				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.2.4.1.2	<i>P</i> 180	<i>L</i> 35	# 478
Swanson, Steve		Corning Incorporated		
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
Incorrect entry.				
<i>SuggestedRemedy</i>				
"Input_optical_power >=xx dBm" should read "Input_optical_power <= -30 dBm"				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.2.4.1.2	<i>P</i> 180	<i>L</i> 38	# 479
Swanson, Steve		Corning Incorporated		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
Clarification needed.				
<i>SuggestedRemedy</i>				
After "Receive sensitivity" add the following text: "(max) in Table 58-9"				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.3	<i>P</i> 181	<i>L</i> 40	# 125
Koji, Shino		NTT		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
"1000BASE-PX" should be changed into "1000BASE-PX Type A"				
<i>SuggestedRemedy</i>				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.3	<i>P</i> 181	<i>L</i> 51	# 480
Swanson, Steve		Corning Incorporated		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
Incorrect format.				
<i>SuggestedRemedy</i>				
"0.5m to 10 km" should read "0.5 to 10000" and relabel heading to read "Minimum range (m)"				
<i>Proposed Response</i>		<i>Response Status</i>	O	

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Cl 58	SC 58.3.1	P182	L17	# 884
Tom Murphy		Infinion		
Comment Type T	Comment Status D			
The wavelength range for the ONU (1270 to 1360) is inconsistent with Clause 59, 60 and 38.				
<i>SuggestedRemedy</i>				
Change to 1260 to 1360 nm, changes to four tables. Also expand RMS tables * 2				
Proposed Response		Response Status O		

Cl 58	SC 58.3.1	P182	L19	# 907
Tom Murphy		Infinion		
Comment Type TR	Comment Status D			
For type A & B, in the OLT, the power range for Tx is 4 dB. This is too small for manufacturing tolerances, ageing and other factors. These points will be details in a presentation prepared by Frank Effenberger				
<i>SuggestedRemedy</i>				
For Type A & B, increase Tx power range to 5 dB, OLT Tx max increased by 1 dB, ONU Rx max overload increase by 1 dB				
Proposed Response		Response Status O		

Cl 58	SC 58.3.1	P182	L25	# 874
Tom Murphy		Infinion		
Comment Type E	Comment Status D			
No value for OFF power of OLT Tx				
<i>SuggestedRemedy</i>				
Insert -30 dBm as OFF power				
Proposed Response		Response Status O		

Cl 58	SC 58.3.1	P182	L27	# 607
Bemmel, Vincent		Alloptic		
Comment Type T	Comment Status D			
An extinction ratio of 9dB is more realistic. Consistent with 1000Base-LX (8802-3-2000, Table 38-7)				
<i>SuggestedRemedy</i>				
Change Extinction ratio values from 6dB to 9dB				
Proposed Response		Response Status O		

Cl 58	SC 58.3.1	P182	L31	# 909
Tom Murphy		Infinion		
Comment Type TR	Comment Status D			
Adopt the proposed PON timing values here and for the OT receiver				
<i>SuggestedRemedy</i>				
Adopt the proposed PON timing values here and for the OT receiver				
Proposed Response		Response Status O		

Cl 58	SC 58.3.1	P182	L32	# 609
Bemmel, Vincent		Alloptic		
Comment Type T	Comment Status D			
Based on current technology, 100 ns (instead of 16ns) is a more realistic target value for T_on(max) and T_off(max)				
<i>SuggestedRemedy</i>				
Change target values for T_on(max) and T_off(max) to 100ns				
Proposed Response		Response Status O		

Cl 58	SC 58.3.1	P182	L43	# 481
Swanson, Steve		Corning Incorporated		
Comment Type E	Comment Status D			
Redundant text.				
<i>SuggestedRemedy</i>				
Delete entire subclause; RMS spectral width is already included in Table 58-7.				
Proposed Response		Response Status O		

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<i>Cl</i> 58	<i>SC</i> 58.3.1, 58.5.1,	<i>P</i> 157, 163,	<i>L</i> in tables.	<i>#</i> 99044
Frank Effenberger		Quantum Bridge Com		
<i>Comment Type</i>	TR	<i>Comment Status</i>	A	<i>D</i> 1.0 #56 CNIR
The downstream laser line widths of 1 nm RMS are too large. Also, the use of RMS specification for single longitudinal mode lasers is inappropriate.				
<i>SuggestedRemedy</i>				
The downstream laser line widths should be defined by their 20 dB width, and that width should be 1 nm. A footnote should be added to state: "The line width of the SLM laser is expected to be less than 1 nm."				
The specific changes are:				
Page 157: Change 'RMS spectral width' to 'Spectral width at -20dB points'				
Page 157: Add note to changed text "The line width of the SLM laser is expected to be less than 1 nm."				
Page 163: Change 'RMS spectral width' to 'Spectral width at -20dB points'				
Page 163: Add note to changed text "The line width of the SLM laser is expected to be less than 1 nm."				
<i>Proposed Response</i>		<i>Response Status</i>	W	
ACCEPT IN PRINCIPLE. It is accepted that the value for the laser linewidth needs investigation. The method of definition is consistent with existing standards				

<i>Cl</i> 58	<i>SC</i> 58.3.1.1	<i>P</i> 182	<i>L</i> 25	<i>#</i> 590
Dawe, Piers		Agilent		
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
The spectral trade-off in the 1590 band seems too fussy.				
<i>SuggestedRemedy</i>				
Replace:				
1480 0.96 0.66				
1500 0.88 0.60				
with:				
1480 to 1500 0.88 0.60				
Be consistent with clause 59, e.g. by removing the table from one or other clause and referring across.				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.3.1.1	<i>P</i> 182	<i>L</i> 46	<i>#</i> 875
Tom Murphy		Infinion		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
RMS table not in correct location				
<i>SuggestedRemedy</i>				
Reunite Table 58-8 with the text of 58.3.1.1				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.3.1.1	<i>P</i> 183	<i>L</i> 25	<i>#</i> 876
Tom Murphy		Infinion		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	
It would be useful to know to RMS width for 1490 nm as this is the values most designers will initially consider				
<i>SuggestedRemedy</i>				
Insert further line into table with 1490 nm RMS values				
<i>Proposed Response</i>		<i>Response Status</i>	O	

<i>Cl</i> 58	<i>SC</i> 58.3.1.1	<i>P</i> 183	<i>L</i> 29	<i>#</i> 693
Kakuno, Yutaka		Sumitomo Electric Indu		
<i>Comment Type</i>	T	<i>Comment Status</i>	D	
There is no expression for the side mode suppression ratio for SLM lasers, in Table 58-8(subclause:58.3.1.1, page:183, line:29) and Table 58-12(subclause:58.4.1.1, page:186, line:35).				
<i>SuggestedRemedy</i>				
Add footnotes to these tables as follows:				
The side mode suppression ratio for SLM lasers is expected to be greater than or equal to 30dB.				
<i>Proposed Response</i>		<i>Response Status</i>	O	

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Cl 58	SC 58.3.2	P 183	L 38	# 482
Swanson, Steve		Coming Incorporated		
Comment Type T	Comment Status D			
Incorrect wavelength range.				
SuggestedRemedy				
Change "1270-1360" to "1260-1360" consistent with other clauses.				
Proposed Response	Response Status O			

Cl 58	SC 58.3.2	P 183	L 51	# 611
Bemmel, Vincent		Alloptic		
Comment Type T	Comment Status D			
Based on current technology, 1400 nsec (instead of 50) is a more realistic target value for T_optical_rec_recovery(max)				
SuggestedRemedy				
Change the target value of T_optical_rec_recovery(max) from 50 ns to 1400 ns (instead of 50)				
Proposed Response	Response Status O			

Cl 58	SC 58.3.2, 58.4.1, 58.5.2, 5	P 158, 160, 16	L in tables.	# 99045
Frank Effenberger		Quantum Bridge Com		
Comment Type TR	Comment Status A			
D1.0 #54 CNIR				
The upstream power budgets place too heavy a burden on the OLT receiver sensitivity. As they stand, it will be very difficult to construct type B OLT receivers.				
SuggestedRemedy				
The upstream power levels should be increased by 1 dB overall.				
The specific changes are:				
1000Base-PX-ONT-A maximum receive power changed to -2 dBm (page 158)				
1000Base-PX-ONT-A receive sensitivity changed to -25 dBm (page 158)				
1000Base-PX-ONU-A average launch power (min) to -2 dBm (page 160)				
1000Base-PX-ONU-A average launch power (max) to +3 dBm (page 160)				
1000Base-PX-ONT-B maximum receive power changed to -7 dBm (page 164)				
1000Base-PX-ONT-B receive sensitivity changed to -28 dBm (page 164)				
1000Base-PX-ONU-B average launch power (min) to -2 dBm (page 166)				
1000Base-PX-ONU-B average launch power (max) to +3 dBm (page 166)				
Proposed Response	Response Status W			
ACCEPT IN PRINCIPLE. The power budget could be changed subject to the consensus of the group and a more detailed technical presentation on the issue; perhaps as part of the PON ad-hoc group				

Cl 58	SC 58.3.2, 58.4.1, 58.5.2, 5	P 158, 160, 16	L in tables.	# 99046
Frank Effenberger		Quantum Bridge Com		
Comment Type TR	Comment Status R			
D1.0 #57 CNIR				
The burst mode timing targets are indeed practical. The editor's notes should be removed, and the values made normative.				
SuggestedRemedy				
Remove the editor's notes regarding the burst mode timing values.				
The specific changes are:				
1000Base-PX-OLT-A T_Optical_recovery_time notes removed(page 158)				
1000Base-PX-ONU-A T_On and T-Off notes removed(page 160)				
1000Base-PX-OLT-B T_Optical_recovery_time notes removed(page 164)				
1000Base-PX-ONU-B T_On and T-Off notes removed(page 166)				
Proposed Response	Response Status W			
REJECT. Optics STF would like to see more information on this topic before making a change. Tom Murphy to coordinate an effort for the next meeting in November				

Cl 58	SC 58.4	P 184	L 15	# 483
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Formatting.				
SuggestedRemedy				
"0.5 to 20 km" should read "0.5 to 20000" and the heading should read "Minimum range (m)"				
Proposed Response	Response Status O			

Cl 58	SC 58.4	P 184	L 4	# 126
Koji, Shino		NTT		
Comment Type E	Comment Status D			
"1000BASE-PX" should be changed into "1000BASE-PX Type B"				
SuggestedRemedy				
Proposed Response	Response Status O			

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CI 58	SC 58.4.1	P 185	L 19	# 908	
Tom Murphy		Infinion			
Comment Type	TR	Comment Status	D		
The receiver sensitivity for the Type B OLT is -29 dBm. This will be a difficult value to achieve, even with APDs. This point is detailed in a presentation prepared by Frank Effenberger					
SuggestedRemedy					
For the Upstream Type B link, increase the Tx power by 1 dB, the max Tx power by 1 dB and reduce the OLT Rx sensitivity by 1 dB					
Proposed Response		Response Status	O		
CI 58	SC 58.4.1	P 185	L 25	# 877	
Tom Murphy		Infinion			
Comment Type	E	Comment Status	D		
No value for OFF power of OLT Tx					
SuggestedRemedy					
Insert -30 dBm as OFF power					
Proposed Response		Response Status	O		
CI 58	SC 58.4.1	P 185	L 27	# 608	
Bemmel, Vincent		Alloptic			
Comment Type	T	Comment Status	D		
An extinction ratio of 9dB is more realistic. Consistent with 1000Base-LX (8802-3-2000, Table 38-7)					
SuggestedRemedy					
Change Extinction ratio values from 6dB to 9dB					
Proposed Response		Response Status	O		
CI 58	SC 58.4.1	P 185	L 32	# 610	
Bemmel, Vincent		Alloptic			
Comment Type	T	Comment Status	D		
Based on current technology, 100 ns (instead of 16ns) is a more realistic target value for T _{on} (max) and T _{off} (max)					
SuggestedRemedy					
Change target values for T _{on} (max) and T _{off} (max) to 100ns					
Proposed Response		Response Status	O		

CI 58	SC 58.4.1	P 185	L 35	# 878	
Tom Murphy		Infinion			
Comment Type	E	Comment Status	D		
Optical return loss tolerance values don't match with Table 58.7					
SuggestedRemedy					
Change 15 to 12 dB, both entries					
Proposed Response		Response Status	O		
CI 58	SC 58.4.1.1	P 185	L 45	# 127	
Koji, Shino		NTT			
Comment Type	E	Comment Status	D		
The type is wrong					
SuggestedRemedy					
Change to Type B					
Proposed Response		Response Status	O		
CI 58	SC 58.4.1.1	P 185	L 46	# 879	
Tom Murphy		Infinion			
Comment Type	E	Comment Status	D		
RMS table not in correct location					
SuggestedRemedy					
Reunite Table 58-12 with the text of 58.4.1.1					
Proposed Response		Response Status	O		
CI 58	SC 58.4.1.1	P 186	L 31	# 880	
Tom Murphy		Infinion			
Comment Type	E	Comment Status	D		
It would be useful to know to RMS width for 1490 nm as this is the values most designers will initially consider					
SuggestedRemedy					
Insert further line into table with 1490 nm RMS values					
Proposed Response		Response Status	O		

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Cl 58	SC 58.5	P 186	L 37	# 484
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Consistent terminology.				
<i>SuggestedRemedy</i>				
Change "Worst-case" to "Illustrative" consistent with Clause 60.				
Proposed Response		Response Status	O	

Cl 58	SC 58.6	P 187	L 20	# 612
Bemmel, Vincent		Alloptic		
Comment Type	T	Comment Status	D	
Based on current technology, 1400 nsec (instead of 50) is a more realistic target value for T_optical_rec_recovery(max)				
<i>SuggestedRemedy</i>				
Change the target value of T_optical_rec_recovery(max) from 50 ns to 1400 ns (instead of 50)				
Proposed Response		Response Status	O	

Cl 58	SC 58.7	P 187	L 48	# 881
Tom Murphy		Infineon		
Comment Type	E	Comment Status	D	
There is no high lighted text in table 58-16, or table 58-17				
<i>SuggestedRemedy</i>				
Remove this sentence				
Proposed Response		Response Status	O	

Cl 58	SC 58.8	P 188	L 49	# 882
Tom Murphy		Infineon		
Comment Type	T	Comment Status	D	
The majority of BiDi devices use a pigtail construction. Hence, a patch cord is not needed for this measurement				
<i>SuggestedRemedy</i>				
All optical measurements shall be made through a short patch cable or pigtail, between 0.5 and 5 m in length				
Proposed Response		Response Status	O	

Cl 58	SC 58.9.1	P 189	L 35	# 883
Tom Murphy		Infineon		
Comment Type	T	Comment Status	D	
The language here is such that one has the opinion that column 2 is the only viable option. This is not the case in reality.				
<i>SuggestedRemedy</i>				
Remove the sentence "However,. ... partition noise". If the spectral width is kept below the limits of column 3, epsilon will not exceed 0.115 and the chromatic dispersion penalty is expected to be below 2 dB when all link parameters are simultaneously at worst case values.				
Proposed Response		Response Status	O	

Cl 58	SC 58.9.11	P 190	L 36	# 292
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
If it is agreed to remove the stressed receiver sensitivity test then this test section is no longer needed				
<i>SuggestedRemedy</i>				
Remove section 58.9.11				
Proposed Response		Response Status	O	

Cl 58	SC 58.9.4	P 189	L 54	# 485
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Incomplete reference.				
<i>SuggestedRemedy</i>				
Repeat text from 60.8.5 since many clause clause have identical text.				
Proposed Response		Response Status	O	

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Cl 58	SC 58.9.9	P 190	L	# 695
Diab, Wael William		Cisco Systems		
Comment Type	TR	Comment Status	D	
TDP is the appropriate method for evaluating PMDs. Nonetheless, given the speed of these PMDs and the short-term desire to implement solutions (as expressed in the original proposal presentations), an informative that relates traditional measurement techniques to TDP may help bridge the gap.				
SuggestedRemedy				
Specify an informative correlation between the TDP measurements and the eye mask and/or the jitter numbers				
Proposed Response		Response Status	O	
Cl 58	SC 59.2.4	P 179	L 54	# 474
Swanson, Steve		Coming Incorporated		
Comment Type	T	Comment Status	D	
Missing text.				
SuggestedRemedy				
Add the following sentence:				
"This standard imposes no response time requirements on the generation of the SIGNAL_DETECT paramter."				
Proposed Response		Response Status	O	
Cl 58	SC Table 58-13	P 187	L 15	# 291
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
Stressed Receiver Sensitivity is not an appropriate test for a single mode system.				
SuggestedRemedy				
Remove the receiver stressed sensitivity requirement				
Proposed Response		Response Status	O	

Cl 58	SC Table 58-3,58-5	P	L	# 867
Tomoaki, Masuta		NEC Corporation		
Comment Type	E	Comment Status	D	
Need a value for xx dBm for FAIL mode.				
SuggestedRemedy				
We propose -35dBm for ONU Type-A and B, which is 10dB down from the receive sensitivity (-25dBm).				
Proposed Response		Response Status	O	
Cl 58	SC Table 58-7	P 182	L	# 868
Tomoaki, Masuta		NEC Corporation		
Comment Type	T	Comment Status	D	
Why is the Optical return loss tolerance (max) for Type-A different from that for Type-B.				
SuggestedRemedy				
The Optical return loss tolerance (max) for Type-A should be 15dB for OLT and ONU as the same vaule as Type-B.				
Proposed Response		Response Status	O	
Cl 58	SC Table 58-8,58-12	P 183	L 1	# 621
Nojima, Kazuhiro		Matsushita Communic		
Comment Type	T	Comment Status	D	
There are two specifications(@epsilon=0.168 and 0.115) in table 58-8,58-12(page 186). It is not clear which should be chosen.				
Only one specification should be defined in table 58-8,58-12.				
SuggestedRemedy				
Proposed Response		Response Status	O	
Cl 58	SC Table 58-9	P 183	L 46	# 290
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
Stressed Receiver Sensitivity is not an appropriate test for a single mode system.				
SuggestedRemedy				
Remove the receiver stressed sensitivity requirement				
Proposed Response		Response Status	O	

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Cl 58	SC Table 58-9	P 183	L 52	# 620
Onishi, Kazumi		Ok! Electric Industry C		
Comment Type	T	Comment Status	D	
The definitions for the variables, T_dyn_recovery and T_lvl_recovery are not shown in the footnotes under the Table58-9(pp.183) and Table58-13(pp.187).				
<i>SuggestedRemedy</i>				
Add the following sentence to the footnotes under the Table58-9 and Table58-13.				
where "T_dyn_recovery" denotes "dynamic sensitivity recovery time" that is necessary to prepare for the next burst arrival after a precedent burst, and "T_lvl_recovery" denotes "level recovery time" that is for restoring correct logic levels.				
Proposed Response		Response Status	O	

Cl 58	SC Table 58-9,13	P	L	# 869
Tomoaki, Masuta		NEC Corporation		
Comment Type	T	Comment Status	D	
We should consider that "multiple reflection" may occur between an ONU and OLT. In this case this "multiple reflection" may be regarded as a noise to the received signal and cause the penalty for optical receiving sensitivity.				
<i>SuggestedRemedy</i>				
We propose to add a specification for "tolerance to the reflected optical power" to OLT and ONU receive characteristic.				
Proposed Response		Response Status	O	

Cl 58	SC Table 58-9,58-13	P 183	L	# 870
Tomoaki, Masuta		NEC Corporation		
Comment Type	T	Comment Status	D	
The current receive sensitivity for OLT is very hard. Considering a power penalty of burst-mode operation, the sensitivity of OLT should be relaxed. So the output power of ONU should be increased by 1dB and the receive sensitivity of OLT should be increased by 1dB.				
<i>SuggestedRemedy</i>				
As a result 1000Base-PX-ONU-Type-A average launched power (MAX) changed to +3dBm 1000Base-PX-ONU-Type-A average launched power (min) changed to -2dBm 1000Base-PX-OLT-Type-A receive sensitivity changed to -25dBm 1000Base-PX-OLT-Type-A receive overload changed to -2dBm				
1000Base-PX-ONU-Type-B average launched power (MAX) changed to +3dBm 1000Base-PX-ONU-Type-B average launched power (min) changed to -2dBm 1000Base-PX-OLT-Type-B receive sensitivity changed to -28dBm 1000Base-PX-OLT-Type-B receive overload changed to -7dBm				
Proposed Response		Response Status	O	

Cl 58	SC Table58-2	P 180	L 13	# 121
Koji, Shino		NTT		
Comment Type	E	Comment Status	D	
"Input_optical_power >= XXdBm" should be changed into "Input_optical_power <= XXdBm"				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	

Cl 58	SC Table58-3	P 180	L 34	# 122
Koji, Shino		NTT		
Comment Type	E	Comment Status	D	
"Input_optical_power >= XXdBm" should be changed into "Input_optical_power <= XXdBm"				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	

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CI 58 SC Table58-4 P-181 L-6 # 123
Koji, Shino NTT
Comment Type E **Comment Status D**
"Input_optical_power >= XXdBm" should be changed into "Input_optical_power <= XXdBm"
SuggestedRemedy
Proposed Response **Response Status O**

CI 58 SC Table58-5 P-181 L-21 # 124
Koji, Shino NTT
Comment Type E **Comment Status D**
"Input_optical_power >= XXdBm" should be changed into "Input_optical_power <= XXdBm"
SuggestedRemedy
Proposed Response **Response Status O**

CI 59 SC 1 P L-7 # 36
Tatum, Jim Honeywell
Comment Type E **Comment Status D**
Clause yy not valid
SuggestedRemedy
Replace with appropriate clause number
Proposed Response **Response Status O**

CI 59 SC 1.2 P L-30 # 37
Tatum, Jim Honeywell
Comment Type E **Comment Status D**
Text is needed for sections 59.1.1 and 59.1.3
SuggestedRemedy
Are these sections really needed?
Proposed Response **Response Status O**

CI 59 SC 1.4 P L-39 # 38
Tatum, Jim Honeywell
Comment Type E **Comment Status D**
PMD should be plural
SuggestedRemedy
replace with PMDs
Proposed Response **Response Status O**

CI 59 SC 1.4 P L-54 # 39
Tatum, Jim Honeywell
Comment Type E **Comment Status D**
Is clause 36 the correct reference?
SuggestedRemedy
replace with appropriate clause number
Proposed Response **Response Status O**

CI 59 SC 12.2 P L # 57
Tatum, Jim Honeywell
Comment Type TR **Comment Status D**
Table 59-15 missing values
SuggestedRemedy
values should be consistent with table 59-11. Table 59-11 needs to add a column for the sperate OLT and ONU cases.
Proposed Response **Response Status O**

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Cl 59	SC 12.2	P	L	# 56
Tatum, Jim		Honeywell		
Comment Type	T	Comment Status	D	
Figure 59-7 does not show cable connections for BX and SMF EX case				
For EX MMF case, it calls out SMF in figure 59-7				
SuggestedRemedy				
Add connections to the BX and SMF EX case.				
Change SMF to MMF is 59-7, replace "Jujimper Cable" with "offset launch patch cord"				
Proposed Response		Response Status	O	

Cl/ 59	SC 13.1	P	L	# 58
Tatum, Jim		Honeywell		
Comment Type	TR	Comment Status	D	
Taqlbe 59-16 missing value for max attenuation at 1550nm. Should be specified at 1490nm.				
SuggestedRemedy				
Add values per fiber manufacturers recommendation				
Proposed Response		Response Status	O	

Cl 59	SC 13.1	P 215	L 11	# 892
John George		OFS		
Comment Type	E	Comment Status	D	
Additional clarification of fiber types needed to assist user				
SuggestedRemedy				
Harmonize with clauses 58 and 60 by inserting "(dispersion un-shifted single mode)" after "B1.1" and "(low water peak single mode)" after "B1.3".				
Proposed Response		Response Status	O	

Cl 59	SC 14	P	L	# 60
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
Pics are riddled with references to clause 38, and its associated sections. Also references to 1000BASE-LX and 1000BASE-SX.				
Jitter specs are no longer normative				
Suggested Remedy				
Replace and edit as appropriate.				
Remove jitter reference from PICS				
Proposed Response		Response Status	O	

Cl 59	SC 14.1	P	L 12	# 59
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
Is clause 21 a valid reference?				
SuggestedRemedy				
Replacw as needed				
Proposed Response		Response Status	O	

Cl 59	SC 2.1	P	L 19	# 40
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
line starting with "TP1..." is redundant with text in next paragraph				
SuggestedRemedy				
delete line starting with "TP1..."				
Proposed Response		Response Status	O	

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Cl 59	SC 2.4	P	L 15	# 41
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
need reference to table 59-2 as well as 59-1				
SuggestedRemedy				
add reference to 59-1. This may be irrelevant based on resolution to next comment.				
Proposed Response		Response Status	O	

Cl 59	SC 2.4.1	P	L 40	# 42
Tatum, Jim		Honeywell		
Comment Type	T	Comment Status	D	
Can 59.2.4.1 and 59.4.2.2 be combined into a single section, and combine tables 59-1 and 59-2 into a single table.				
SuggestedRemedy				
Combine sections 59.2.4.1&2 into a single section, and combine tables 59-1 and 59-2 into a single table. Firrst columne is signal detect value, then a colum for each EX, and BX-ONU and BX-OLT. three rows which define values for SD of FAIL, OK, and Unspecified.				
Proposed Response		Response Status	O	

Cl 59	SC 3.1	P	L 12	# 44
Tatum, Jim		Honeywell		
Comment Type	T	Comment Status	D	
value in table is "see"				
SuggestedRemedy				
note should be added reagarding the trade off between the spectral width and center wavelength.				
Proposed Response		Response Status	O	

Cl 59	SC 3.1	P	L 41	# 43
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
Note A should be anchored with table 59-4.				
SuggestedRemedy				
Move text.				
Proposed Response		Response Status	O	

Cl 59	SC 3.1.1	P	L 35	# 45
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
reference to 59-4 wrong				
SuggestedRemedy				
replace with 59-5				
Proposed Response		Response Status	O	

Cl 59	SC 4.1	P	L	# 46
Tatum, Jim		Honeywell		
Comment Type	TR	Comment Status	D	
Table 59-6 missing values for stress receive sensitivity and vertical eye closure limit				
SuggestedRemedy				
vlues need to be finalized by spreadsheet analysis				
Proposed Response		Response Status	O	

Cl 59	SC 4.1	P	L	# 47
Tatum, Jim		Honeywell		
Comment Type	TR	Comment Status	D	
Table 59-8, values for RMS spectral width for OLT and ONU should be replaced with notes for trade off for RMS width and center wavelength.				
SuggestedRemedy				
Use values in Table 59-5 for ONU side, and leave OLT side as fixed, but value needs to be reduced to 0.3nm to ensure link robustness.				
Proposed Response		Response Status	O	

Cl 59	SC 5	P	L	# 48
Tatum, Jim		Honeywell		
Comment Type	TR	Comment Status	D	
Table 59-10 is missing values for several values.				
SuggestedRemedy				
Power budgetr is 9dB				
other values to be determined by spreadsheet analysis				
Proposed Response		Response Status	O	

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Cl 59	SC 59	P 197	L 1	# 570
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Simplify the title following clause 60.				
<i>SuggestedRemedy</i>				
Physical Medium Dependent (PMD) sublayer and baseband medium, type 1000BASE-EX (Long Wavelength) and 1000BASE-BX (BiDirectional Long Wavelength)				
Optionally add "10 km" somewhere in the title to distinguish it from 1000BASE-LX.				
Proposed Response		Response Status O		

Cl 59	SC 59	P 197	L 1	# 573
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Not baseband, it's intensity modulated.				
<i>SuggestedRemedy</i>				
Delete "baseband".				
Proposed Response		Response Status O		

Cl 59	SC 59.1	P 198	L 7	# 578
Dawe, Piers		Agilent		
Comment Type T	Comment Status D			
MDIO Clause yy: if we go with the "45 registers through 22 interface" proposal, presumably a pure clause 45 implementation would be OK too.				
<i>SuggestedRemedy</i>				
Change yy to "22 or 45".				
Proposed Response		Response Status O		

Cl 59	SC 59.1	P 198	L 9	# 579
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
To help the reader (and ourselves, later), add a new Table 1 following clause 60. We can make it even more useful by adding a further column.				
<i>SuggestedRemedy</i>				
Add a new Table 1 following clause 60 (but use range, 10km not range (meters) 10000).				
Add another column "Maximum total channel loss". To avoid too much detail so early, just have one "MMF" entry with ranges or "up to ..." values. Add footnote "At the nominal wavelength".				
Proposed Response		Response Status O		

Cl 59	SC 59.1.4	P 198	L 39	# 865
Thatcher, Jonathan		World Wide Packets		
Comment Type E	Comment Status D			
See remedy				
<i>SuggestedRemedy</i>				
Change to "1000BASE-EX"				
Proposed Response		Response Status O		

Cl 59	SC 59.1.4	P 198	L 41	# 864
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
See remedy				
<i>SuggestedRemedy</i>				
Change "PMA entities." to "with the PMA."				
Proposed Response		Response Status O		

Cl 59	SC 59.10	P 199	L	# 99047
Tatum, Jim		Honeywell		
Comment Type E	Comment Status D			
Add "transmitter" after "optical on line 3				
<i>SuggestedRemedy</i>				
Add "transmitter" after "optical on line 3				
Proposed Response		Response Status O		

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Cl 59	SC 59.10.3	P 213	L 12	# 849
Thatcher, Jonathan		World Wide Packets		
Comment Type	E	Comment Status	D	
Word "environment" hanging.				
SuggestedRemedy				
Remove?				
Proposed Response		Response Status	O	

Cl 59	SC 59.12	P 213	L 32	# 464
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Clarification needed.				
SuggestedRemedy				
Add the following text to the second sentence:				
"...for multimode cabling," after "Method B"				
"...for single-mode cabling," after Method A-1.				
Proposed Response		Response Status	O	

Cl 59	SC 59.12.1	P 213	L 43	# 467
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
SMF incorrectly labelled.				
SuggestedRemedy				
"SMF" should read B.1.1, B.1.3 SMF				
Proposed Response		Response Status	O	

Cl 59	SC 59.12.1	P 213	L 44	# 465
Swanson, Steve		Corning Incorporated		
Comment Type	T	Comment Status	D	
Wavelength entries are incorrect for multimode fiber.				
SuggestedRemedy				
"1310" should read "1300" for both multimode entries.				
Proposed Response		Response Status	O	

Cl 59	SC 59.12.1	P 213	L 45	# 848
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
Where is the "Channel Insertion Loss" in Table 59-14 (other than the title)?				
SuggestedRemedy				
Add C.I.L and the specifications				
Proposed Response		Response Status	O	

Cl 59	SC 59.12.1	P 213	L 49	# 466
Swanson, Steve		Corning Incorporated		
Comment Type	T	Comment Status	D	
Inconsistent format for operating distance.				
SuggestedRemedy				
Operating distance should read:				
0.5-10000 for SMF				
0.5-500 for 62.5 and 50um				
Proposed Response		Response Status	O	

Cl 59	SC 59.12.2	P 214	L 1	# 468
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Figure 59-7 incorrectly labelled				
SuggestedRemedy				
First instance of "SMF Cable" should read "MMF Cable"				
Proposed Response		Response Status	O	

Cl 59	SC 59.13.1	P 215	L 12	# 847
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
Is this subclause really needed? Can't we reference an existing subclause?				
SuggestedRemedy				
Simplify, redundancy bad. Remember that this is one standard.				
Proposed Response		Response Status	O	

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Cl 59	SC 59.13.1	P 215	L 21	# 469
Swanson, Steve		Corning Incorporated		
Comment Type	T	Comment Status	D	
Missing Table entry.				
SuggestedRemedy				
Include fiber cable attenuation at 1550 nm:				
0.4b or 0.5c				
Proposed Response		Response Status	O	

Cl 59	SC 59.13.4	P 216	L 29	# 850
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
More @#\$(redundancy. There is no reason to have people read this word by word to see if they can find a difference with the patch cord in Cl 38 when there is no difference.				
SuggestedRemedy				
Just reference CL 38.				
Proposed Response		Response Status	O	

Cl 59	SC 59.13.4	P 217	L 12	# 569
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
This patchcord is only an example; no connector wars!				
SuggestedRemedy				
Change "shall be" to "is" (4 times). Change "The keying of the SC duplex" to "The keying of this duplex."				
Delete the PICS associated with these "shall"s.				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.1	P 199	L 10	# 885
Tom Murphy		Infinion		
Comment Type	T	Comment Status	D	
The majority of BiDi devices use a pigtail construction. Hence, a patch cord is not needed for this measurement.				
SuggestedRemedy				
...is defined as the output end of a patch cord or pigtail (TP2)....				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4	P 200	L 15	# 440
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Reference for signal detect is incomplete.				
SuggestedRemedy				
At the end of the first sentence in paragraph 2, add: "...for 1000BASE-EX and Table 59-2 for 1000BASE-BX."				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4	P 200	L 16	# 925
Tom Mathey		Independent		
Comment Type	T	Comment Status	D	
If this PMD is to be used by EPON (OLT, ONU), then there must be a response time requirement on the generation of the SIGNAL_DETECT parameter in order for the EPON to even function.				
SuggestedRemedy				
Add response time parameter.				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4.1	P 200	L 30	# 866
Thatcher, Jonathan		World Wide Packets		
Comment Type	E	Comment Status	D	
Don't need both 59.2.4.1 and 59.2.4.2				
SuggestedRemedy				
Collapse into one subsection; collapse T59-1 and T59-2 into one table. Change width of table so that the "." and the 30 stay together (both T59-1 and T59-2).				
Proposed Response		Response Status	O	

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Cl 59	SC 59.2.4.1	P 200	L 37	# 576
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Cramped table.				
SuggestedRemedy				
Take out the unnecessary carriage returns and shrink-wrap the whole table, and some others especially 59-2. Thanks!				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4.1	P 200	L 41	# 574
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Trying to harmonise signal detect limits towards -45 dBm. Note that this spec line is a lower bound for signal detect, making it lower does not force implementers to lower their signal detect levels - but they may like to, to allow ease of use of more sensitive receivers.				
SuggestedRemedy				
Find what existing commonplace legacy transceivers' OFF power actually is. Pick a number as near to -45 dBm as is compatible with not having many legacy parts raising false signal detects.				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4.1	P 200	L 43	# 575
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Be precise about which sensitivity: the part's? the part's data sheet's? the standard's limit?				
SuggestedRemedy				
Change "Receive sensitivity" to "Receive sensitivity in Table 59-6". Similarly in table 59-2, change to "Receive sensitivity in Table 59-9"				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4.1	P 200	L 45	# 441
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Consistent with Clause 60, add clarification to receive sensitivity in Table 59-1.				
SuggestedRemedy				
After receive sensitivity in Table 59-1, add "(max) in Table 59-6."				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4.2	P 201	L 6	# 577
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Trying to harmonise signal detect limits towards -45 dBm. Note that this spec line is a lower bound for signal detect, making it lower does not force implementers to lower their signal detect levels - but they may like to, to allow ease of use of more sensitive receivers. Legacy parts would be less of an issue for 1000BASE-BX than 1000BASE-LX.				
SuggestedRemedy				
-45 dBm.				
Proposed Response		Response Status	O	

Cl 59	SC 59.2.4.2	P 201	L 8	# 442
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Consistent with Clause 60, add clarification to receive sensitivity in Table 59-2.				
SuggestedRemedy				
After receive sensitivity, add "(max) in Table 59-9."				
Proposed Response		Response Status	O	

Cl 59	SC 59.3	P 201	L 19	# 829
Thatcher, Jonathan		World Wide Packets		
Comment Type	E	Comment Status	D	
Reference to 59.14 should be 59.13				
SuggestedRemedy				
See comment				
Proposed Response		Response Status	O	

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Cl 59	SC 59.3	P 201	L 31	# 443
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Clarify singlemode fiber specified.				
SuggestedRemedy				
Add "Type B.1.1, B.1.3" before "SMF" under fiber type in Table 59-3.				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 201	L 47	# 830
Thatcher, Jonathan		World Wide Packets		
Comment Type E	Comment Status D			
Remove "a."				
SuggestedRemedy				
See comment				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 201	L 47	# 444
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Redundant text.				
SuggestedRemedy				
Delete text in lines 47-49.				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 202	L 12	# 445
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Missing entry in Table 59-4.				
SuggestedRemedy				
For RMS spectral width, enter "See Table 59-5."				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 202	L 12	# 831
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
See "Table 59-5"				
SuggestedRemedy				
See comment				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 202	L 16	# 580
Dawe, Piers		Agilent		
Comment Type T	Comment Status D			
Launch power on SMF should be higher.				
SuggestedRemedy				
-9.5 dBm. No need to change the MMF launch powers.				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 202	L 18	# 586
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Trying to harmonise Tx OFF power limits towards -45 dBm (see another comment for table 59-1).				
SuggestedRemedy				
Find what in-production transceivers' OFF power actually is. Pick a number as near to -45 dBm as is compatible with not having many legacy parts raising false signal detects. Must be same or lower than the new number for table 59-1.				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1	P 203	L 1	# 581
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
I have graphs to illustrate table 59-5. But people prefer tables for normative specs, they are precise.				
SuggestedRemedy				
Add illustrative graphs. Don't delete the tables.				
Proposed Response	Response Status O			

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Cl 59	SC 59.3.1.1	P 202	L 32	# 446
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Redundant text.				
SuggestedRemedy				
Delete 59.3.1.1 RMS spectral width. dangling subclause that is already referenced in Table 59-4.				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1.1	P 202	L 34	# 582
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Wrong table				
SuggestedRemedy				
59-5				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1.1	P 202	L 34	# 832
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
Maximum spectral width "vs Center wavelength" for ... is shown in "Table 59-5"				
SuggestedRemedy				
Fix frequency and reference per comment.				
Proposed Response	Response Status O			

Cl 59	SC 59.3.1.1	P 202	L 34	# 583
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Add some clarification				
SuggestedRemedy				
Add ". intermediate spectral limits may be found by interpolation. It should be noted that these limits, particularly the wider ones, are not in themselves adequate to guard against an excessive dispersion penalty, and the TDP requirements must also be met. See 59.9.9."				
Proposed Response	Response Status O			

Cl 59	SC 59.4	P 203	L 47	# 452
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Correct Table entry and move Table to coincide with text in 59.4.				
SuggestedRemedy				
Fiber Type column should read "Type B1.1, B1.3 SMF"				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 203	L 15	# 447
Swanson, Steve		Coming Incorporated		
Comment Type T	Comment Status D			
Correct Table entry.				
SuggestedRemedy				
"3.5" should read "3.50"				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 203	L 21	# 448
Swanson, Steve		Coming Incorporated		
Comment Type T	Comment Status D			
Table entry incorrect.				
SuggestedRemedy				
"1.47" should read "3.06" in Table 59-5.				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 203	L 22	# 449
Swanson, Steve		Coming Incorporated		
Comment Type T	Comment Status D			
Table entry incorrect.				
SuggestedRemedy				
"2.5" should read "2.58" in Table 59-5.				
Proposed Response	Response Status O			

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Cl 59	SC 59.4.1	P 203	L 34	# 834
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
Missing "(min)" from lines 35, 36, 38, 40				
SuggestedRemedy				
Fix per comment				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 203	L 35	# 450
Swanson, Steve		Coming Incorporated		
Comment Type T	Comment Status D			
Receive sensitivity not in line with Clause 38 and stated power budgets.				
SuggestedRemedy				
Change receive sensitivity to -19 dBm				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 203	L 38	# 451
Swanson, Steve		Coming Incorporated		
Comment Type T	Comment Status D			
Missing entries in Table 59-6.				
SuggestedRemedy				
Include recommended values for stressed receiver sensitivity and vertical eye closure in Table 59-6.				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 203	L 4	# 833
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
1. RMS spectral width is a "(max)" as is RMS... to acheive epsilon..."				
2. Center wavelengths should be like: "1260 <= Lambda < 1270" up to 1350 which would be "1350 <= Lambda <= 360" in Table 59-5				
3. Remove row for 1360				
4. Center the specs in the columns				

SuggestedRemedy				
Fix per comment				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 204	L 1	# 453
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Several Entireties in Tables 59-8 and 59-9 can be straddled.				
SuggestedRemedy				
Reformat Table and straddle columns with identical entries.				
Proposed Response	Response Status O			

Cl 59	SC 59.4.1	P 204	L 16	# 587
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Trying to harmonise Tx OFF power limits towards -45 dBm (see another comment for table 59-2). Legacy parts would be less of an issue for 1000BASE-BX than 1000BASE-LX.				
SuggestedRemedy				
-45 dBm				
Proposed Response	Response Status O			

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Cl 59	SC 59.4.1	P 204	L 9	# 588
Dawe, Piers		Agilent		
Comment Type T	Comment Status D			
Use the same spectral limits for 1000BASE-BX upstream as for 1000BASE-EX.				
<i>SuggestedRemedy</i>				
Replace spectral width "2" with "See table 59-5". Change title of table 59-5 to "1000BASE-X 1310 nm band 10 km spectral limits" or "1000BASE-EX and 1000BASE-BX spectral limits"				
Proposed Response	Response Status O			
Cl 59	SC 59.4.1	P 204	L 9	# 589
Dawe, Piers		Agilent		
Comment Type T	Comment Status D			
The same spectral limits for 1000BASE-BX downstream and for 1000BASE-PX downstream should be the same.				
<i>SuggestedRemedy</i>				
Suggest replace spectral width "0.4" with "See table 59-5". Add another row(s) to the table, to agree with Clause 58. Consider removing the table from one or other clause and referring across.				
Proposed Response	Response Status O			
Cl 59	SC 59.4.2	P 204	L 39	# 835
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
Talbe 59-9 missing "(min)" from lines 39, 41, 43, 45				
<i>SuggestedRemedy</i>				
Fix per comment				
Proposed Response	Response Status O			
Cl 59	SC 59.5	P 204	L 52	# 454
Swanson, Steve		Corning Incorporated		
Comment Type E	Comment Status D			
Make 59 consistent with 60.				
<i>SuggestedRemedy</i>				
Replace "Worst-case" with "Illustrative" in title (4 places).				
Proposed Response	Response Status O			

Cl 59	SC 59.5	P 205	L 7	# 455
Swanson, Steve		Corning Incorporated		
Comment Type T	Comment Status D			
No entries for SMF in Table 59-10				
<i>SuggestedRemedy</i>				
Add the following entries:				
Link power budget 8.0 dB				
Channel insertion loss 4.57 dB				
Allocation for penalties 3.27 dB				
Additional insertion loss allowed 0.16 dB				
Proposed Response	Response Status O			
Cl 59	SC 59.5	P 205	L 8	# 836
Thatcher, Jonathan		World Wide Packets		
Comment Type TR	Comment Status D			
We should have consistent power budgets between 100Mb/s, 1Gb/s and possibly even 10 Gb/s. Need to reference a single set of fiber specifications for 10km, P2P fiber plants.				
<i>SuggestedRemedy</i>				
Minimally, need both BIDI (100 Mb and 1 Gb) using the same fiber plant specifications and both dual fibers (100 Mb and 1 Gb) using the same fiber plant specification.				
Ideally, BIDI's should be the same fiber specification as the dual fibers (meaning that a BIDI should work on a dual fiber plant).				
It would be wonderful if this could be true for 10G dual fiber as well.				
Proposed Response	Response Status O			
Cl 59	SC 59.6	P 205	L 24	# 837
Thatcher, Jonathan		World Wide Packets		
Comment Type TR	Comment Status D			
Table 59-11: there should be specifications for both 1310 and 1550 nm.				
<i>SuggestedRemedy</i>				
Add another SMF column. ID one as 1310, and the other as 1550.				
Proposed Response	Response Status O			

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Cl 59	SC 59.6	P 205	L 33	# 456
Swanson, Steve		Coming Incorporated		
Comment Type	T	Comment Status	D	
Missing entries in Table 59-11.				
SuggestedRemedy				
Add the following entries in Table 59-11:				
Channel insertion loss 6.2 dB				
Allocation for penalties 3.2 dB				
Additional insertion loss allowed 1.6 dB				
Proposed Response		Response Status	O	

Cl 59	SC 59.8	P 206	L 11	# 839
Thatcher, Jonathan		World Wide Packets		
Comment Type	TR	Comment Status	D	
Tables 59-12 and 59-13: why aren't TP2 and TP3 specified the same way Clause 60 is, using TDP?				
There is no reason to have different specification means in EFM P2P				
SuggestedRemedy				
Use consistent specification methods				
Proposed Response		Response Status	O	

Cl 59	SC 59.8	P 206	L 8	# 838
Thatcher, Jonathan		World Wide Packets		
Comment Type	TR	Comment Status	D	
TP1 and TP4 in Tables 59-12 & 59-13 should be the same as 1000BASE-LX.				
SuggestedRemedy				
Make it so.				
Proposed Response		Response Status	O	

Cl 59	SC 59.8.9	P 209	L	# 697
Diab, Wael William		Cisco Systems		
Comment Type	TR	Comment Status	D	
TDP is the appropriate method for evaluating PMDs. Nonetheless, given the speed of these PMDs and the short-term desire to implement solutions (as expressed in the original proposal presentations), an informative that relates traditional measurement techniques to TDP may help bridge the gap.				
SuggestedRemedy				
Specify an informative correlation between the TDP measurements and the eye mask and/or the jitter numbers				
Proposed Response		Response Status	O	

Cl 59	SC 59.9	P 206	L 41	# 887
Tom Murphy		Infinion		
Comment Type	T	Comment Status	D	
The majority of BiDi devices use a pigtail construction. Hence, a patch cord is not needed for this measurement				
SuggestedRemedy				
All optical measurements shall be made through a short patch cable or pigtail, between 0.5 and 5 m in length				
Proposed Response		Response Status	O	

Cl 59	SC 59.9.1	P 206	L 53	# 840
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
1. Not clear if epsilon should be normative or informative. 2. Use greek letter instead of "e" 3. What does "10-3 times the signaling speed" mean? 10e3? 4. Pag 207, line 1: what does "speed(59-x)" mean?				
SuggestedRemedy				
Per comment.				
Proposed Response		Response Status	O	

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Cl 59	SC 59.9.1	P 207	L 1	# 457
Swanson, Steve		Coming Incorporated		
Comment Type	E	Comment Status	D	
Equation number misplaced and missing.				
<i>SuggestedRemedy</i>				
Add equation number right justified (59.1?)				
Proposed Response		Response Status	O	
Cl 59	SC 59.9.1	P 207	L 3	# 889
Tom Murphy		Infineon		
Comment Type	T	Comment Status	D	
The language here is such that one has the opinion that column 2 is the only viable option. This is not the case in reality.				
<i>SuggestedRemedy</i>				
Remove the sentence "However... partition noise". If the spectral width is kept below the limits of column 3, epsilon will not exceed 0.115 and the chromatic dispersion penalty is expected to be below 2 dB when all link parameters are simultaneously at worst case values.				
Proposed Response		Response Status	O	
Cl 59	SC 59.9.13	P 210	L 21	# 844
Thatcher, Jonathan		World Wide Packets		
Comment Type	T	Comment Status	D	
Do we really need CPR if the offset patch cord does the trick?				
<i>SuggestedRemedy</i>				
Recommend removing CPR(but not offset patch cord for MMF).				
Proposed Response		Response Status	O	
Cl 59	SC 59.9.14	P 210	L 27	# 845
Thatcher, Jonathan		World Wide Packets		
Comment Type	TR	Comment Status	D	
If new method is good enough for 10 Gig and for C 60, why isn't it good enough here? This method is known to be difficult to implement.				
<i>SuggestedRemedy</i>				
Replace TP3 Rx conformance test with new method.				
Proposed Response		Response Status	O	

Cl 59	SC 59.9.14	P 210	L 29	# 567
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Per D1.0 comment 627, we decided to use a clause 52 style stressed eye generator. The argument against the clause 38 style generator is that people don't like spending the time doing the iterative roll-your-own process of building and calibrating a home-made stressed eye generator. The argument against the clause 52 style generator is ... the same! An informative stressed sensitivity spec is probably a good thing for MMF use.				
<i>SuggestedRemedy</i>				
Debate again. One outcome is to reference what's in clause 60. If clause 60 doesn't need stressed sensitivity (because path distortion is expected to be low), copy all that stuff to here and let clause 58 refer to it.				
Proposed Response		Response Status	O	
Cl 59	SC 59.9.15	P 212	L 1	# 846
Thatcher, Jonathan		World Wide Packets		
Comment Type	E	Comment Status	D	
If this subclause is identical to clause 38, then just reference C38.				
<i>SuggestedRemedy</i>				
One of: 1. Put in editors note saying that this will be removed at final publication with reference to 38.6.12, or 2. Do it now.				
Proposed Response		Response Status	O	
Cl 59	SC 59.9.15	P 212	L 48	# 463
Swanson, Steve		Coming Incorporated		
Comment Type	E	Comment Status	D	
Incorrect reference.				
<i>SuggestedRemedy</i>				
Reference should read "IEC 60950."				
Proposed Response		Response Status	O	

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CI 59 SC 59.9.3 P 207 L 17 # 585
Dawe, Piers Agilent

Comment Type E **Comment Status D**
Following up the extinction ratio pattern change to allow near-service measurement, second thoughts about best practice wrt reflections. Anyone know the 20-bit binary sequence for I2?

SuggestedRemedy
Change "This reflections" to "This measurement is made with the node transmitting a repeating I2 pattern (binary xxxxxxxxxxxxxxxxx)."

Proposed Response **Response Status O**

CI 59 SC 59.9.4 P 207 L 20 # 841
Thatcher, Jonathan World Wide Packets

Comment Type TR **Comment Status D**
Subsection 59.9.4 has no meaning if there are no specifications in the tables.

SuggestedRemedy
Either put specs in tables, or remove subclause. Make consistent with C60.

Proposed Response **Response Status O**

CI 59 SC 59.9.4 P 207 L 21 # 458
Swanson, Steve Corning Incorporated

Comment Type E **Comment Status D**
Reference to Clause 60.

SuggestedRemedy
Repeat all text here since there are many subclause with common text between 58, 59, and 60.

Proposed Response **Response Status O**

CI 59 SC 59.9.6 P 207 L 34 # 459
Swanson, Steve Corning Incorporated

Comment Type E **Comment Status D**
Missing space after first sentence.

SuggestedRemedy
Add a space.

Proposed Response **Response Status O**

CI 59 SC 59.9.7 P 208 L 30 # 843
Thatcher, Jonathan World Wide Packets

Comment Type T **Comment Status D**
Use same eye mask for C59 and C60

SuggestedRemedy
Replace with C60 eye mask. Interoperability with LX should not be an issue.

Proposed Response **Response Status O**

CI 59 SC 59.9.7 P 208 L 5 # 842
Thatcher, Jonathan World Wide Packets

Comment Type E **Comment Status D**
Line 5: put spaces into the formula; hard to read
Line 20: spelling of "requiured"

SuggestedRemedy
Fix

Proposed Response **Response Status O**

CI 59 SC 59.9.7 P 208 L 7 # 460
Swanson, Steve Corning Incorporated

Comment Type E **Comment Status D**
Missing equation number.

SuggestedRemedy
Add equation number right justified.

Proposed Response **Response Status O**

CI 59 SC 59.9.8 P 208 L 48 # 568
Dawe, Piers Agilent

Comment Type T **Comment Status D**
I have an action to find out if risetime spec is necessary for this clause. I'm hopeful that it isn't, and the strict mask of this clause will be enough. But I'll try to address the question better before the meeting.

SuggestedRemedy
As discussed at the meeting.

Proposed Response **Response Status O**

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CI 59	SC 59.9.8	P 209	L 4	# 461
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Missing equation number.				
SuggestedRemedy				
Add equation number right justified.				
Proposed Response	Response Status O			

CI 59	SC 59.9.9	P 209	L 14	# 584
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Align title with 60 (as modified)				
SuggestedRemedy				
Change "Transmitter dispersion penalty" to "Transmitter and dispersion penalty (TDP)"				
Proposed Response	Response Status O			

CI 59	SC 59.9.9	P 209	L 16	# 462
Swanson, Steve		Coming Incorporated		
Comment Type E	Comment Status D			
Reference to Clause 60 is provided.				
SuggestedRemedy				
Should text be repeated here? Many subclauses have identical text.				
Proposed Response	Response Status O			

CI 59	SC 6	P	L	# 49
Tatum, Jim		Honeywell		
Comment Type TR	Comment Status D			
Table 59-11 contains references to fiber modal bandwidth				
Table 59-11 is missing values				
SuggestedRemedy				
Delete rows regarding modal bandwidth				
Fill in values through spreadsheet analysis at meeting				
Proposed Response	Response Status O			

CI 59	SC 8	P	L	# 50
Tatum, Jim		Honeywell		
Comment Type TR	Comment Status D			
Table 59-12 is incomplete				
SuggestedRemedy				
Use values from clause 38 as baseline values				
Proposed Response	Response Status O			

CI 59	SC 8	P	L	# 51
Tatum, Jim		Honeywell		
Comment Type TR	Comment Status D			
Table 59-13 is incomplete				
SuggestedRemedy				
Use values in clause 38 table 38-10 as baseline values.				
Proposed Response	Response Status O			

CI 59	SC 9.10	P	L 26	# 53
Tatum, Jim		Honeywell		
Comment Type E	Comment Status D			
59.6.11 reference is wrong				
SuggestedRemedy				
replace with 59.9.14				
Proposed Response	Response Status O			

CI 59	SC 9.11	P	L	# 54
Tatum, Jim		Honeywell		
Comment Type T	Comment Status D			
This section should be noted as informative since we are going to TDP techniques.				
All "shall's" need to be removed				
SuggestedRemedy				
add informative to title of section, replace "shall" with appropriate grammatical words.				
Proposed Response	Response Status O			

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CI 59	SC 9.15	P	L 7	# 55
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
Is reference to 36A.5 valid?				
<i>SuggestedRemedy</i> If not, replace.				
Proposed Response		Response Status	O	

CI 59	SC 9.3	P	L 17	# 52
Tatum, Jim		Honeywell		
Comment Type	E	Comment Status	D	
reference to clause 36A valid?				
<i>SuggestedRemedy</i> Is there an equivalent pattern definition section in AH?				
Proposed Response		Response Status	O	

CI 59	SC General	P General	L	# 891
John George		OFS		
Comment Type	E	Comment Status	D	
Single mode fiber designations in table column headings inconsistent with clauses 58 and 60				
<i>SuggestedRemedy</i> Change "SMF" to "B1.1, B1.3 SMF" in all applicable tables 59-3, 4, 7, 10, 11, 14, 15, 16				
Proposed Response		Response Status	O	

CI 59	SC Table 59-4	P 202	L 16	# 294
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
The minimum transmitter power numbers in the table do not agree with the baseline proposal (joiner_1_0302.pdf). The baseline proposal is for -9.5dBm for SMF. MMF is not mentioned. The table should be brought in line with the baseline proposal.				
In addition, change the MMF power to be 0.5dB lower than the SMF power similar to 1000Base-LX.				
<i>SuggestedRemedy</i> Change the transmitter power to -9.5dBm for the SMF case and -10.0dBm for the MMF cases.				
Proposed Response		Response Status	O	

CI 59	SC Table 59-9	P 204	L 42	# 293
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
Stressed receiver sensitivity is not an appropriate test for a single mode receiver				
<i>SuggestedRemedy</i> Remove the stressed receiver sensitivity requirement from the table				
Proposed Response		Response Status	O	

CI 60	SC	P	L	# 541
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Wordsmithing: Now that CDRH and IEC are aligned, class 1 is to the IEC reference given (can remove one "shall" and one PICS entry). There are 100BASE-X optical transceivers (e.g. 100BASE-FX) not subject to this clause. Is the word "certified" needed? It was eliminated in clause 52. Does the PICS count as certification, so a further mention would be superfluous?				
<i>SuggestedRemedy</i> 100BASE-LX and 100BASE-BX optical transceivers shall conform to Class 1 laser requirements as defined in the IEC 60825-1, under any condition of operation. This includes single fault conditions whether coupled into a fiber or out of an open bore.				
And just to tidy things up, join the following one-paragraph sentence "Conformance to additional" onto this one.				
Proposed Response		Response Status	O	

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Cl 60	SC 60	P	L	# 496
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Does 1.4.62 center wavelength: The average of two optical wavelengths at which the spectral radiant intensity is 50% of the maximum value. (See IEEE 802.3 Clause 11.) agree with EIA/TIA-455-127?				
SuggestedRemedy				
Log the question under 1.4, definitions				
Proposed Response	Response Status			O

Cl 60	SC 60	P 225	L 1	# 572
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Not baseband, it's intensity modulated.				
SuggestedRemedy				
Delete "baseband".				
Proposed Response		Response Status O		

Cl 60	SC 60..1	P 229	L 25	# 499
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
"ER" is sometimes used to mean error ratio (as in BER and alone). G.957 and TS-1000use "EX" for extinction ratio.				
SuggestedRemedy				
Replace "ER" with "extinction ratio" eight times in this clause, and in the equations replace it with "Ex".				
Proposed Response		Response Status O		

Cl 60	SC 60.1	P 226	L 14	# 488
Dawe, Piers Agilent				
Comment Type	E	Comment Status	D	
Table 1 is a great help to the reader. We can make it even more useful by adding a further column. This has the by-product of allowing us to delete a small table later on.				
SuggestedRemedy				
Add 6th column "Maximum total channel loss". Take values from table 60-13, with any modifications. Add footnote "At the nominal wavelength".				
Proposed Response		Response Status	O	

C/ 60	SC 60.1	P 226	L 16	# 489
Dawe, Piers				
Comment Type	E	Comment Status	D	
Style: and D1.0 comments 287, 275. Especially with SI units, quantities are generally with the range 0.1 ~< x < 1000 - unless the next prefixed unit up/down is disliked. Nothing wrong with km, well understood and used in clauses 8, 9, 10, 12, 13, 15, 24, 36, 38, 44, 49, 52, 53, 58 59 and 60 (sometimes in compound units e.g. dB/km).				
SuggestedRemedy				
Change "Minimum range (meters)", "0.5 to 10000" to "Minimum range", "0.5 m to 10 km".				
Proposed Response	Response Status O			

Cl 60	SC 60.1	P 226	L 16	# 491
Dawe, Piers				
Comment Type E	Comment Status D			
Use "straddled" or merged cells to stress that some entries are common by design, and to reduce clutter.				
SuggestedRemedy				
Merge the three "fiber type" cells. Merge the three range cells. Merge the two BX "number of fibers" cells. Keep the three wavelength cells separate: the coincidence of two entries was not a necessary consequence of the objectives.				
Proposed Response	Response Status O			

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CI 60	SC 60.1	P 226	L 21	# 506
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Cover the basics.				
<i>SuggestedRemedy</i>				
Add sentences "A 100BASE-LX link uses 100BASE-LX PMDs at each end while a 100BASE-BX link uses a 100BASE-BX-OLT PMD at one end and a 100BASE-BX-ONU PMD at the other. Typically the 1550 nm band is used to transmit away from the center of the network ("downstream") and the 1310 nm band towards the center ("upstream"), although this arrangement, or the notion of hierarchy, is not required."				
Proposed Response		Response Status	O	

CI 60	SC 60.1	P 226	L 3	# 486
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Further wordsmithing (3 details): change "100BASE-LX PMD and the 100BASE-BX PMD and medium," to				
<i>SuggestedRemedy</i>				
100BASE-LX PMD and 100BASE-BX PMDs and the medium				
Proposed Response		Response Status	O	

CI 60	SC 60.1	P 226	L 5	# 228
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Clause 24 is not an automatic cross-reference.				
<i>SuggestedRemedy</i>				
Add *ref*				
Proposed Response		Response Status	O	

CI 60	SC 60.1	P 226	L 6	# 229
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Which Management Interface yy?				
Don Pannel has a proposal that enables access of the Clause 45 registers using today's Clause 22 CPU's and switches.				
<i>SuggestedRemedy</i>				
Use the Clause 45 registers and allow access to Clause 45 registers through both the Clause 22 interface and the Clause 45 interface.				
Ask Ed Turner how to express this in the PMD Clause.				
Proposed Response		Response Status	O	

CI 60	SC 60.1	P 226	L 6	# 487
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
MDIO Clause yy: if we go with the "45 registers through 22 interface" proposal, presumably a pure clause 45 implementation would be OK too.				
<i>SuggestedRemedy</i>				
Change yy to "22 or 45".				
Proposed Response		Response Status	O	

CI 60	SC 60.1.1	P 210	L 1	# 99048
Dawe, Piers		Agilent		
Comment Type	TR	Comment Status	R	
10^-12 BER can't really be necessary, being one (detected) error in two hours. It would be expensive to test for and remarkably hard to extrapolate reliably, though in practice (without the guarantee in the standard) it will be met cost-effectively. I understand the underlying technical reason for demanding very low BERs is to avoid TCP running slow when it sees dropped packets. 10^-10 or 10^-11 seems enough. Other 100Mb/s PHYs use on the order of 10^-10.				
<i>SuggestedRemedy</i>				
Consider a more traditional BER limit for all 100M PHYs.				
Proposed Response		Response Status	U	
REJECT.				

The PMD STF needs to discuss the technical and economical feasibility for specifying a BER of 10^-12 for all 100Mbps PHYs, especially in terms of testing.

14-2-3. Commentor is encouraged to bring a revised proposal.

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Cl 60	SC 60.10	P 244	L 48	# 542
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Four lines of text don't deserve a top-level subclause to themselves.				
<i>SuggestedRemedy</i>				
Change the title of 60.9 to "Environmental, safety and labeling.				
Demote 60.10 to 60.9.5.				
Join the second sentence-paragraph onto the first.				
Proposed Response		Response Status	O	

Cl 60	SC 60.11	P 245	L 1	# 546
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Another very short top-level subclause				
<i>SuggestedRemedy</i>				
Move 60.11 completely, to just before the present 60.12.1, so that it becomes the new 60.11.1, and 60.12.1 becomes 60.11.2.				
Proposed Response		Response Status	O	

Cl 60	SC 60.11	P 245	L 23	# 543
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
If we add a loss column to table 60-1 we can delete table 13. Doing so would save us the bother of sorting out the nominal vs range aspect of wavelength.				
<i>SuggestedRemedy</i>				
Add a loss column to table 60-1 per another comment. Delete table 60-13.				
Proposed Response		Response Status	O	

Cl 60	SC 60.11	P 245	L 23	# 545
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Need to state the minimum acceptable channel losses.				
<i>SuggestedRemedy</i>				
"The maximum channel insertion losses are given in Table 60–13/1. The minimum loss for 100BASE-LX and 100BASE-BX is zero."				
Proposed Response		Response Status	O	

Cl 60	SC 60.11	P 245	L 26	# 472
Swanson, Steve		Corning Incorporated		
Comment Type	T	Comment Status	D	
Incorrect reference; only single-mode fiber is referenced in this Clause.				
<i>SuggestedRemedy</i>				
Delete "...ANSI/TIA/EIA-526-14A [B14], Method B, and"				
Proposed Response		Response Status	O	

Cl 60	SC 60.11	P 245	L 38	# 544
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
We need to agree what channel losses are reasonable. The 6 and 7 dB values would be appropriate in an enterprise environment, we think, but we are hearing that in an access network with many branching points and splices, significantly higher losses may be cost effective. Upgradability of fibre plant (to Gigabit Ethernet or OC-12, from dual to single fibre, or possibly to other data rates) may be a concern but in my opinion cannot be mandatory; the standard should be consistent and satisfactory in itself.				
<i>SuggestedRemedy</i>				
Study the issue and choose higher loss limits. May not necessarily be the same for dual fibre as for single fibre. If we wish to advise on upgrade paths to other data rates, put the information in Annex 64 and refer to it from here or in 60.12. if we wish to discuss commonality between 100BASE-LX and 100BASE-BX, do it here or in 60.12.				
Proposed Response		Response Status	O	

Cl 60	SC 60.11	P 245	L 38	# 284
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
We should strive to specify a common cable plant for all EFM P2P SMF PMDs.				
<i>SuggestedRemedy</i>				
Specify the same channel insertion loss for all 1310nm and 1550nm P2P SMF PMDs respectively.				
Channel insertion loss (1310nm) = 7 dB				
Channel insertion loss (1550nm) = 6 dB				
Proposed Response		Response Status	O	

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CI 60	SC 60.12	P	L	# 549
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Missing dB/km value for 1550 nm, error in 1310 nm. G.652 allows 0.5 dB/km for 1310 nm, OC-48 and below. We can sort the dB/km out or simply specify end-to-end loss which I think is in line with the operators' thinking. I prefer option 3c below.				
SuggestedRemedy				
1. Delete 0.4 dB/km for 1310 nm.				
Option 2a Delete footnotes b and c.				
Option 2b Use both references in one footnote.				
Option 2c Use both references in 60.12.1.				
Option 3a Insert 0.4 dB/km for 1550 nm.				
Option 3b Delete all dB/km entries. We have stated the end-to-end loss elsewhere				
Option 3c Insert 0.4 dB/km for 1550 nm and make the dB/km entries informative. The quick way to do that is to insert "dispersion" on p245 line 44 before "specifications" and add a new sentence "The attenuation coefficients shown represent the requirements of fibre or cable standards G.652 and ANSI/TIA/EIA-568-B.3 [and IEC xxx?]. They are shown here for information only; the end-to-end channel loss shown in Table 60-1 is required."				
Proposed Response		Response Status	O	

CI 60	SC 60.12	P 246	L 3	# 548
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Tidying up				
SuggestedRemedy				
Lines 9 and 10, straddle the dispersion entries.				
Re-shrink-wrap the whole table.				
Line 12, change "and" to "which is the".				
Line 14, change TIA568B.3 to ANSI/TIA/EIA-568-B.3				
Proposed Response		Response Status	O	

CI 60	SC 60.12.1	P 245	L 53	# 547
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
I suspect most of table 60-14 is in alignment with IEC 60793-2, not exceptions to it.				
SuggestedRemedy				
Change "exceptions" to "requirements".				
Proposed Response		Response Status	O	

CI 60	SC 60.12.2.1	P 246	L 24	# 550
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
We are hearing that access networks are different to enterprise networks and may contain many splices, maybe 2 dB isn't enough.				
SuggestedRemedy				
Discuss and raise "2 dB" to appropriate values for 100BASE-LX and 100BASE-BX separately. Maybe we can learn from the experience that went into TS-1000.				
Proposed Response		Response Status	O	

CI 60	SC 60.12.2.2	P 246	L 27	# 551
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Obsolete nomenclature				
SuggestedRemedy				
Change subclause title to "Maximum discrete reflectance". To help the reader, in the sentence insert after "reflectance", "of e.g. a connection or splice".				
Proposed Response		Response Status	O	

CI 60	SC 60.13	P 247	L 1	# 552
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Title not aligned with clause title.				
SuggestedRemedy				
Trim the title in line with title of clause.				
Proposed Response		Response Status	O	

CI 60	SC 60.13	P 247	L 10	# 553
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Not all at once				
SuggestedRemedy				
Change "OLT, and" to "OLT, or".				
Proposed Response		Response Status	O	

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CI 60	SC 60.2.1	P 227	L 33	# 470
Swanson, Steve		Coming Incorporated		
Comment Type	E	Comment Status	D	
Incorrect reference.				
<i>SuggestedRemedy</i>				
"100BASE-FX" should read "100BASE-LX"				
Proposed Response		Response Status	O	

CI 60	SC 60.2.1	P 227	L 4	# 886
Tom Murphy		Infinicon		
Comment Type	T	Comment Status	D	
The majority of BiDi devices use a pigtail construction. Hence, a patch cord is not needed for this measurement.				
<i>SuggestedRemedy</i>				
...is defined as the output end of a patch cord or pigtail (TP2),...				
Proposed Response		Response Status	O	

CI 60	SC 60.2.4	P 228	L 11	# 492
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Compacting the printout:				
<i>SuggestedRemedy</i>				
Take out one to three carriage returns from tables 60-2 and 60-3 and re-shrink-wrap the tables.				
Proposed Response		Response Status	O	

CI 60	SC 60.2.4	P 228	L 30	# 493
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Duplicate truth tables. These two tables should be virtually identical, no need to spell it out twice. If we wanted different signal detect lower limits per PMD, we could put the limits in the receiver spec tables, but I believe they should be common across multiple PMD types which could be connected by accident.				

SuggestedRemedy
Delete table 60-3. Replace "in Table 60-5" with "in Table 60-5 or Table 60-7 as appropriate". Change the title to either "100BASE-LX and 100BASE-BX SIGNAL_DETECT value definition" or simply "SIGNAL_DETECT value definition".

Proposed Response *Response Status* O

CI 60	SC 60.2.4	P 228	L 6	# 855
Thatcher, Jonathan		World Wide Packets		
Comment Type	E	Comment Status	D	
Tables 60-2 and 60-3 should be combined				
<i>SuggestedRemedy</i>				
Combine.				
Proposed Response		Response Status	O	

CI 60	SC 60.3	P 228	L 47	# 494
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
"All" media types is copied from clause 38 where there are several. Here, there are just two, and the difference between them hardly concerns this clause. Also, does a transceiver "support" a medium type? Isn't it the other way round, the transceiver uses the medium?				
<i>SuggestedRemedy</i>				
Replace "all" by "the".				
Replace "supports" by "operates over"?				
Similarly for 60.4, p 230.				
Proposed Response		Response Status	O	

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CI 60	SC 60.3.1	P 229	L 16	# 512	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
We agreed a minimum extinction ratio of 6 dB and then discovered that the idle pattern for this PMD, which is the convenient pattern for testing is 0101... This will cause a lower reading of extinction ratio for a slow but compliant and satisfactory transmitter, which should be accounted for. By the way this effect is a good thing; it means that there is a hidden trade between extinction ratio and transmitter speed for satisfactory transmitters. A 6 dB extinction ratio measured the Gigabit Ethernet way translates to 4.8 dB in this clause. I guess we can round this off to 5 dB.					
<i>SuggestedRemedy</i>					
5 dB for extinction ratio, -14.8 dBm or 32.9 uW.					
Proposed Response		Response Status	O		

CI 60	SC 60.3.1	P 229	L 17	# 498	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
It has been suggested that a RIN spec is overkill when we have a TDP spec, and unnecessary spec items add cost, even if just in paperwork. Also, it's not a test that can readily be carried out on a normal Ethernet equipment, but relates more to a component level test, and we should avoid specifying things which can't be verified on a "black box" basis. And neither TS-1000 nor G.957 has a RIN spec.					
<i>SuggestedRemedy</i>					
Consider removing the spec line from the table. Then consider adding a sentence to p228 line 54: "In addition, a RIN12OMA lower than -110 dB/Hz is recommended. RIN is a contributor to TDP."					
Do the same in 60.4.1.					
Consider removing the "shall" in 60.8.7.					
Proposed Response		Response Status	O		

CI 60	SC 60.3.1	P 229	L 19	# 501	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
IEEE style guide 15.2 avoids the Newspaper Headline Capitalization Style.					
<i>SuggestedRemedy</i>					
"Optical return loss tolerance" and check the rest of the clause for a few more instances.					
Proposed Response		Response Status	O		

CI 60	SC 60.3.1	P 229	L 24	# 856	
Thatcher, Jonathan		World Wide Packets			
Comment Type	T	Comment Status	D		
"computed mechanically"? Is this some kind of weird concept from across the pond? Is the user supposed to use an abacus or some kind of old fashioned adding machine?					
<i>SuggestedRemedy</i>					
Something helpful would be helpful					
Proposed Response		Response Status	O		

CI 60	SC 60.3.1	P 229	L 8	# 495	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
If a transmitter has a center wavelength of 1261 nm and a spectral width of 7 nm, a little of its spectrum extends around 1257 nm. Is it compliant or not? FDDI has "Central Wavelength" (clear, but its limits are within the cable limits), G.957 has "Operating wavelength range", and can go as far as 1260-1360. G.652 specifies the Cable cut-off wavelength, maximum 1260 nm. TS-1000 has "central wavelength of 1260 nm to 1360 nm". Clause 38 has "Wavelength (range) 1270 to 1355 nm".					
<i>SuggestedRemedy</i>					
Question for the fibre experts! We would like all the wavelength range possible so we can stretch the temperature range for reasonable manufacturing tolerances.					
Options:					
A Insert "Central" before wavelength.					
B Use "Operating wavelength range" but define it as e.g. central wavelength +/- 1 RMS spectral width.					
Proposed Response		Response Status	O		

CI 60	SC 60.3.2	P 229	L 31	# 500	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
We need to be clearer about what is a property of the receiver and what is a property of the received signal. And min and max.					
<i>SuggestedRemedy</i>					
Line 31: receiver sensitivity					
Line 41: received power					
Line 42: Receiver sensitivity (max)					
Line 44: Receiver sensitivity as OMA a (max)					
Line 48: Stressed receiver sensitivity					
Do the same in 60.4.2 and table 60-7.					
Proposed Response		Response Status	O		

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CI 60	SC 60.3.2	P 229	L 47	# 502	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
Here are straw man values for a 100BASE-LX: revised nominal receiver sensitivity, stressed receiver sensitivity and vertical eye closure penalty. These assume a loss budget of 8 dB, being 10km * 0.5dB/km + 3dB for splices and connectors (this is a change from 2 dB and needs debate), and a TDP of 3.7 dB. They take into account the 101010... pattern used for OMA with this line code, which reduces the measured OMA causing the sensitivity to appear to get better, and the proposed 5 dB extinction ratio limit on this basis. These sensitivities should still be readily achievable, but if we think they are an issue we can raise the minimum transmit Pave to achieve a similar OMA to an OC-3 part.					

SuggestedRemedy

Change receiver sensitivity from -25 to -26.9 P_{ave}, and to -26.8 dBm or 2.10 uW OMA. This is comparable to an ITU sensitivity of -27.5 dBm. Stressed receiver sensitivity -24.1 dBm P_{ave}. Vertical eye closure penalty 3.7 dB. The two sensitivities move in simple opposition to the loss budget.

Proposed Response Response Status O

CI 60	SC 60.3.2	P 229	L 50	# 559	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
If we choose to stay with the current stressed eye conformance, need stressed eye jitter entries in tables 60-5 and 60-7.					
<i>SuggestedRemedy</i>					
Option 1 Abandon stressed eye conformance for these PMDs on the ground that there isn't enough path distortion to bother with.					
Option2 Add another row to the table "Stressed eye jitter (min) ? U1 pk-pk. Add footnote "Vertical eye closure penalty and stressed eye jitter are test conditions for measuring stressed receiver sensitivity. They are not required characteristics of the receiver."					
Proposed Response		Response Status	O		

CI 60	SC 60.3.2	P 229	L 51	# 503	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
Footnote b, "This equals the Return Loss of 100BASE-LX" is confusing. I read it to be a statement about commonality of requirements between 100BASE-LX and 1000BASE-LX when I think it means to explain the terminology used.					
<i>SuggestedRemedy</i>					
In editors' box p225 under "Definitions" add "Reflectance". Define reflectance ratio as ratio of reflected to incident power (better check this with other standards, books etc.) and say that it is the inverse of return loss.					
Change the footnote here and in 60.4.2 to "See 1.4.n for definition of reflectance".					
Add further entries under "Definitions" to update 1.4.129, and 1.4.237 to mention 1000BASE-LX.					
Proposed Response		Response Status	O		

CI 60	SC 60.4	P 213	L	# 99049	
Dawe, Piers		Agilent			
Comment Type	TR	Comment Status	R		D1.0 #289
At present we are copying TS-1000 for power levels but saying the objective is 10 km while TS-1000 does 15 km. These statements are contradictory: a standard cannot demand things it doesn't need, or if it demands them it must put them to use. In the following comments I show how spec values which are compatible with TS-1000, but less onerous, can deliver our present 10 km objective, with a spec power budget reduced from 16 dB to 9 dB (1550 band) and 9 or 10 dB (1310 band). Part of the reduction is a sleight of hand: we are defining a worst-pattern sensitivity. Alternatively we could choose another reach in the range 10 to 15 km.					
<i>SuggestedRemedy</i>					
Use spec values for a 10 km link which are compatible but less onerous than TS-1000.					
Proposed Response		Response Status	U		
REJECT.					

Piers to draft a letter. Work with the liason to engage the TTC committee to look at changes to the power budget to harmonize both TTC and EFM specifications.

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Cl 60	SC 60.4	P 230	L 12	# 505
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Tautology: the range must necessarily be the same for 100BASE-BX-OLT and 100BASE-BX-ONU. The point is that it is the range of a 100BASE-BX link.				
SuggestedRemedy				
Simplify "100BASE-BX-OLT and 100BASE-BX-ONU" to "100BASE-BX" the first time (line 12).				
Proposed Response		Response Status	O	

Cl 60	SC 60.4	P 230	L 8	# 504
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Take the clutter out of the title				
SuggestedRemedy				
PMD to MDI optical specifications for 100BASE-BX				
Proposed Response		Response Status	O	

Cl 60	SC 60.4	P 230	L 8	# 507
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Removing clutter				
SuggestedRemedy				
Change "100BASE-BX-OLT and the 100BASE-BX-ONU" to "100BASE-BX" in lines 20, 24 and 52, p231 lines 1 and 40, and p232 line 1. Change "budget" to "budgets", p231 line 40, 43 and p232 line 2.				
Proposed Response		Response Status	O	

Cl 60	SC 60.4.1	P 230	L 27	# 471
Swanson, Steve		Corning Incorporated		
Comment Type	E	Comment Status	D	
Table can be reformatted.				
SuggestedRemedy				
Straddle all common entry columns in Tables 60-6 and 60-7.				
Proposed Response		Response Status	O	

Cl 60	SC 60.4.1	P 230	L 32	# 497
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
RMS spectral width round 1310 would not be 7 but 7.7 nm to align with both G.957 and TS-1000. I think this is a typo but because it affects a table entry I have called my comment technical.				
SuggestedRemedy				
7.7 nm				
Proposed Response		Response Status	O	

Cl 60	SC 60.4.1	P 230	L 35	# 234
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
The power budget of 16dB for 100BASE-BX seems unnecessarily high.				
SuggestedRemedy				
Investigate the possibility to relax the P_ave (min) and Rx sensitivity values.				
Proposed Response		Response Status	O	

Cl 60	SC 60.4.1	P 230	L 38	# 509
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Desirability of 8.2 dB extinction ratio to be debated further. However, the equivalent of an ITU-T style 8.2 dB measured under a 10101... basis is 7.1 dB				
SuggestedRemedy				
Change spec extinction ratios here to 7.1 dB. Change transmit OMAs to -12.7 dBm or 53.7 uW. Continue investigation and discussions.				
Proposed Response		Response Status	O	

Cl 60	SC 60.4.1	P 230	L 41	# 510
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
This table may need an optical return loss tolerance spec, which would be used in the TDP test.				
SuggestedRemedy				
Add optical return loss tolerance, 12 dB.				
Proposed Response		Response Status	O	

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CI 60	SC 60.4.2	P 231	L 11	# 511	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
Here are straw man values for 100BASE-BX upstream: stressed receiver sensitivity and vertical eye closure penalty. These assume a loss budget of 8 dB, being 10km * 0.5dB/km + 3dB for splices and connectors (this is a change from 2 dB and needs debate). They take into account the 101010... pattern used for OMA with this line code, which reduces the measured OMA causing the sensitivity to appear to get better.					
<i>SuggestedRemedy</i>					
Change receiver sensitivity OMA to -27.7 dBm or 1.69 uW OMA. Stressed receiver sensitivity -26.2 dBm P_ave. Vertical eye closure penalty 3.8 dB. There is still 2.6 dB of margin estimated by the model with a TDP of 4.1 dB.					
Proposed Response		Response Status	O		

CI 60	SC 60.4.2	P 231	L 11	# 513	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
Here are straw man values for 100BASE-BX downstream: stressed receiver sensitivity and vertical eye closure penalty. These assume a loss budget of 7 dB, being 10km * 0.4dB/km + 3dB for splices and connectors (this is a change from 2 dB and needs debate). They take into account the 101010... pattern used for OMA with this line code, which reduces the measured OMA causing the sensitivity to appear to get better.					
<i>SuggestedRemedy</i>					
Change receiver sensitivity OMA to -27.7 dBm or 1.69 uW OMA (same as upstream). Stressed receiver sensitivity -25.6 dBm P_ave. Vertical eye closure penalty 4.1 dB. There is still 2.3 dB of margin estimated by the model with a TDP of 5.8 dB.					
Proposed Response		Response Status	O		

CI 60	SC 60.5	P 231	L 30	# 857	
Thatcher, Jonathan		World Wide Packets			
Comment Type	TR	Comment Status	D		
Channel insertion loss (meaning fiber specification) should be same as Gig types. More extensive, similar, comment on C 59.					
<i>SuggestedRemedy</i>					
Make sure that 100Mb fiber plant can be used for higher speeds. Must have upgrade path.					
Proposed Response		Response Status	O		

CI 60	SC 60.5	P 231	L 31	# 514	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
Preliminary estimates for power budget tables, 100BASE-LX, 100BASE-BX 1310 band, 100BASE-BX 1550 band. There are discrepancies of ~0.3 dB here but it will give the reader a fair indication. These values are based on my other comments.					
<i>SuggestedRemedy</i>					
Power budget 12.9, 16, 16 dB					
Operating distance 10, 10 km (merge the two BX cells)					
Channel insertion loss 8, 8, 7 dB (do we need a footnote on this "At the fiber specification wavelength of 1310 nm"?)					
Power penalties 4.7, 5.1, 6.7 dB					
Reserved margin 0.0, 2.6, 2.3 dB					
Proposed Response		Response Status	O		

CI 60	SC 60.6	P 232	L 4	# 517	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
The column headings are names of the ends of the link when we need to specify directions.					
<i>SuggestedRemedy</i>					
Options:					
A Use names of directions e.g. upstream, downstream					
B Use wavelength e.g. "1310 nm band", "1550 nm band"					
C Say "From" before names of ends.					
Proposed Response		Response Status	O		

CI 60	SC 60.7	P 231	L 46	# 516	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
type					
<i>SuggestedRemedy</i>					
Change "Tp2" to "TP4".					
Proposed Response		Response Status	O		

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CI 60	SC 60.7	P 231	L 46	# 239
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Typo. TP2 should be TP4.				
<i>SuggestedRemedy</i>				
Change TP2 to TP4				
Proposed Response		Response Status	O	

CI 60	SC 60.7	P 231	L 48	# 241
Jonsson, Ulf		Ericsson AB		

Comment Type T Comment Status D
We need to cover existing components which usually specifies a high-frequency jitter in the range of 25 to 50 kHz.

There are two instances in the spec where we specify the jitter corner frequency:

1. Clause 60.8.9 (transmitted eye) - here it is used to insure that the a TRx does not pass jitter that have corner BW less than x kHz (corner mask is x kHz).
2. Clause 60.7 (jitter budget) - Here we spec a corner freq greater than x kHz.

With the above reasoning the 100M ad hoc has concluded that we should go for the lower value of 20 kHz.

SuggestedRemedy

"...(above 20/64 kHz)" should be changed to "... (above 20 kHz)"

Remove editor's note.

Proposed Response Response Status O

CI 60	SC 60.7	P 231	L 48	# 515
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Choose 20 kHz for the jitter measurement corner. This implies that CDRs should have bandwidths at least 20 kHz; if anyone thinks that they don't, speak up!				
<i>SuggestedRemedy</i>				
Delete "64". Delete the editor's note. In 60.8.8 p236 line 34, delete "or 64" and another note.				
Proposed Response		Response Status	O	

CI 60	SC 60.7	P 231	L 50	# 520
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Could add some more explanation here				
<i>SuggestedRemedy</i>				
Add "High probability jitter at TP2 is constrained by the eye mask. Total jitter at TP3 (and therefore at TP2 also) is constrained by the error detector timing offsets. High levels of high probability jitter at TP2, 3 and 4 are expected, caused by high probability baseline wander, and values around 0.4 UI have been considered. The jitter difference between TP2 and TP3 is expected to be lower than for higher speed PMDs.				
Proposed Response		Response Status	O	

CI 60	SC 60.7	P 232	L 20	# 518
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
ps should be				
<i>SuggestedRemedy</i>				
ns (twice)				
Proposed Response		Response Status	O	

CI 60	SC 60.7	P 232	L 20	# 519
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Not Compliance Point				
<i>SuggestedRemedy</i>				
"Reference point" (as on p227) or "Measurement point"				
Proposed Response		Response Status	O	

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CI 60	SC 60.7	P 232	L 26	# 536	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
Add a sentence to specify the decision timing offsets for TDP, which should be taken out of the measurement subclause so they can be chosen per PMD (family).					
SuggestedRemedy					
The decision timing offsets to be used in TDP assurance (60.8.9.4) are +0.x UI. Debate x. Suggestions for this clause, 0.08 or 0.10.					
Proposed Response		Response Status	O		

CI 60	SC 60.8	P 232	L 31	# 888	
Tom Murphy		Infineon			
Comment Type	T	Comment Status	D		
The majority of BiDi devices use a pigtail construction. Hence, a patch cord is not needed for this measurement					
SuggestedRemedy					
All optical measurements shall be made through a short patch cable or pigtail, between 0.5 and 5 m in length					
Proposed Response		Response Status	O		

CI 60	SC 60.8.1.1	P 232	L 44	# 523	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
It makes it easier to write the PICS if there is no more than one "shall" in any statement of requirement. There's one on line 41.					
SuggestedRemedy					
Each frame has ...					
Proposed Response		Response Status	O		

CI 60	SC 60.8.1.1	P 232	L 44	# 859	
Thatcher, Jonathan		World Wide Packets			
Comment Type	T	Comment Status	D		
The test pattern is repeated...					
SuggestedRemedy					
Add "continuously repeated" after "frames"					
Proposed Response		Response Status	O		

CI 60	SC 60.8.1.1	P 233	L 1	# 522	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
Too Many Capitals					
SuggestedRemedy					
interframe gap					
Proposed Response		Response Status	O		

CI 60	SC 60.8.1.1	P 233	L 1	# 521	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
Spell out an acronym which is new to the PMD clauses					
SuggestedRemedy					
... after the frame check sequence (FCS) has ...					
Proposed Response		Response Status	O		

CI 60	SC 60.8.10	P 239	L 44	# 537	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
Test signal for 100BASE-X will have some deliberate BLW and jitter.					
SuggestedRemedy					
"... and RIN (but see below). The ..." On p240 line 4, add "This causes some jitter in the test signal, which is acceptable."					
Proposed Response		Response Status	O		

CI 60	SC 60.8.11	P 240	L 7	# 289	
Radcliffe, Jerry		Hatteras Networks			
Comment Type	T	Comment Status	D		
This is the section of hte test methodology for stressed receiver sensitivity. Other comments were made to remove this requirement from the receivers. If this is accepted the test section needs to be removed.					
SuggestedRemedy					
Remove Clause 60.8.11 if it was agreed to eliminate the requirement for this test.					
Proposed Response		Response Status	O		

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Cl 60	SC 60.8.11	P 240	L 9	# 539
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
This very long subclause needs a sentence of introduction.				
SuggestedRemedy				
New first sentence:				
The stressed receiver conformance test is intended to screen against receivers with poor frequency response or timing characteristics which could cause errors when combined with a distorted but compliant signal at TP3. Modal (MMF) or chromatic (SMF) dispersion can cause distortion.				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.1	P 240	L 24	# 273
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Make Clause 60 self-contained. Better to copy figure to Clause 60 rather than having a cross-reference to Clause 52.				
SuggestedRemedy				
Copy Figure 52-10 to Clause 60.				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.1	P 240	L 27	# 540
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
60.y.y				
SuggestedRemedy				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.1	P 240	L 33	# 274
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Remove text that has to do with MMF.				
SuggestedRemedy				
Remove the following text: "and the transversal filter called out to emulate multimode fiber"				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.1	P 240	L 49	# 275
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Reference test pattern defined in Clause 60.8.1				
SuggestedRemedy				
Replace the text: "Actual patterns for testing the receiver are specified in the appropriate clause." with: "The pattern for testing the receiver is specified in Clause 60.8.1."				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.1	P 241	L 15	# 276
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
This comment is valid for Line 15 and Line 17				
Make Clause 60 self-contained. Better to copy figure to Clause 60 rather than having a cross-reference to Clause 52.				
SuggestedRemedy				
Copy Figure 52-10 to Clause 60.				
Proposed Response		Response Status	O	

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Cl 60	SC 60.8.11.2	P 241	L 40	# 555
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
60.n.m.1				
SuggestedRemedy				
60.8.11.1				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 40	# 277
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Make cross reference to 60.8.11.1				
SuggestedRemedy				
60.m.n.1 should be 60.8.11.1				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 41	# 556
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Does "In any case, a pattern shorter than PRBS10 is not recommended." apply to short-block-coded PMDs?				
SuggestedRemedy				
?				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 43	# 557
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
Typos and capitalisation				
SuggestedRemedy				
extinction ratio transmitter.				
, the extinction ratio may				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 44	# 278
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Two .s				
SuggestedRemedy				
Remove '.'				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 47	# 558
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Clarification				
SuggestedRemedy				
Extend sentence ", although for the purposes of this clause, OMA is to be measured with a different pattern; AN and OMA are not likely to be equal."				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 47	# 279
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Change cross-reference 52.9.5 to 60.8.5				
SuggestedRemedy				
Change cross-reference 52.9.5 to 60.8.5				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.11.2	P 241	L 48	# 562
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Bullet 5 is far too long				
SuggestedRemedy				
Wordsmithing suggestions welcome.				
Proposed Response		Response Status	O	

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Cl 60	SC 60.8.11.2	P 242	L 10	# 280
Jonsson, Ulf		Ericsson AB		
Comment Type E	Comment Status D			
Change equation number				
SuggestedRemedy				
Change (52-1) to (60-2)				
Proposed Response	Response Status O			

Cl 60	SC 60.8.11.2	P 242	L 14	# 563
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Figure 60-n				
SuggestedRemedy				
60-4				
Proposed Response	Response Status O			

Cl 60	SC 60.8.11.2	P 242	L 14	# 282
Jonsson, Ulf		Ericsson AB		
Comment Type E	Comment Status D			
Make cross-reference				
SuggestedRemedy				
Figure 60-n should be Figure 60-4				
Proposed Response	Response Status O			

Cl 60	SC 60.8.11.2	P 242	L 7	# 561
Dawe, Piers		Agilent		
Comment Type E	Comment Status D			
Wrong equation label				
SuggestedRemedy				
Option 1 Refer to and label equation in clause 60 series				
Option 2 Replace "Equation (52 -1)" with "the equation: -"				
Proposed Response	Response Status O			

Cl 60	SC 60.8.11.2	P 242	L 7	# 281
Jonsson, Ulf		Ericsson AB		
Comment Type E	Comment Status D			
Change equation reference				
SuggestedRemedy				
Change (52-1) to (60-2)				
Proposed Response	Response Status O			

Cl 60	SC 60.8.11.2	P 243	L 10	# 862
Thatcher, Jonathan		World Wide Packets		
Comment Type T	Comment Status D			
Text cut off.				
This entire subclause should be referenced				
SuggestedRemedy				
Remove and reference C52. At least fix text.				
Proposed Response	Response Status O			

Cl 60	SC 60.8.11.2	P 243	L 3	# 283
Jonsson, Ulf		Ericsson AB		
Comment Type E	Comment Status D			
Figure 60-n is Figure 60-4				
SuggestedRemedy				
Make cross-reference to Figure 60-4				
Proposed Response	Response Status O			

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CI 60	SC 60.8.2	P 233	L 24	# 524	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
"The wavelength and spectral width (RMS) shall be measured ..." isn't really what we mean. We mean that they should be assured to meet the measurements, were they to be carried out.					
<i>SuggestedRemedy</i>					
"The wavelength and spectral width (RMS) shall be assured in relation to measurements ... Further wordsmithing welcome!					
Proposed Response		Response Status	O		

CI 60	SC 60.8.4	P 233	L 36	# 525	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
"The extinction ratio is measured under fully modulated conditions with worst-case reflections." First, I never considered any partly modulated condition, we shouldn't even suggest the idea. Second, for DFB lasers the reflections are a bad idea for extinction ratio measurements, adding uncertainty to the measurement. Not so sure about multi-longitudinal-mode lasers.					
<i>SuggestedRemedy</i>					
Delete the sentence.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.5	P 233	L 48	# 858	
Thatcher, Jonathan		World Wide Packets			
Comment Type	T	Comment Status	D		
Should we specify the BT filter specification here?					
<i>SuggestedRemedy</i>					
1/10th the value used in C38; 1/100th the value used in C52.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.5	P 233	L 53	# 526	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
We want to make this text as applicable as possible over EFM so we don't have to proliferate it.					
<i>SuggestedRemedy</i>					
Change "idle pattern described above" to simply "idle pattern"					
Proposed Response		Response Status	O		

CI 60	SC 60.8.5	P 234	L 17	# 528	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
Which fig. 60-y?					
<i>SuggestedRemedy</i>					
Proposed Response		Response Status	O		

CI 60	SC 60.8.5	P 234	L 2	# 246	
Jonsson, Ulif		Ericsson AB			
Comment Type	E	Comment Status	D		
Missing space.					
<i>SuggestedRemedy</i>					
Add space after "1"					
Proposed Response		Response Status	O		

CI 60	SC 60.8.5	P 234	L 3	# 527	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
The similarity (but not congruence) to clause 52 OMA could cause confusion.					
<i>SuggestedRemedy</i>					
Change "interval, 1 UI" to "interval, here 1 UI" on lines 3 and 5					
Proposed Response		Response Status	O		

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CI 60	SC 60.8.5	P 234	L 4	# 247
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Type				
SuggestedRemedy				
"ower" shall be "power"				
Proposed Response		Response Status	O	

CI 60	SC 60.8.5	P 234	L 4	# 248
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Missing space				
SuggestedRemedy				
Add space after "...20%"				
Proposed Response		Response Status	O	

CI 60	SC 60.8.6	P 234	L 19	# 266
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Add information on how to calculate Receive OMA based on Rx sensitivity and ER				
SuggestedRemedy				
Add the following formula:				
$OMA \sim 2 * Rx_sensitivity * ((ER-1)/(ER+1))$				
Proposed Response		Response Status	O	

CI 60	SC 60.8.6	P 234	L 29	# 529
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Type!				
SuggestedRemedy				
OMA = P1 - P0 not vice versa!				
Proposed Response		Response Status	O	

CI 60	SC 60.8.6	P 234	L 29	# 249
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
All numbers in the equations should be in subscript				
SuggestedRemedy				
Change all numbers in the equations to be in subscript				
Proposed Response		Response Status	O	

CI 60	SC 60.8.6	P 234	L 31	# 252
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
This comment is valid for Line 31 and Line 40.				
Change mW to Watts.				
SuggestedRemedy				
Change mW to Watts.				
Proposed Response		Response Status	O	

CI 60	SC 60.8.6	P 234	L 44	# 250
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
The numbers in P0 and P1 should be in subscript.				
SuggestedRemedy				
Change the numbers in P0 and P1 to be in subscript.				
Proposed Response		Response Status	O	

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CI 60	SC 60.8.6	P 234	L 45	# 253
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Is the following sentence applicable to the Clause 100M PMDs?				
"For some PMD types, e.g. 10GBASE, different patterns leading to different values of P1 and P0 are used for OMA on the one hand and extinction ratio on the other hand".				
SuggestedRemedy				
Remove the sentence				
Proposed Response				
Response Status O				
CI 60	SC 60.8.6	P 234	L 46	# 251
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
The numbers in P0 and P1 should be in subscript.				
SuggestedRemedy				
Change the numbers in P0 and P1 to be in subscript.				
Proposed Response				
Response Status O				
CI 60	SC 60.8.7	P 235	L 5	# 254
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
We don't need to specify RIN for 100M. A RIN test is not necessary since it's covered by the TDP measurement.				
SuggestedRemedy				
Remove Clause 60.8.7				
Proposed Response				
Response Status O				
CI 60	SC 60.8.7.1	P 235	L 14	# 255
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Add figure				
SuggestedRemedy				
Add figure similar to Clause 52 showing the test arrangement.				
Proposed Response				
Response Status O				

CI 60	SC 60.8.7.2	P 236	L 8	# 560
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Wrong equation label				
SuggestedRemedy				
Option 1 Refer to and label equation in clause 60 series				
Option 2 Replace "Equation (52 -1)" with "the equation:-"				
Proposed Response	Response Status O			

CI 60	SC 60.8.7.3	P 236	L 11	# 257
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Add equation number in order to be able to cross-reference it				
SuggestedRemedy				
Add equation number (60-1)				
Proposed Response	Response Status O			

CI 60	SC 60.8.7.3	P 236	L 18	# 259
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Remove space				
SuggestedRemedy				
Change "block ing" to "blocking"				
Proposed Response	Response Status O			

CI 60	SC 60.8.7.3	P 236	L 21	# 258
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Sentence only valid for MMF components and thus is not applicable to the Clause 60 PMDs as they only specify SMF.				
SuggestedRemedy				
Remove sentence.				
Proposed Response	Response Status O			

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CI 60	SC 60.8.7.3	P 236	L 8	# 256	
Jonsson, Ulf		Ericsson AB			
Comment Type	E	Comment Status	D		
Incorrect equation reference.					
<i>SuggestedRemedy</i>					
Change "Equation (52-1)" to "Equation (60-1)"					
Proposed Response		Response Status	O		

CI 60	SC 60.8.8	P 236	L 34	# 260	
Jonsson, Ulf		Ericsson AB			
Comment Type	T	Comment Status	D		
We need to cover existing components which usually specifies a high-frequency jitter in the range of 25 to 50 kHz.					
There are two instances in the spec where we specify the jitter corner frequency:					
1. Clause 60.8.9 (transmitted eye) - here it is used to insure that the a TRx does not pass jitter that have corner BW less than x kHz (corner mask is x kHz).					
2. Clause 60.7 (jitter budget) - Here we spec a corner freq greater than x kHz.					
With the above reasoning the 100M ad hoc has concluded that we should go for the lower value of 20 kHz.					
<i>SuggestedRemedy</i>					
"... less than or equal to 20 or 64 kHz" should be changed to "... less than or equal to 20 kHz"					
Remove editor's note.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9	P 236	L 51	# 860	
Thatcher, Jonathan		World Wide Packets			
Comment Type	T	Comment Status	D		
It would be better to put this subsection into clause 59. Then it would be clear why there exists text referring to MMF.					
<i>SuggestedRemedy</i>					
Move to C59. If not, add notes that MMF is not applicable to C60. Better to just move it and reference it.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9	P 236	L 53	# 261	
Jonsson, Ulf		Ericsson AB			
Comment Type	E	Comment Status	D		
Make Clause 60 self-contained. Better to copy figure to Clause 60 rather than having a cross-reference to Clause 52.					
<i>SuggestedRemedy</i>					
Copy Figure 52-12 to Clause 60.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9	P 236	L 53	# 530	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
Continuing attempts to improve readability. The suggested remedy is a rearrangement of the title and first paragraph.					
<i>SuggestedRemedy</i>					
60.8.9 Transmitter and dispersion penalty (TDP) measurement					
The transmitter and dispersion penalty (TDP) measurement tests for transmitter impairments with chromatic effects for a transmitter to be used with single mode fiber, and for transmitter impairments with modal (not chromatic) dispersion effects for a transmitter to be used with multimode fiber. The procedure tests for pattern dependent effects (but see below). For 100BASE-LX and 100BASE-BX, a standardised element of pattern dependent baseline wander is included in the reference channel.					
Transmitter and dispersion penalty may be measured with apparatus similar to Figure 52 - 12, consisting of a reference transmitter, the transmitter under test, a controlled optical reflection, an optical attenuator, a test fiber, and a reference receiver system containing a reference receiver front end (optical to electrical converter), a transversal filter to emulate multimode fiber, if appropriate, and a bit-error rate tester. All BER and sensitivity measurements are made with the test patterns specified for the PMD type.					
Proposed Response		Response Status	O		

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CI 60	SC 60.8.9	P 236	L 53	# 531	
Dawe, Piers		Agilent			
Comment Type	E	Comment Status	D		
Spare text					
SuggestedRemedy					
The procedure tests for pattern dependent effects (but see below). For 100BASE-LX and 100BASE-BX, a standardised element of pattern dependent baseline wander is included in the reference channel.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9	P 237	L 2932	# 262	
Jonsson, Ulf		Ericsson AB			
Comment Type	T	Comment Status	D		
Remove text that has to do with MMF.					
SuggestedRemedy					

Change to the following text:
 "fiber, and a reference receiver system containing a reference receiver front end (optical to electrical converter) and a bit-error rate tester. All BER and sensitivity measurements are made with the test patterns specified for the PMD type. This measurement tests for transmitter impairments with chromatic effects for a transmitter to be used with single mode fiber."

Proposed Response		Response Status	O		
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CI 60	SC 60.8.9	P 237	L 30	# 264	
Jonsson, Ulf		Ericsson AB			
Comment Type	E	Comment Status	D		
The test pattern is defined in 60.8.1. Make the text clearer by referencing this test pattern.					
SuggestedRemedy					
Make a reference to 60.8.1.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9	P 238	L	# 694	
Diab, Wael William		Cisco Systems			
Comment Type	TR	Comment Status	D		
TDP is the appropriate method for evaluating PMDs. Nonetheless, given the speed of these PMDs and the short-term desire to implement solutions (as expressed in the original proposal presentations), an informative that relates traditional measurement techniques to TDP may help bridge the gap.					
SuggestedRemedy					
Specify an informative correlation between the TDP measurements and the eye mask and/or the jitter numbers					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9.1	P 237	L 42	# 271	
Jonsson, Ulf		Ericsson AB			
Comment Type	E	Comment Status	D		
What does "mutatis mutandis" mean?					
SuggestedRemedy					
Change this phrase to something easier to understand.					
Proposed Response		Response Status	O		

CI 60	SC 60.8.9.1	P 237	L 45	# 532	
Dawe, Piers		Agilent			
Comment Type	T	Comment Status	D		
RIN is more of an issue than I thought when combined with high probability baseline wander.					
SuggestedRemedy					
Tighten and clarify recommendation to "RIN12OMA should be -120 dB/Hz for 100 ... - 125 for 1000..."					
Proposed Response		Response Status	O		

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Cl 60	SC 60.8.9.2	P 238	L 7	# 263
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Remove text that has to do with MMF.				
<i>SuggestedRemedy</i>				
Remove the sentence "When emulating a multimode fiber link..."				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 238	L 36	# 267
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
The optical return loss for 1400-1600 nm should be specified in the same way as for 1310 nm.				
<i>SuggestedRemedy</i>				
Add the text "See ORLT in Transmitter spec" into the optical return loss field for 1400-1600 nm.				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 238	L 36	# 533
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
confusing				
<i>SuggestedRemedy</i>				
Delete "(maximum)".				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 238	L 40	# 534
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Should reflection be at TP2 or TP3 (before or after a minimum loss)? Argument for TP2: allows for a bad connector. Argument for TP3: bad connector is not compliant, this spec is very conservative anyway.				
<i>SuggestedRemedy</i>				
Discuss (in ad hoc?)				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 239	L 1	# 268
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
-3dBe should be -3 dBm				
<i>SuggestedRemedy</i>				
Change -3dBe to -3 dBm				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 239	L 16	# 270
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Missing space				
<i>SuggestedRemedy</i>				
Change "20dB/decade" to "20 dB/decade"				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 239	L 6	# 861
Thatcher, Jonathan		World Wide Packets		
Comment Type	TR	Comment Status	D	
the BER should be less than, not greater than 10e-3.				
Also, in line 1, -3dBe ?				
<i>SuggestedRemedy</i>				
Change per comment				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.3	P 239	L 912	# 269
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Remove text that has to do with MMF.				
<i>SuggestedRemedy</i>				
Remove the paragraph starting with "For a transmitter to be used with multimode fiber..."				
Proposed Response		Response Status	O	

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Cl 60	SC 60.8.9.4	P 239	L 30	# 535
Dawe, Piers		Agilent		
Comment Type	T	Comment Status	D	
The timing offset is likely to be PMD dependent.				
SuggestedRemedy				
Change "+- 0.05 UI" to "the amount specified in e.g. 60.7." Line 53, change to "at the specified timing offsets". Line 54, delete the sentence "Higher timing offsets may be necessary."				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.4	P 239	L 31	# 272
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
Make Clause 60 self-contained. Better to copy figure to Clause 60 rather than having a cross-reference to Clause 52.				
SuggestedRemedy				
Copy Figure 52-12 to Clause 60.				
Proposed Response		Response Status	O	

Cl 60	SC 60.8.9.4	P 239	L 40	# 538
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
Here is the place to create a new subclause to explain how to obtain an approximate measure of TDP (although a standard is not expected to be a textbook nor a free consultancy service).				
SuggestedRemedy				
60.8.9.5 Approximate measures of TDP				
In practice it may be necessary to do without the clock recovery unit at 100Mb/s. [are they available?] Experimentally, timing stability at this rate may be acceptable, and the jitter due to the CRU could be accounted for by adjusting the eye mask length and the TDP decision timing offsets.				
A significant component of TDP is baseline wander. A wander of +- OMA/10 will be created by the receiver if it is not already present in the transmitted signal. Higher levels of pattern dependent penalty can be estimated from the mask margin (if necessary, by ignoring the upper and lower mask regions). The accuracy of this approach has not been established by the committee. Oscilloscope measurements at TP3 may be degraded by instrument noise.				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-1	P 226	L 18	# 230
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
The nominal wavelengths for 100BASE-BX-ONU and 100BASE-BX-OLT have been mixed up.				
SuggestedRemedy				
Change Nominal wavelength for 100BASE-BX-OLT to 1550 nm.				
Change Nominal wavelength for 100BASE-BX-ONU to 1310 nm.				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-10	P 232	L 20	# 244
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
'ps' should be 'ns' in the table.				
SuggestedRemedy				
Change 'ps' to 'ns' in two places in the table.				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-12	P 238	L 30	# 265
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Remove parts that has to do with MMF.				
SuggestedRemedy				
Remove the row "1310 nm band for MMF"				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-14	P 246	L 5	# 285
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Need to describe the fiber characteristics for 1550nm.				
SuggestedRemedy				
Ask the fiber experts how to describe SMF for 1550 nm use.				
Proposed Response		Response Status	O	

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Cl 60	SC Table 60-4	P 229	L 17	# 231
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
We don't need to specify RIN for 100M. A RIN test is not necessary since it's covered by the TDP measurement.				
<i>SuggestedRemedy</i>				
Either remove the RIN_12_OMA from the table or, if people find it helpful, make an informative recommendation that RIN_12_OMA should be less than -110 dB/Hz.				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-4	P 229	L 25	# 232
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
In the footnote, make a reference to how OMA is being calculated. This is explained in Clause 60.8.6.				
<i>SuggestedRemedy</i>				
Add the following text to the end of the footnote: " ..., see Clause 60.8.6"				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-5	P 229	L 47	# 287
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
The stressed receiver sensitivity is not appropriate for receivers operating over SMF at a 125Mbaud.				
<i>SuggestedRemedy</i>				
Remove the stressed receiver sensitivity test from Table 60-5.				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-5	P 229	L 51	# 233
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
In footnote 'a', make a reference to how OMA is being calculated. This should be explained in Clause 60.8.6.				
<i>SuggestedRemedy</i>				
Add the following text to the end of the footnote: " ..., see Clause 60.8.6"				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-6	P 230	L 29	# 235
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
TS-1000 has the traditional SONET value of 8.2 dB. However, in order to allow true low-cost components a lower value is preferred. Besides, considering the baseline wander effect of the 4B/5B code a lower value is appropriate.				
<i>SuggestedRemedy</i>				
Extinction Ratio (min) = 6 dB				
Proposed Response		Response Status	O	

Cl 60	SC Table 60-6	P 230	L 40	# 240
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
We don't need to specify RIN for 100M. A RIN test is not necessary since it's covered by the TDP measurement.				
<i>SuggestedRemedy</i>				
Either remove the RIN_12_OMA from the table or, if people find it helpful, make an informative recommendation that RIN_12_OMA should be less than -110 dB/Hz.				
Proposed Response		Response Status	O	

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CI 60	SC Table 60-6	P 230	L 46	# 236
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
In the footnote, make a reference to how OMA is being calculated. This is explained in Clause 60.8.6.				
<i>SuggestedRemedy</i>				
Add the following text to the end of the footnote:				
"..., see Clause 60.8.6"				
Proposed Response		Response Status	O	

CI 60	SC Table 60-7	P 231	L 15	# 288
Radcliffe, Jerry		Hatteras Networks		
Comment Type	T	Comment Status	D	
The stressed receiver sensitivity is not appropriate for receivers operating over SMF at a 125Mbaud.				
<i>SuggestedRemedy</i>				
Remove the stressed receiver sensitivity requirements from Table 60-7.				
Proposed Response		Response Status	O	

CI 60	SC Table 60-7	P 231	L 18	# 237
Jonsson, Ulf		Ericsson AB		
Comment Type	E	Comment Status	D	
In footnote 'a', make a reference to how OMA is being calculated. This should be explained in Clause 60.8.6.				
<i>SuggestedRemedy</i>				
Add the following text to the end of the footnote:				
"..., see Clause 60.8.6"				
Proposed Response		Response Status	O	

CI 60	SC Table 60-7	P 231	L 9	# 238
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
The power budget of 16dB for 100BASE-BX seems unnecessarily high.				
<i>SuggestedRemedy</i>				
Investigate the possibility to relax the P_ave (min) and Rx sensitivity values.				
Proposed Response		Response Status	O	

CI 60	SC Table 60-9	P 215	L 20	# 99050
Dawe, Piers		Agilent		
Comment Type	TR	Comment Status	R	
<i>D1.0 #293</i>				
As well as the minimum transmit power being be reduced, the sensitivity can be relaxed from -30 dBm, for 10 km (part of the difference is because this standard will likely define a sensitivity with the stressful test pattern, and sensitivity is pattern dependent with 4B/5B). This allows more budget for the WDM components (hidden from the standard behind the MDI). This is still a "mean power parallelogram" mean power oriented spec but I have expressed the minimum power in OMA also, like 100BASE-LX. Because the link attenuation is expected to differ at 1310 and 1550 nm, either the transmit power or sensitivity should differ for the two 100BASE-BX PMDs. Here I suggest making the sensitivities differ.				

SuggestedRemedy
Pave -25 dBm at 6 dB extinction ratio = -24.2 dB OMA or 3.79 uW.

Proposed Response *Response Status* U
REJECT.

See comment 289

CI 60	SC Table 60-9	P 232	L 6	# 242
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Consider relaxation of the power budget.				
<i>SuggestedRemedy</i>				
10 dB?				
Proposed Response		Response Status	O	

CI 60	SC Table 60-9	P 232	L 8	# 243
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
Set operating distance for 100BASE-BX-ONU to 10km.				
<i>SuggestedRemedy</i>				
Operating distance = 10000 m				
Proposed Response		Response Status	O	

P802.3ah Draft 1.0 Comments

Cl 60	SC Table 60-9	P 232	L 9	# 245
Jonsson, Ulf		Ericsson AB		
Comment Type	T	Comment Status	D	
We should strive to specify a common cable plant for all EFM P2P SMF PMDs.				
<i>SuggestedRemedy</i>				
Channel insertion loss (100BASE-BX-OLT) = 6 dB				
Channel insertion loss (100BASE-BX-ONU) = 7 dB				
Proposed Response		Response Status	O	

Cl 61	SC	P 249	L 15	# 642
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Spelling error "aggregation"				
(also on line 16)				
<i>SuggestedRemedy</i>				
Should be "aggregation"				
Proposed Response		Response Status	O	

Cl 61	SC 61.0	P 249	L 16	# 429
Cravens, George		Mindspeed		
Comment Type	E	Comment Status	D	
Under Abbreviations, "Aggregation" is misspelled.				
<i>SuggestedRemedy</i>				
Change "Aggregation" to "Aggregation"				
Proposed Response		Response Status	O	

Cl 61	SC 61.1	P 250	L 1	# 422
Tzannes, Marcos		Aware		
Comment Type	TR	Comment Status	D	
2-PASS-TL and 2-BASE-TL address two separate market segments. 2-BASE-TL provides operation without underlying POTS service and therefore addresses the business market. 2-PASS-TL provides operation with underlying POTS service and therefore addresses the residential market.				
<i>SuggestedRemedy</i>				
The long-reach copper PHY EFM standard should specify two port types:				
- Port type #1: 2-BASE-TL, long reach EFM for business customers (without underlying POTS) based on SHDSL.				
- Port type #2: 2-PASS-TL, long reach EFM for residential customers (with underlying POTS) based on ADSL2.				
Proposed Response		Response Status	O	

Cl 61	SC 61.1.4.1	P 251	L 36	# 63
Marris, Arthur		Cadence Design Foun		
Comment Type	E	Comment Status	D	
Change the last sentence of the second paragraph to read "The MAC-PHY rate matching function adjusts the inter packet gap so that the net data rate"				
<i>SuggestedRemedy</i>				
as above				
Proposed Response		Response Status	O	

Cl 61	SC 61.1.4.1	P 251	L 42	# 64
Marris, Arthur		Cadence Design Foun		
Comment Type	E	Comment Status	D	
MAC_PHY should be MAC-PHY				
<i>SuggestedRemedy</i>				
Change to MAC-PHY				
Proposed Response		Response Status	O	

P802.3ah Draft 1.0 Comments

CI 61	SC 61.1.4.1	P 251	L 47	# 926
Tom Mathey		Independent		
Comment Type	E	Comment Status	D	
Reword text for "collision" as "collision" has little meaning in full-duplex.				
<i>SuggestedRemedy</i>				
Change from "across the gamma interface to avoida collision on the MLI interface if required." to "across the gamma interface to avoid simultaneous transfer of transmit and receive frames if required".				
Proposed Response		Response Status	O	
CI 61	SC 61.1.4.1.1	P 252	L 18	# 927
Tom Mathey		Independent		
Comment Type	E	Comment Status	D	
If the MAC is not able to handle simultaneous transfer of transmit and receive frames while in half-duplex, then we may need to specify a minimum time from falling edge of transmit to rising edge of receive. For example, legacy MACs which share a CRC circuit may need some recovery time.				
<i>SuggestedRemedy</i>				
Specify, a number equal to a minimum IPG or TBD is suggested for now.				
Proposed Response		Response Status	O	
CI 61	SC 61.1.4.1.1	P 252	L 18	# 643
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Needs to include reference to defining section for MAC PHY rate matching.				
<i>SuggestedRemedy</i>				
Add new sentence at end of final paragraph:				
The definition of the MAC PHY rate matching specification is presented in subclause 61.2.1				
Proposed Response		Response Status	O	

CI 61	SC 61.1.4.1.1	P 252	L 20	# 66
Marris, Arthur		Cadence Design Foun		
Comment Type	E	Comment Status	D	
Add "The definition of MAC-PHY rate matching is presented in subclause 61.2.1."				
<i>SuggestedRemedy</i>				
As above.				
Proposed Response		Response Status	O	

CI 61	SC 61.1.4.1.1	P 252	L 5	# 65
Marris, Arthur		Cadence Design Foun		
Comment Type	E	Comment Status	D	
tx_en should be upper case				
<i>SuggestedRemedy</i>				
Change "tx_en" to "TX_EN"				
Proposed Response		Response Status	O	

CI 61	SC 61.1.4.2	P 252	L 41	# 316
Barnea, Eyal		Metalink		
Comment Type	E	Comment Status	D	
Second sentence of the first paragraph adds no relevant information.				
<i>SuggestedRemedy</i>				
delete the sentence				
Proposed Response		Response Status	O	

CI 61	SC 61.1.5.6	P 253	L 34	# 698
Diab, Wael William		Cisco Systems		
Comment Type	E	Comment Status	D	
The subclause simply has a pointer to another subclause with no other information.				
<i>SuggestedRemedy</i>				
Remove the pointer/section and/or add text to differentiate between the 2 subclauses				
Proposed Response		Response Status	O	

P802.3ah Draft 1.0 Comments

Cl 61	SC 61.2	P	L	# 817
O'Mahony, Barry		Intel Corp.		
Comment Type	T	Comment Status	D	
Framing and encapsulation method using PTM TPS-TC does not meet constant overhead and robustness requirements.				
SuggestedRemedy				
Adopt new TPS-TC as described in accompanying presentation.				
Proposed Response		Response Status	O	

Cl 61	SC 61.2.1.2.1	P 253	L 34	# 699
Diab, Wael William		Cisco Systems		
Comment Type	E	Comment Status	D	
The table reference has no introduction				
SuggestedRemedy				
Please add a sentence introducing the table and describing its purpose				
Proposed Response		Response Status	O	

Cl 61	SC 61.2.1.2.2	P 253	L 40	# 644
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
EFM copper PHY management is defined using Clause 45 access.				
SuggestedRemedy				
Change subclause to read:				
The management interface has pervasive connections to all functions. Operation of the management control lines MDC and MDIO is specified in Clauses 22 and 45, and requirements for managed objects inside the PCS and PMA are specified in Clause 30.				
Proposed Response		Response Status	O	

Cl 61	SC 61.2.1.3	P 254	L 1	# 67
Marris, Arthur		Cadence Design Foun		
Comment Type	T	Comment Status	D	
A comment was submitted and approved in New Orleans against draft 1.0 to insert state diagrams here. This comment has not been acted on.				
SuggestedRemedy				
Please insert the state diagrams as agreed during comment resolution in New Orleans.				
Proposed Response		Response Status	O	

Cl 61	SC 61.2.1.3	P 254	L 1	# 68
Marris, Arthur		Cadence Design Foun		
Comment Type	T	Comment Status	D	
Most deployments with exposed MAC-PHY interfaces are likely to use SMII or RMII. This is because low cost ethernet switch silicon will be used to aggregate links from multiple subscribers in the CO. These chips use SMII and RMII which in order to save having a separate collision signal infer collision from TX_EN and CRS. A minor modification to the MAC-PHY rate matching state diagrams is needed to support RMII and SMII.				
SuggestedRemedy				
I have supplied separately a document with the new state diagrams.				
Proposed Response		Response Status	O	

Cl 61	SC 61.2.2	P 255	L 10	# 435
Cravens, George		Mindspeed		
Comment Type	E	Comment Status	D	
Figure 61-2 shows "PHY Loop Aggregation". This should be "PHY PMI Aggregation" to match the text.				
SuggestedRemedy				
Revise Figure 61-2, changing the text "PHY Loop Aggregation" to "PHY PMI Aggregation".				
Proposed Response		Response Status	O	

<i>Cl</i> 61	<i>SC</i> 61.2.2.2.2	<i>P</i> 255	<i>L</i> 32	<i>#</i> 219	
Squire, Matt		Hatteras Networks			
<i>Comment Type</i>	<i>TR</i>	<i>Comment Status</i>	<i>D</i>		
Current loop aggregation doesn't match accepted proposal of last meeting.					
<i>SuggestedRemedy</i>					
See PDF and FM file submitted to editor.					
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>		

<i>Cl</i> 61	<i>SC</i> 61.2.2.3	<i>P</i> 257	<i>L</i> 5	<i>#</i> 645	
Barrass, Hugh		Cisco			
<i>Comment Type</i>	<i>TR</i>	<i>Comment Status</i>	<i>D</i>		
(approved) Comment on previous draft has not been actioned.					
The maximum latency difference between aggregated loops must be specified.					
<i>SuggestedRemedy</i>					
Same remedy as previously accepted:					
The PMD control of aggregated links must ensure that the maximum latency difference between any two aggregated links corresponds to no more than 64,000 bit times. This must be achieved by adjusting the bit rate, error correction and interleaving functions in the PMA/PMD of each link. Note that the burst noise protection offered by the error correction and interleaving functions is directly proportional to the latency, therefore it is logical that multiple aggregated links in the same environment should be optimized to have the similar latencies.					

<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>		
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<i>Cl</i> 61	<i>SC</i> 61.2.2.3.1	<i>P</i> 256	<i>L</i> 1	<i>#</i> 647	
Barrass, Hugh		Cisco			
<i>Comment Type</i>	<i>E</i>	<i>Comment Status</i>	<i>D</i>		
This section (which is modified by previous comment) does not belong in this subclause.					
<i>SuggestedRemedy</i>					
Move last paragraph of this subclause to subclause 61.2.2.3 PHY PMI aggregation receive function.					
<i>Proposed Response</i>		<i>Response Status</i>	<i>O</i>		

<i>Cl</i> 61	<i>SC</i> 61.2.2.3.1	<i>P</i> 256	<i>L</i> 32	<i>#</i> 646	
Barrass, Hugh		Cisco			
<i>Comment Type</i>	<i>T</i>	<i>Comment Status</i>	<i>D</i>		
Error detecting rules are not complete.					
Entire section needs to be rewritten - note that this is independant of header and functional changes agreed at last meeting					

<i>SuggestedRemedy</i>					
Change subclause to the following:					
61.2.2.3.1 Error-detecting rules					
The receive TC function passes all frames to the PAF across the gamma interface. If the TC detects an error in the encapsulation, it asserts RxErr during the frame transmission on the gamma interface.					
For each PMA (gamma interface), the per PMA buffering mechanism must discard the fragment if any of the following conditions occur:					
RxError is asserted during the reception of the fragment across the gamma interface. The fragment is too small - less than minFragmentSize as defined TBD.					
The fragment is too large - more than maxFragmentSize as defined TBD.					
The fragment would cause the per PMA received buffer to overflow.					
The PAF must then assert one of the per PMA error flags as appropriate:					
TC_PAF_RxErrorReceived; TC_PAF_FragmentTooSmall; TC_PAF_FragmentTooLarge; TC_PAF_Overflow.					

Additionally the packet assembly function must detect the following errors:					
If the nextFragmentSequenceNumber is less than the expectedFragmentSequenceNumber (or greater than expectedFragmentSequenceNumber + 2^11) then assert PAF_BadFragmentReceived.					
If all active PMA buffers are non empty and nextFragmentSequenceNumber is greater than expectedFragmentSequenceNumber then assert PAF_LostFragment, set expectedFragmentSequenceNumber equal to nextFragmentSequenceNumber.					
If any PMA buffer is non empty for 64k bit times (for that PMA/PMD) and no fragment is transferred then assert PAF_LostFragment, set expectedFragmentSequenceNumber equal to nextFragmentSequenceNumber.					
Having detected one of the above errors, the packet assembly function must act as follows:					
If the packet assembly function was mid-frame (i.e. waiting for an End of Packet), assert RxError signal on MII interface, abort frame transfer and flush PMA buffers until the next Start of Packet is received.					
If the packet assembly function was between frames (i.e. waiting for a Start of Packet),					

assert RxError signal on the MII interface, send 64 byte garbage frame with forced FCS error to MAC, flush PMA buffers until the next Start of Packet is received.

Proposed Response Response Status O

CI 61	SC 61.2.2.3.1	P256	L50	# 431
Cravens, George		Mindspeed		

Comment Type TR Comment Status D

At line 47, the clause states that (paraphrased): the PAF shall discard MAC frames with fragment errors. However, at line 50, the PAF is required to send a "garbage frame":

"If any PHY does not provide a non-errored fragment with the current MAC frame count then the PAF shall send 64 byte garbage frame to the MAC and discard all non-errored fragments with the current MAC Frame counter. In this case the PAF shall construct a 64 byte MAC frame with an FCS/CRC error and send this frame to the MAC-PHY Rate Matching function."

This is inconsistent with the previous two requirements (than only non-errored frames be passed up to the MAC layer).

SuggestedRemedy

Delete the requirement for generation of "garbage frames", and require that any time a frame is dropped due to errors, the FragmentError.indicate primitive (61.2.2.4.2, pg. 257, Line 26) will be used to allow the upper layer to count dropped frames.

Proposed Response Response Status O

CI 61	SC 61.2.2.3.1	P257	L5	# 976
Vladimir Oksman		Broadcom		

Comment Type T Comment Status D

There also should be specified how long should be the waiting time after which the receiver makes a decision that some fragments of the frame are lost. Otherwise, the system may get suspended.

SuggestedRemedy

Add a value or an editor note to define this parameters in the future.

Proposed Response Response Status O

CI 61	SC 61.2.2.4.2	P257	L26	# 648
Barrass, Hugh		Cisco		

Comment Type T Comment Status D

The error signal specified here is not relevant as there is no specified interface between the PAF and the MAC-PHY rate matching function.

However, a number of error indicators are needed by the management entity to maintain required counters.

SuggestedRemedy

Replace paragraph with the following:

TC_PAF_RxErrorReceived: (for each PMA, gamma interface) this primitive is asserted to indicate that a fragment has been received across the gamma interface with RxErr asserted. The errored fragment has been discarded.

TC_PAF_FragmentTooSmall: (for each PMA, gamma interface) this primitive is asserted to indicate that a fragment has been received across the gamma interface which was smaller than the minFragmentSize defined. The errored fragment has been discarded.

TC_PAF_FragmentTooLarge: (for each PMA, gamma interface) this primitive is asserted to indicate that a fragment has been received across the gamma interface which was larger than the maxFragmentSize defined. The errored fragment has been discarded.

TC_PAF_Overflow: (for each PMA, gamma interface) this primitive is asserted to indicate that a fragment has been received across the gamma interface which would have caused the receive buffer to overflow. The errored fragment has been discarded.

PAF_BadFragmentReceived: this primitive is asserted to indicate that a fragment has been received which does not fit into the sequence expected by the frame assembly function. The errored fragment has been discarded and the frame buffer flushed to the next valid frame start.

PAF_LostFragment: this primitive is asserted to indicate that a fragment expected according to sequence has not been received by the frame assembly function. The missing fragment has been skipped and the frame buffer flushed to the next valid frame start.

Proposed Response Response Status O

P802.3ah Draft 1.0 Comments

CI 61	SC 61.2.2.4.3	P257	L	# 928	
Tom Mathey		Independent			
Comment Type	T	Comment Status	D		
The use of multiple MII's is not well described. Also on p258, line 37. For multiple MIIs, we would need clause 45 registers and bits to describe how many, provide ability bits, provide selection or enable/disable bits, provide a description of how a sub-layer would map to or choose a particular MII and MAC for both transmit and receive paths: how to map a given MII and its PCS to specific PMD's, etc.					
<i>SuggestedRemedy</i> Nuke.					
Proposed Response		Response Status	O		

CI 61	SC 61.2.2.6.2	P259	L40	# 432	
Cravens, George		Mindspeed			
Comment Type	E	Comment Status	D		
MACFrameLen parameter should refer to the maximum allowable frame length (from another section of the standard) rather than using a fixed number since the maximum frame length may change in the future (for example: there is talk of stacked VLAN tags in 802.1 and other places).					
<i>SuggestedRemedy</i> Change 1522 to the proper parameter (and clause reference) for maximum frame length.					
Proposed Response		Response Status	O		

CI 61	SC 61.2.3.1.1	P264	L1	# 649	
Barrass, Hugh		Cisco			
Comment Type	T	Comment Status	D		
Signal PCS_link_state is required by the PMA Aggregation Function. This signal must cross the gamma interface from the TC to the PMT to indicate that the link is active for the PAF.					
<i>SuggestedRemedy</i> Add paragraph: An additional signal is required which would be represented in the referenced document section H.3.1.4. signal: PCS_link_state size: 1 bit direction: TC -> PTM entity description: control signal asserted when link is active and framing has synchronized according to the definition in subclause 61.2.3.2.					
Proposed Response		Response Status	O		

CI 61	SC 61.2.3.1.1	P264	L4	# 650	
Barrass, Hugh		Cisco			
Comment Type	T	Comment Status	D		
Gamma interface is not completely defined, some additional definition is allowed to make the definition acceptable. <i>SuggestedRemedy</i> Add paragraphs: The TC shall assert Tx_Enbl when it has sufficient space for an entire (max length) frame to be transferred across the gamma interface at the net rate of the MII interface. The TC must keep Tx_Enbl signal asserted until the last byte of the frame is transferred across the gamma interface. If Tx_Enbl remains asserted after the last byte of the frame then another frame may be transferred across the gamma interface after the inter packet gap. The TC shall assert Rx_Enbl when it has an entire frame ready to be transferred (or enough of the frame that it can guarantee that the entire frame will be ready for transfer) across the gamma interface at the net rate of the MII interface. The TC must keep Rx_Enbl signal asserted until the last byte of the frame is transferred across the gamma interface. If Rx_Enbl is deasserted before the end of the frame then this must be treated as a receive abort.					
Proposed Response		Response Status	O		

CI 61	SC 61.2.3.1.1	P264	L4	# 651
Barrass, Hugh	Cisco			
Comment Type	TR	Comment Status	D	
Accepted comment 644 has not been implemented. The signals required for remote access to PAF registers have not been specified.				
SuggestedRemedy				
Add paragraph:				
Additional signals are required for OAM flow (which would be relevant to referenced document section H.3.1.4). These signals allow access from the TC to the PTM entity (PCS) for reading and writing PHY loop aggregation registers. The following definitions should be tabulated:				
signal: write_remote_aggregation_reg				
size: 1 bit				
direction: TC -> PTM entity				
description: control signal to write PMD_aggregation_register. Active (min) 1 octet clock cycle.				
signal: write_remote_discovery_reg				
size: 1 bit				
direction: TC -> PTM entity				
description: control signal to write remote_discovery_register. Active (min) 1 octet clock cycle.				
signal: clear_remote_discovery_reg				
size: 1 bit				
direction: TC -> PTM entity				
description: control signal to clear remote_discovery_register. Active (min) 1 octet clock cycle.				
signal: read_remote_aggregation_reg				
size: 1 bit				
direction: TC -> PTM entity				
description: control signal to read PMD_aggregation_register. Active (min) 1 octet clock cycle.				
signal: read_remote_discovery_reg				
size: 1 bit				
direction: TC -> PTM entity				
description: control signal to read remote_discovery_register. Active (min) 1 octet clock cycle.				
signal: remote_write_data_bus				
size: 48 bit				
direction: TC -> PTM entity				
description: data bus for writing to PMD loop aggregation registers. Valid during octet clock cycle when write control is asserted.				
signal: remote_read_data_bus				

size: 48 bit
direction: PTM entity -> TC
description: data bus for the results of a read or atomic write function. Valid during octet clock cycle when Acknowledge_read_write or NAcknowledge_read_write is asserted.

signal: Acknowledge_read_write
size: 1 bit
direction: PTM entity -> TC
description: control signal responding (positively) to read or write. Active 1 octet clock cycle.

signal: NAcknowledge_read_write
size: 1 bit
direction: PTM entity -> TC
description: control signal responding (negatively) to read or write. Active 1 octet clock cycle.

Proposed Response Response Status O

CI 61	SC 61.2.3.1.2	P264	L22	# 652
Barrass, Hugh	Cisco			
Comment Type	T	Comment Status	D	
Link synchronization state must be passed upwards across the alpha/beta interface.				
SuggestedRemedy				
Add paragraph:				
The following signals must be passed across the alpha/beta interface to allow the TC to understand the current link status of the PMA.				
signal: PMA_receive_synchronized				
size: 1 bit				
direction: PMA -> TC				
description: signal indicates that the receive function is synchronized and valid data is being passed upwards across the alpha/beta interface.				
Proposed Response Response Status O				

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CI 61	SC 61.2.3.1.2	P264	L22	# 653
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Receive error signal must be passed upwards across the alpha/beta interface.				
SuggestedRemedy				
Add paragraph:				
signal: PMA_FEC_uncorrected_error				
size: 1 bit				
direction: PMA -> TC				
description: Where appropriate, this signal indicates that the Forward Error Correction function (if present) in the PMA has detected, but not corrected an error or errors in an FEC frame. This signal must be asserted for the duration of the FEC frame in which uncorrectable errors were detected.				
Proposed Response		Response Status	O	
CI 61	SC 61.2.3.1.2	P264	L5	# 977
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
The alpha/beta interface is already defined in Clause 62.				
SuggestedRemedy				
Either change the reference to the appropriate section in 62 or (even better) move the definition from 62 and place there a reference.				
Proposed Response		Response Status	O	
CI 61	SC Fig. 61-3	P259	L8	# 430
Cravens, George		Mindspeed		
Comment Type	TR	Comment Status	D	
The PMI Aggregation section (Starting with Subclause 61.2.2.1, pg. 255), does not reflect the changes voted on during the last interim meeting (New Orleans). At the interim meeting, it was decided to incorporate the changes proposed in Squire_copper_1_0902.pdf into the next (this) draft. These changes include a single sequence number.				
SuggestedRemedy				
Revise the PMI Aggregation section to reflect the changes proposed in Squire_Copper_1_0902.pdf. These changes include the use of a single sequence number in the header, and the removal of the requirement to wait until there is "no backpressure" (61.2.2.2, pg. 255, line 43). While only Fig. 61-3 is called out above, the change involves multiple subclauses.				
Proposed Response		Response Status	O	

CI 61	SC Fig. 61-4	P261	L22	# 433
Cravens, George		Mindspeed		
Comment Type	E	Comment Status	D	
Change LAF to PAF to match text.				
SuggestedRemedy				
Change LAF to PAF (possibly numerous occurrences in the clause).				
Proposed Response		Response Status	O	
CI 61A	SC	P282	L	# 99012
Wei, Dong		SBC Communications,		
Comment Type	TR	Comment Status	D	D1.0 #413
The insertion of Annex 61A into the draft was never approved by either the Task Force (TF) or the Copper sub-TF. It is inappropriate for the editor to input anything that is not approved by the TF into the draft. This is a serious problem and it should not occur again.				
SuggestedRemedy				
Delete the entire clause.				
Proposed Response		Response Status	W	
PROPOSED REJECT. Pending presentation and approval by STF				
CI 61A	SC	P282	L1	# 99013
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	D1.0 #441
Irrelevant material				
SuggestedRemedy				
Exclude this clause. The material of this clause is irrelevant for the future standard. This material was never discussed and there was no agreement to include it into the draft.				
Proposed Response		Response Status	W	
PROPOSED REJECT. Pending presentation and approval by STF				

P802.3ah Draft 1.0 Comments

Cl 61A	SC	P 316	L	# 641
WEI, DONG		SBC Communications,		
Comment Type	TR	Comment Status	D	
This comment replaces Comment #413 on Draft 1.0.				
Demonstration of how to define new PSDs and how to show their spectral compatibility is beyond the scope of this standard.				
<i>SuggestedRemedy</i>				
Delete the entire clause (from Page 316 to Page 320).				
Proposed Response		Response Status	O	

Cl 61A	SC	P 316	L 1	# 311
Barnea, Eyal		Metalink		
Comment Type	T	Comment Status	D	
The content of this annex was never discussed or presented				
<i>SuggestedRemedy</i>				
Delete the annex				
Proposed Response		Response Status	O	

Cl 61A	SC 61A	P 316	L 1	# 306
Shohet, Zion		Infineon		
Comment Type	E	Comment Status	D	
This section has never been discussed in the STF.				
This section is also not included in simon_copper_1_0902.pdf, which lists all sub-clauses in the document, and which was adopted last meeting.				
<i>SuggestedRemedy</i>				
remove this section				
Proposed Response		Response Status	O	

Cl 61A	SC annex 61A	P 282	L 1	# 99014
Zion Shohet		Infineon		
Comment Type	E	Comment Status	D	
this annex should be removed. It has never been discussed, nor presented, nor agreed upon. The information within this text is not a std anywhere.				
This annex should be removed.				
<i>SuggestedRemedy</i>				

Proposed Response *Response Status* **W**
PROPOSED REJECT. Pending presentation and approval by STF

Cl 61A	SC Entire Annex	P 282	L 1	# 99015
Cook, Charles		Qwest		
Comment Type	TR	Comment Status	D	
Annex 61A shall be completely removed for the following reasons:				
- Annex 61A is based upon North American spectrum management requirement (draft T1.417 issue2) and may not be applicable to other regions;				
- Annex A of draft T1.417 issue2, where the section "Spectral compatibility guideline" is from, provides a tool for the PSD definition in new technology development to check spectrum compatibility. And there is no need to include the partial portion of such tool in a final standard of a new technology. Additionally, there is much information needed to assure the proper use of Annex A of draft T1.417 issue2, partial quotation of draft T1.417 issue2 could potentially be misleading;				
- The example in Annex 61A is irrelevant to the final IEEE 802.3ah standard and potentially misleading.				

SuggestedRemedy

Completely remove Annex 61A and submit it as a contribution so that it can be deliberated by the committee. Only material that has been agreed upon should be included in drafts of the document.

Proposed Response *Response Status* **W**
PROPOSED REJECT. Pending presentation and approval by STF

Cl 62	SC	P 321	L	# 313
Barnea, Eyal		Metalink		
Comment Type	E	Comment Status	D	
Add abbreviation to QAM				
<i>SuggestedRemedy</i>				
QAM - Quadrature Amplitude Modulation				
Proposed Response		Response Status	O	

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CI 62	SC	P 321	L 9	# 312	
Barnea, Eyal		Metalink			
Comment Type	E	Comment Status	D		
No need to reference T1E1.4/099 as T1.424 is referenced					
SuggestedRemedy					
Delete the line					
Proposed Response		Response Status	O		

CI 62	SC 1.2	P 322	L 13	# 223	
Gustafsson, Jonas		Ericsson			
Comment Type	E	Comment Status	D		
Is this correct? Should it not be 10Mbps?					
SuggestedRemedy					
Change from 2Mbps to 10Mbps.					
Proposed Response		Response Status	O		

CI 62	SC 4.3	P 342	L 53	# 227	
Gustafsson, Jonas		Ericsson			
Comment Type	E	Comment Status	D		
If T1.424/T1al-Use Part 3 standard is used in North America, this is a correct assumption.					
Hence, the statement is only valid in this case.					
SuggestedRemedy					
Replace with:					
b) For operation in North America 10PASS-TS must be configured to use Plan A defined in 62.7.1.					
Proposed Response		Response Status	O		

CI 62	SC 4.5.2.2	P 344	L 19	# 225	
Gustafsson, Jonas		Ericsson			
Comment Type	E	Comment Status	D		
Plan D can't be found in any table currently defined.					
SuggestedRemedy					
Add definition of Plan D (in table 62-12-10) or remove from line 19 in subclause 62.4.5.2.2.					
Proposed Response		Response Status	O		

CI 62	SC 4.5.2.2	P 344	L 9	# 224	
Gustafsson, Jonas		Ericsson			
Comment Type	T	Comment Status	D		
The evaluated expression for NSC does not match the actual maximum number of subcarriers intended for 10PASS-TS.					
SuggestedRemedy					
Change expression: from NSC=2n+8 to NSC=2*exp(n+8)					
Proposed Response		Response Status	O		

CI 62	SC 4.6	P 318	L 46	# 99016	
Gustafsson, Jonas		Ericsson			
Comment Type	T	Comment Status	D		D1.0 #171
Annex 61A describes spectrum compatibility according to two specific band plans (sets of PSD templates). Only one of these are defined in the subclause 62.4.6 (text and tables of PSD - frequency samples).					
The existing templates are collected from the section 61 of the ANSI standard T1.417. This document does not reflect the spectrum compatibility issues outside US. Hence, severely restrict the market potential of this standard.					
SuggestedRemedy					
It is recommended to add text and sets of PSD templates according to European requirements. Such information can be found in section 5.1.1 of ETSI TS 101 270-2 V1.1.1.					
Proposed Response		Response Status	W		
PROPOSED ACCEPT IN PRINCIPLE. Please provide examples					

CI 62	SC 62.1	P 322	L 5	# 654	
Barrass, Hugh		Cisco			
Comment Type	E	Comment Status	D		
Section number missed out in second sentence of preamble					
SuggestedRemedy					
Change to:					
Similarly, sections 62.4 and 62.5(DMT PMD functional specifications and SCM PMD functional specifications) are mutually exclusive.					
Proposed Response		Response Status	O		

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Cl 62	SC 62.1.2	P 322	L 13	# 655
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Data rate is incorrect (typo) from previous comment.				
SuggestedRemedy				
Change data rate from 2Mbps to 10Mbps.				
Proposed Response		Response Status	O	
Cl 62	SC 62.1.2	P 322	L 13	# 978
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
2 Mb/s is mentioned instead 10. It is not clear that full duplex operation should be with 10 Mb/s. Also, the MII in EFM application actually operates in half duplex mode.				
SuggestedRemedy				
Clarify the wording, with meaning "10Mb/s simultaneously in both directions".				
Proposed Response		Response Status	O	
Cl 62	SC 62.1.2	P 322	L 15	# 656
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
List of objectives is not enumerated correctly.				
SuggestedRemedy				
Third line should be c), fourth line should be d)				
Proposed Response		Response Status	O	
Cl 62	SC 62.1.2	P 322	L 17	# 657
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Third line of objectives does not match Task Force objective				
SuggestedRemedy				
Change line to:				
c) To provide for operating over non-loaded voice grade twisted pair cable at distances up to 750m.				
Proposed Response		Response Status	O	

Cl 62	SC 62.1.4	P 322	L 25	# 308
Shohet, Zion		Infinion		
Comment Type	E	Comment Status	D	
This section is a general one, while figure 62-1 is a DMT PMA block digram.				
Need a different reference/Figure.				
SuggestedRemedy				
Proposed Response		Response Status	O	
Cl 62	SC 62.1.4	P 322	L 26	# 314
Barnea, Eyal		Metalink		
Comment Type	E	Comment Status	D	
Reference to figure 62-1 is wrong , since this is a DMT-PMA functional diagram and not a general functional diagram				
SuggestedRemedy				
Add a new diagram for the PMA functional model,				
Proposed Response		Response Status	O	
Cl 62	SC 62.1.4.1	P 322	L 32	# 979
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
Terminology VTU-O, VTU-R is not introduced and may be actually not appropriate here.				
SuggestedRemedy				
Clarify definitions of the system parts and link them clearly with VDSL standards if necessary.				
Proposed Response		Response Status	O	
Cl 62	SC 62.1.4.1.1	P 322	L 45	# 660
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Data signals are not shown in a table.				
SuggestedRemedy				
Delete sentence:				
The data flow signals are described in Table 62-1.				
Proposed Response		Response Status	O	

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Cl 62	SC 62.1.4.1.2	P 322	L 54	# 658
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Link synchronization state must be passed upwards across the alpha/beta interface.				
SuggestedRemedy				
Add line:				
e) Receive PMA state machine synchronized (PMA_receive_synchronized)				
Additionally, the signal must be added to the table (Table 62.1)				
Proposed Response		Response Status	O	

Cl 62	SC 62.1.4.1.2	P 322	L 54	# 659
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Receive error signal must be passed upwards across the alpha/beta interface.				
SuggestedRemedy				
Add line:				

f) Receive Forward Error Correction detected but not corrected error, asserted for the whole FEC frame in which the error is detected (PMA_FEC_uncorrected_error)

Additionally, the signal must be added to the table (Table 62.1)

Proposed Response	Response Status
	O

Cl 62	SC 62.1.4.1.2	P 323	L	# 315
Barnea, Eyal		Metalink		
Comment Type	E	Comment Status	D	
data stream signals are missing in Table 62-1				
SuggestedRemedy				
Add Tx_s and Rx_s signals to the table				
Proposed Response		Response Status	O	

Cl 62	SC 62.1.4.1.2	P 323	L 1	# 980
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
Table 62-1 doesn't include the data flow signals.				
SuggestedRemedy				
Add data flow signals TX_s, Rx_s to the Table.				
Proposed Response		Response Status	O	

Cl 62	SC 62.1.4.1.2	P 323	L 17	# 661
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Table reference is wrong.				
SuggestedRemedy				
Change sentence to:				
The synchronization flow signals are described in Table 62-1.				
Proposed Response		Response Status	O	

Cl 62	SC 62.1.4.1.2	P 323	L 27	# 981
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
Wrong reference, should be "Table 62-1".				
SuggestedRemedy				
Fix the reference.				
Proposed Response		Response Status	O	

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Cl 62	SC 62.1.4.1.3	P 323	L 25	# 662
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
OAM flow description should match Clause 61.				
SuggestedRemedy				
Replace sentence with:				
OAM Information flow across the gamma interface will support access to the registers defined in Clause 45. Refer to Clause 45 for a complete description of access to TC, PMA and PMD registers from the MDIO interface.				
Proposed Response		Response Status	O	

Cl 62	SC 62.2.3	P 325	L	# 819
Simon, Scott		Cisco Systems, Inc.		
Comment Type	T	Comment Status	D	
The FEC mechanism defines two variables K and R. The current text states that there are multiple optional values for these variables. The draft should select one setting.				
SuggestedRemedy				
Change the text to fix R at 16 (as given in the two "mandatory" settings).				
The text should be changed to fix K at either 128 or 224. The TF should discuss and decide on one value. If the value cannot be decided, fix it as TBD for the next draft.				
Proposed Response		Response Status	O	

Cl 62	SC 62.3	P 332	L 2	# 295
Shohet, Zion		Infinion		
Comment Type	E	Comment Status	D	
Add text to indicate that reference to other documents is used in this sub-clause				
SuggestedRemedy				
Add the following directly after the sub-clause title:				
"The SCM PMA functionality is specified by incorporating the following references:				
- Reference 1-1: T1.424/Trial-Use standard Part 1				
- Reference 1-2: T1.424/Trial-Use standard Part 2				
- Reference 2: ITU-T G.993.1				
- Reference 3-1: ETSI TS 101 270-1				
- Reference 3-2: ETSI TS 101 270-2 "				
Proposed Response		Response Status	O	

Cl 62	SC 62.3.2	P 332	L 50	# 296
Shohet, Zion		Infinion		
Comment Type	E	Comment Status	D	
make reference to T1E1				
SuggestedRemedy				
1- Change title to: PMA Frame Format, reference 1-2 section 7.2.3.1				
2- Replace text and figure in this section by: "Stet, with the exception that only Slow channel is applicable, i.e. F=0"				
Proposed Response		Response Status	O	

Cl 62	SC 62.3.2.1	P 333	L 32	# 297
Shohet, Zion		Infinion		
Comment Type	E	Comment Status	D	
make reference to T1E1				
SuggestedRemedy				
Replace the text and figures 62-6 & 62-7 of this section by:				
"The Sub-frame structure is identical to the Slow codeword defined in Reference 1-2 section 7.2.3.3, with the exception that only "single latency" is applicable."				
Proposed Response		Response Status	O	

Cl 62	SC 62.3.2.1	P 333	L 40	# 663
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Figure 62-6 shows variable size frame which is not relevant to this standard.				
SuggestedRemedy				
Delete word "max"				
Change "P octets" to "181 octets"				
Also, change "FEC 16 ctets" to "FEC 16 octets"				
Proposed Response		Response Status	O	

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CI 62	SC 62.3.2.1	P 333	L 47	# 664	
Barrass, Hugh		Cisco			
Comment Type	E	Comment Status	D		
Reference to variable frame size needs to be removed.					
SuggestedRemedy					
Change phrase to:					
a payload field of 181 octets,					
Proposed Response		Response Status	O		
CI 62	SC 62.3.2.1	P 334	L 1	# 982	
Vladimir Oksman		Broadcom			
Comment Type	E	Comment Status	D		
There is no "EOC" defined in this standard. There is no Reference for VOC. Same about the next two paragraphs.					
SuggestedRemedy					
Either remove EOC or add reference to it. Add reference to VOC					
Proposed Response		Response Status	O		
CI 62	SC 62.3.2.2.1	P 334	L 52	# 298	
Shohet, Zion		Infinion			
Comment Type	E	Comment Status	D		
remove the editor's note.					
SuggestedRemedy					
Proposed Response		Response Status	O		
CI 62	SC 62.3.2.2.2	P 337	L 3	# 299	
Shohet, Zion		Infinion			
Comment Type	E	Comment Status	D		
Remove reference to NTR.					
SuggestedRemedy					
Change text to: " The Control-1 octet contains the o/r_trig"					
Proposed Response		Response Status	O		

CI 62	SC 62.3.2.2.3	P 335	L 38	# 301	
Shohet, Zion		Infinion			
Comment Type	E	Comment Status	D		
The editor's note should be deleted					
SuggestedRemedy					
Proposed Response		Response Status	O		
CI 62	SC 62.3.2.2.3	P 335	L 38	# 665	
Barrass, Hugh		Cisco			
Comment Type	E	Comment Status	D		
Editor's note should be removed.					
This editor's note is not relevant for this subclause, and is no longer relevant for subclause 62.3.2.2.2 (where it should have been placed).					
The description of the NTR reserved bit in control word 1 will allow out of scope implementations to use NTR as defined elsewhere.					
SuggestedRemedy					
Remove editor's note.					
Proposed Response		Response Status	O		
CI 62	SC 62.3.2.2.3	P 335	L 45	# 302	
Shohet, Zion		Infinion			
Comment Type	E	Comment Status	D		
Table 62-8 should be here.					
SuggestedRemedy					
Proposed Response		Response Status	O		

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<i>Cl</i> 62	<i>SC</i> 62.3.2.2.6	<i>P</i> 336	<i>L</i> 49	<i>#</i> 305
Barrass, Zion		Infinion		
<i>Comment Type</i> E	<i>Comment Status</i> D			
add reference to T1e1				
<i>SuggestedRemedy</i>				
1- Change text from "...here." to "...in reference 1-2 section 11"				
2- Delete rest of text and figure 62-8, on page 337.				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.3.2.2.6	<i>P</i> 337	<i>L</i> 14	<i>#</i> 667
Barrass, Hugh		Cisco		
<i>Comment Type</i> E	<i>Comment Status</i> D			
The values of "n" and "m" are defined elsewhere in the text, there is no need to use variables.				
<i>SuggestedRemedy</i>				
Replace n by 2.				
Replace m by 6.				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.3.2.2.6	<i>P</i> 337	<i>L</i> 33	<i>#</i> 668
Barrass, Hugh		Cisco		
<i>Comment Type</i> E	<i>Comment Status</i> D			
Variables, n and m, are defined as constants - which makes them redundant				
<i>SuggestedRemedy</i>				
change paragraphs to the following:				
The state machine moves from the PRESYNC state to the SYNC state when the frame Sync_Event occurs consecutively 2 times. If a violated Sync_Event occurs during the PRESYNC state, the state machine returns to the HUNT state.				
The state machine moves from the SYNC state to the HUNT state when the frame Sync_Event is violated consecutively 6 times.				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.3.2.2.6	<i>P</i> 337	<i>L</i> 38	<i>#</i> 669
Barrass, Hugh		Cisco		
<i>Comment Type</i> T	<i>Comment Status</i> D			
Add note regarding link state synchronization signal.				
<i>SuggestedRemedy</i>				
Add paragraph at end of subclause:				
Signal PMA_receive_synchronized is asserted when the state machine is in "SYNC" state.				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.3.2.2.9	<i>P</i> 339	<i>L</i> 35	<i>#</i> 670
Barrass, Hugh		Cisco		
<i>Comment Type</i> T	<i>Comment Status</i> D			
Remove options for interleaver block lengths.				
<i>SuggestedRemedy</i>				
Rewrite the paragraph as:				
The incoming codeword of 200 octets is divided into interleaver blocks of 25 octets. The octets within the interleaver blocks are numbered from j = 0 to j = 24.				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.3.2.2.9	<i>P</i> 340	<i>L</i> 5	<i>#</i> 671
Barrass, Hugh		Cisco		
<i>Comment Type</i> E	<i>Comment Status</i> D			
Simplify values in table 62-10				
<i>SuggestedRemedy</i>				
Rewrite the first row of table:				
Block Length (l) l = 25 octets S = 200 octets				
<i>Proposed Response</i>	<i>Response Status</i> O			

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Cl 62	Simon, Scott	SC 62.4.3	P 342	L	# 826
Comment Type	TR	Comment Status	D		
There is no objective or reason for interoperability with MCM-VDSL.					
<i>SuggestedRemedy</i>					
Remove subclause 62.4.3					
Proposed Response		Response Status	O		

Cl 62	Simon, Scott	SC 62.4.5.2.2	P 344	L 17	# 828
Comment Type	E	Comment Status	D		
The three paragraphs that start with "The frequency plans shall consist. . ." are redundant with Annex 62A. As is Table 62-12					
<i>SuggestedRemedy</i>					
Replace the paragraph with a smaller one that describes the fact that 10PASS-T can operate with up to 2 frequency bands in each direction. . . standard and user-defined band plans are described in Annex 62A.					
Remove Table 62-12 and ensure the same information is conveyed as part of the bandplan profiles in Annex 62A					
Proposed Response		Response Status	O		

Cl 62	Vladimir Oksman	SC 62.4.5.2.2	P 344	L 20	# 983
Comment Type	E	Comment Status	D		
The listed band plans are inconsistent with 62A.					
<i>SuggestedRemedy</i>					
Fix the reference					
Proposed Response		Response Status	O		

Cl 62	Vladimir Oksman	SC 62.4.5.2.2	P 345	L 1	# 984
Comment Type	E	Comment Status	D		
The table lists the information which belongs to 62A.					
<i>SuggestedRemedy</i>					
Move the table to 62A					
Proposed Response		Response Status	O		

Cl 62	Simon, Scott	SC 62.4.5.4	P 347	L	# 820
Comment Type	TR	Comment Status	D		
The draft has left out the reference for the MCM bitswapping function. The bitswapping function is required for complete specification of an MCM PHY.					
<i>SuggestedRemedy</i>					
Add subclause:					
62.4.5.4.7 Reference section 10.7					
10.7 of MCM-VDSL is replaced with the relevant specifications in Clause 55 and Clause 61. (precise reference to be added)					
Proposed Response		Response Status	O		

Cl 62	Simon, Scott	SC 62.4.5.8	P 353	L	# 827
Comment Type	TR	Comment Status	D		
The reference describes an optional mode of operation to use a different tone spacing than 4.3125KHz. This optional mode must be made mandatory or removed. Since it is redundant to the operation of 10PASS-T (it adds no new capability), it should be removed					
<i>SuggestedRemedy</i>					
Remove subclause 62.4.5.8. Also update the text of 62.4.5 to remove the reference to MCM-VDSL Annex C					
Proposed Response		Response Status	O		

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<i>Cl</i> 62	<i>SC</i> 62.4.6.1.1, 62.4.6.1.2, 6	<i>P</i> 354-358	<i>L</i>	<i>#</i> 985
Vladimir Oksman		Broadcom		
<i>Comment Type</i> T	<i>Comment Status</i> D			
These sections are relevant for North America only, but presented as a generic ones. Also, the most of material relates to 62A. Same about Table 62-23				
<i>SuggestedRemedy</i>				
Add an explanation, and move the relevant Tables to 62A				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.4.6.1.2	<i>P</i> 354	<i>L</i>	<i>#</i> 821
Simon, Scott		Cisco Systems, Inc.		
<i>Comment Type</i> E	<i>Comment Status</i> D			
PSD masks should be specified in Annex 62A as part of the profile definitions				
<i>SuggestedRemedy</i>				
Move all PSD mask descriptions and tables to Annex 62A and number them as part of PMD profiles				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.4.6.1.3	<i>P</i> 358	<i>L</i>	<i>#</i> 822
Simon, Scott		Cisco Systems, Inc.		
<i>Comment Type</i> E	<i>Comment Status</i> D			
Egress masking of HAM radio bands should be addressed as part of Annex 62A profiles. The text of Annex 62A already refers to band notch profiles.				
<i>SuggestedRemedy</i>				
Remove 62.4.6.1.3				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.5.1.1	<i>P</i> 359	<i>L</i> 54	<i>#</i> 672
Barrass, Hugh		Cisco		
<i>Comment Type</i> E	<i>Comment Status</i> D			
According to other sections, the stream may be split into one or two - not two or more - streams.				
<i>SuggestedRemedy</i>				
Change sentence to:				
The frame is split into one or two streams (Figure 62-14 shows splitting into two streams).				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.5.1.1	<i>P</i> 360	<i>L</i> 8	<i>#</i> 673
Barrass, Hugh		Cisco		
<i>Comment Type</i> E	<i>Comment Status</i> D			
"One or more" carriers should be "one or two" carriers.				
<i>SuggestedRemedy</i>				
Change sentence to:				
One or more carriers can be transmitted in each transmission direction, although if one carrier can transmit all the input data, the other carriers may be not used.				
<i>Proposed Response</i>	<i>Response Status</i> O			

<i>Cl</i> 62	<i>SC</i> 62.5.2.1	<i>P</i> 361	<i>L</i> 5	<i>#</i> 823
Simon, Scott		Cisco Systems, Inc.		
<i>Comment Type</i> T	<i>Comment Status</i> D			
The text refers to optional modes with more than two carriers in each direction. EFM PHYs should cap the number of carriers.				
<i>SuggestedRemedy</i>				
Change the text to state that K (the number of TX carriers) may be either 1 or 2.				
Remove the final paragraph: "Note: Splitting procedure. . . link initialization and is TBD."				
<i>Proposed Response</i>	<i>Response Status</i> O			

P802.3ah Draft 1.0 Comments

Cl 62	SC 62.5.2.1	P 361	L 7	# 674
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Remove option for operation on more than 2 carriers.				
SuggestedRemedy				
Operation with one and two carriers (K=2) is mandatory, operation with more than two carriers is not covered in this standard.				
Proposed Response		Response Status	O	

Cl 62	SC 62.5.2.1	P 362	L 33	# 675
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Change out of scope reference to multipair PMD operation.				
SuggestedRemedy				
Change paragraph to:				
Note: Splitting procedure with more than two carriers is useful for multi-loop operation, providing efficient aggregation of loop transport capacity on the physical layer. This mode of operation is outside the scope of this standard.				
Proposed Response		Response Status	O	

Cl 62	SC 62.5.4.1	P 368	L 37	# 678
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Subclause needs to reflect management access as defined in Clause 30, 45 etc.				
SuggestedRemedy				
Change subclause to read:				
All options to control transmit PSD and wideband power are available independently in both transmission directions. Control parameters are defined in Clause 30. Access to PSD control through MDIO is defined in Clause 45. Access to remote PSD parameters during handshaking at link startup is defined in subclause 61.3				
Proposed Response		Response Status	O	

Cl 62	SC 62.5.4.1.1	P 368	L 43	# 679
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Subclause needs to reflect the management defined in Clauses 30, 45 etc.				
SuggestedRemedy				
Change subclause to read:				
The PSD of the transmit signals in both directions shall comply with the set PSD templates and the wideband power limitation to comply with regionally specific PSD templates and wideband power limitations. The standardized values are specified in Annex 62A, also in Reference 1-1 section 7.1, and Reference 3-1 section 8.2.5.2.1. The network operator should define the PSD template prior to first activation of the link. The default PSD template shall be as specified in subclause 62.5.6.2.1.				
Proposed Response		Response Status	O	

Cl 62	SC 62.5.4.1.2	P 368	L 51	# 680
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Subclause needs to reflect the management defined in Clauses 30, 45 etc.				
SuggestedRemedy				
Change subclause to read:				
The system shall be capable to adjust the value and shape transmit PSD. The adjustment is provided via the management system, as specified in Clause 30. Access to the parameters via the MDIO interface is defined in Clause 45. Additional information is available in Annex 62A and subclause 62.5.6.2.2. In particular, the system shall provide capability for PSD reduction in the frequency range below 1.1 MHz to provide spectral compatibility with CO-based ADSL for cabinet and MDU deployments.				
Proposed Response		Response Status	O	

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Cl 62	SC 62.5.4.2.2.2	P 365	L 53	# 676
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
Remove optional spectral shaping modes.				
SuggestedRemedy				
Change paragraph to:				
The transceiver must provide the excess bandwidth parameter of 0.2. Other excess bandwidth parameters, in the range between 0.1 to 0.2 with granularity of 0.025 may be provided outside the scope of this standard.				
Proposed Response		Response Status	O	

Cl 62	SC 62.5.4.2.2.2	P 367	L 1	# 677
Barrass, Hugh		Cisco		
Comment Type	E	Comment Status	D	
Change out of scope note.				
SuggestedRemedy				
Change sentence to:				
Note: Power and group delay templates for other values of a are outside the scope of this standard.				
Proposed Response		Response Status	O	

Cl 62	SC table 62-8	P 336	L 1	# 303
Shohet, Zion		Infineon		
Comment Type	E	Comment Status	D	
Table 62-8 should be modified to include more details, and to fix some typo's.				
SuggestedRemedy				
1- IB-7: change "os_cr1" to "los_cr1"				
2- For IB-7 & IB-8: add a note: "see reference 1-2 section 8.2.1.2"				
3- IB-9: change "fset" to "frdi". Change the Description to: "far-end Remote defect Indicator".				
Add a note: "see reference 1-1 section 10.3.1.4"				
Proposed Response		Response Status	O	

Cl 62	SC table 62-9	P 336	L 21	# 304
Shohet, Zion		Infineon		
Comment Type	E	Comment Status	D	
add reference to items in table 62-9				
SuggestedRemedy				
1- IB-12 and IB-13: add a note: " see reference 1-1 section 10.3.3.2"				
Proposed Response		Response Status	O	

Cl 62	SC table 62-7	P 335	L 11	# 300
Shohet, Zion		Infineon		
Comment Type	E	Comment Status	D	
Table 62-7 needs to be modified				
SuggestedRemedy				
1- add text to the note column of the first two items, trig&flag: "see section 62.5.6.3.4"				
2- add text to the Value column of IB-1: "0=Normal stat, 1=failure condition"				
3- Name of Bit 1 should be cahnged from "IB-5 (TBD)" to "IB-5". The Value column for this item should be cleared. The Description should be "reserved" only.				
4- Name column of bit 0 should be changed from "NTR" to "not used". The Description and Value should be cleared.				
Proposed Response		Response Status	O	

Cl 62A	SC 1	P 377	L 2	# 222
Gustafsson, Jonas		Ericsson		
Comment Type	E	Comment Status	D	
There is currently no Annex 62B.				
SuggestedRemedy				
Add Annex 62B.				
Consider to add Annex 63A and 63B for 2PASS-TL/2BASE-TL with same purposes as 62A and 62B				
Proposed Response		Response Status	O	

CI 62A SC 62A.3 P 377 L # 825
Simon, Scott Cisco Systems, Inc.

Comment Type TR Comment Status D
The text of the subclause refers to user-defined bandplan and PSD Mask profiles. No constraints are placed on the definition of user-defined bandplans.

SuggestedRemedy
Using appropriate editorial license, create subclause 62A.3.3.4.1 "User-defined bandplan" with the following text:

10PASS-T PHYs shall support user-defined bandplans within the limits described below. User defined bandplans are specified by choosing a set of frequency bands, their transmission direction and their boundaries.

Up to four frequency bands may be selected. Frequency band 0 may be selected to transmit in either the upstream or downstream direction. Frequency bands 1 and 3 transmit downstream. Frequency bands 2 and 4 transmit upstream.

The start and end frequencies of each band may be specified in integer multiples (n) of 4kHz, where $n \geq 6$ and $n \leq 3000$. The minimum separation between bands is TBD. If a PHY is set with a profile that violates a minimum band separation, then TBD (the PHY ignores the setting, or refuses to link, etc. If band 0 is selected as a downstream band, the band 0 end and band 1 start frequencies may be both set to $n = 35$, indicating that band 0 and band 1 will operate as a single contiguous downstream band.

Using appropriate editorial license, create subclause 62A.3.3.4.2 "User-defined PSD mask" with the following text:

For each selected frequency band, a user-defined PSD mask may also be specified by selecting a maximum transmit PSD for that band. 10PASS-T PHYs shall support setting the maximum transmit PSD of each band as follows in 0.5dBm/Hz increments. Band 0: TBD (ed note. this max PSD should match the same number from ADSL). Band 1: TBD, Band 2: TBD, Band 3: TBD, Band 4: TBD.

Also, include a table to summarize each of the parameters in a user defined profile and its limits. Example (and only and example!):

- Band 0 Activate: 1,0
- Band 0 Start: 4-34
- Band 0 End: 5-35
- Band 0 Max PSD: -40dBm/Hz
- Band 1 Activate: 1,0
- Band 1 Start: 35-3000
- Band 1 End: 36-3000
- Band 1 Max PSD: -55dBm/Hz
- etc. etc.

Also, add the following note to the bottom of 62A.3.1

Ed. Note: Conformance testing for 10PASS-T phys should be based on cycling each parameter above and observing the output of the PHY on a spectrum analyzer. The actual procedure and limits for doing so should be described in A62B.

Proposed Response Response Status O

CI 62A	SC 62A.3.1	P 377	L 23	# 986
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
Mentioned (Band 0+4) is not defined.				
SuggestedRemedy				
There should be an appropriate reference or a definition included.				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.1	P 378	L 2	# 988
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	
There is no "Plan 998" and "Plan 997" in ITU.				
SuggestedRemedy				
Use "G.993.1 Bandplan A", and "G.993.1 Bandplan B" instead.				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.1	P 378	L 2	# 990
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	
ETSI and T1 specifications are mentioned not clear.				
SuggestedRemedy				
Use "T1.424-Trial Use Part 1" and "TS1 101 270 -1"				
Proposed Response		Response Status	O	

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CI 62A	SC 62A.3.1	P 378	L 2	# 989
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	
There may be much more other useful combinations of used and unused band assignment.				
<i>SuggestedRemedy</i>				
Specify a "band allocation code" and provide explanation that all band combinations may be used. We can decide later whether we would like to use some as optional/mandatory ones.				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.2	P 377	L 45	# 987
Vladimir Oksman		Broadcom		
Comment Type	E	Comment Status	D	
There better be an exact reference which registers should be configured for relevant parameters specifying the profile. Otherwise, a confusion may happen.				
<i>SuggestedRemedy</i>				
Add reference and names of registers specifying each of the profile parameters.				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.3.5	P 378	L 41	# 824
Simon, Scott		Cisco Systems, Inc.		
Comment Type	TR	Comment Status	D	
"Bandplans parameterization" has not been discussed in the TF. The text in the subclause does not clearly define the need for or function of "Bandplans parameterization"				
<i>SuggestedRemedy</i>				
Discuss in the TF the concept of "Bandplans parameterization." The editor shall take direction from the TF to remove or clarify the subclause.				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.3.5	P 378	L 44	# 991
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	
The content of this paragraph is unclear. It seems to be more bit required to define the PSD, about 0.5 dB of accuracy is required.				
<i>SuggestedRemedy</i>				
Check the PSD definition and fix the text to be more clear.				
Proposed Response		Response Status	O	

TYPE: TR/technical required T/technical E/editorial COMMENT STATUS: D/dispatched A/accepted R/rejected SORT ORDER: Clause, Page, Line, Subclause
RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

CI 62A	SC 62A.3.4	P 379	L 15	# 992
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	
Neither SCM, nor MCM transmission profiles have payload rate granularity of 0.25MHz. Actually, two sentences in lines 26, 27 slightly contradict one another.				
<i>SuggestedRemedy</i>				
Include exact granularity, or use "minimum payload rate required" to allow particular technologies accommodate their specific granularity. Fix the text respectively.				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.4	P 379	L 15	# 307
Shohet, Zion		Infinion		
Comment Type	T	Comment Status	D	
400 steps of payload rates are defined. There is no need for infinite number of profiles, to comply with the short-range objective of EFC-Cu.				
We need to define several basic payload rates such as: 2.5/2.5, 5/5, 7.5/7.5, 10/10, and so on.				
These basic rates might also be used for testing of performance, as stated in the beginning of this annex.				
<i>SuggestedRemedy</i>				
Proposed Response		Response Status	O	

CI 62A	SC 62A.3.5	P 379	L 34	# 993
Vladimir Oksman		Broadcom		
Comment Type	T	Comment Status	D	
There is not mentioned how and where the notch should be programmed.				
<i>SuggestedRemedy</i>				
Add a reference pointing the register and the explain briefly how to specify the notch.				
Proposed Response		Response Status	O	

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Cl 63	SC	P 382	L 12	# 803
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	
The note indicates that the text for 2BASE-TL refers to a document from an interim meeting of ITU SG15/q4. The referenced document is actually a draft version of the G.shdsl.bis standard that is in progress in the ITU. We should be referring to established standards where possible.				
SuggestedRemedy				
Modify references to use the latest released version of the G.991.2 (G.shdsl) standard.				
Proposed Response		Response Status	O	
Cl 63	SC 1.1.2	P 383	L 48	# 226
Gustafsson, Jonas		Ericsson		
Comment Type	T	Comment Status	D	
Incorrect data rate.				
SuggestedRemedy				
Change to:				
a) Provide 2Mbps encapsulated packet data rate at the alpha/beta interface.				
Proposed Response		Response Status	O	
Cl 63	SC 62.3.2.2.6	P 336	L 49	# 666
Barrass, Hugh		Cisco		
Comment Type	T	Comment Status	D	
There is no reason why this state machine should be "recommended" instead of simply "described."				
SuggestedRemedy				
Change from:				
A recommended frame delineation state machine is presented here.				
to:				
The frame delineation state machine is presented here.				
Proposed Response		Response Status	O	

Cl 63	SC 63.1	P 376	L	# 99019
Wei, Dong		SBC Communications,		
Comment Type	TR	Comment Status	D	D1.0 #416
The PHY described in this subclause is based on ADSL2 (G.992.3) Annex J. Since Annex J was developed primarily for some European countries where ADSL-over-ISDN is the dominant ADSL variant, G.992.3 does not specify the performance requirements of Annex J for North America. Therefore, Annex J is not suitable for deployment in the U.S. As a future ANSI standard, the P802.3ah draft should not adopt this PHY.				
SuggestedRemedy				
Delete the entire subclause (from Page 376 to Page 541).				
Proposed Response		Response Status	W	
PROPOSED REJECT. At Vancouver meeting, the chair of ITU Study Group 15, Question 4 stated that Annex J is suitable to any geographical region as long as it meets the appropriate spectral guidelines				
Cl 63	SC 63.1	P 376	L	# 99017
Wei, Dong		SBC Communications,		
Comment Type	TR	Comment Status	D	D1.0 #414
The PHY described in this subclause is based on ADSL2 (G.992.3). ADSL2 is not a standardized technology in the U.S. In fact, any standardized DSL technology in the U.S. must be based on an ANSI standard. There does not exist any ANSI standard on which ADSL2 is based. As a future ANSI standard, the P802.3ah draft should not adopt any non-standardized DSL technology in the U.S.				
SuggestedRemedy				
Delete the entire subclause (from Page 376 to Page 541).				
Proposed Response		Response Status	W	
PROPOSED REJECT. IEEE standards are expected to have international applications				

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CI 63	SC 63.1	P 376	L	# 99018	
Wei, Dong		SBC Communications,			
Comment Type	TR	Comment Status	D	D1.0 #415	
2BASE-TL is a much better PHY for the long-reach objective than 2PASS-TL due to the following reasons:					
1) 2BASE-TL has a significantly better simulated rate/reach performance than 2PASS-TL for most noise models that are commonly used;					
2) Lab/field testing and deployment have shown that the real-world performance of 2BASE-TL-type technologies (e.g., SHDSL, HDSL2/4) is very close to their simulated performance, and that of 2PASS-TL-type technologies (e.g., ADSL) is significantly below their simulated performance.					
3) 2BASE-TL is a basis system in T1.417 and hence its deployment in the public access network is protected. 2PASS-TL does not have this advantage.					
4) 2BASE-TL is a mature and proven technology, and 2PASS-TL is new and untested.					
5) 2BASE-TL supports repeater mode, which is a common requirement for business applications. 2PASS-TL does not support repeater mode. Therefore, 2BASE-TL can be deployed on long loops and hence can achieve much broader market potential than 2PASS-TL.					
<i>SuggestedRemedy</i>					
Delete the entire subclause (from Page 376 to Page 541).					
Proposed Response		Response Status	W		
PROPOSED REJECT. It appears to be a personal opinion					

CI 63	SC 63.1	P 383	L 1	# 638	
WEI, DONG		SBC Communications,			
Comment Type	TR	Comment Status	D		
This comment is the same as Comment #415 on Draft 1.0.					
2BASE-TL is a much better PHY for the long-reach objective than 2PASS-TL due to the following reasons:					
1) 2BASE-TL has a significantly better simulated rate/reach performance than 2PASS-TL for most noise models that are commonly used;					
2) Lab/field testing and deployment have shown that the real-world performance of 2BASE-TL type technologies (e.g., SHDSL, HDSL2/4) is very close to their simulated performance, and that of 2PASS-TL-type technologies (e.g., ADSL) is significantly below their simulated performance.					
3) 2BASE-TL is a basis system in T1.417 and hence its deployment in the public access network is protected. 2PASS-TL does not have this advantage.					
4) 2BASE-TL is a mature and proven technology, and 2PASS-TL is new and untested.					
5) 2BASE-TL supports repeater mode, which is a common requirement for business applications. 2PASS-TL does not support repeater mode. Therefore, 2BASE-TL can be deployed on long loops and hence can achieve much broader market potential than 2PASS-TL.					
<i>SuggestedRemedy</i>					
Delete the entire subclause (from Page 383 to Page 409).					
Proposed Response		Response Status	O		

CI 63	SC 63.1	P 383	L 1	# 639	
WEI, DONG		SBC Communications,			
Comment Type	TR	Comment Status	D		
This comment is the same as Comment #416 on Draft 1.0.					
The PHY described in this subcluse is based on ADSL2 (G.992.3) Annex J. Since Annex J was developed primarily for some European countries where ADSL-over-ISDN is the dominant ADSL variant, G.992.3 does not specify the performance requirements of Annex J for North America. Therefore, Annex J is not suitable for deployment in the U.S. As a future ANSI standard, the P802.3ah draft should not adopt this PHY.					
<i>SuggestedRemedy</i>					
Delete the entire subclause (from Page 383 to Page 409).					
Proposed Response		Response Status	O		

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CI 63	SC 63.1	P 383	L 1	# 640
WEI, DONG		SBC Communications,		
Comment Type	TR	Comment Status	D	
This comment is the same as Comment #414 on Draft 1.0.				
The PHY described in this subclause is based on ADSL2 (G.992.3). ADSL2 is not a standardized technology in the U.S. In fact, any standardized DSL technology in the U.S. must be based on an ANSI standard. There does not exist any ANSI standard on which ADSL2 is based. As a future ANSI standard, the P802.3ah draft should not adopt any non-standardized DSL technology in the U.S.				
<i>SuggestedRemedy</i>				
Delete the entire subclause (from Page 383 to Page 409).				
Proposed Response		Response Status	O	

CI 63	SC 63.1.1	P 383	L 30	# 32
Kimpe, Marc		ADTRAN		
Comment Type	TR	Comment Status	D	
The specification should be consistent all PHY's proposed for clause 63. Either modifications to existing standards should be included or no modifications to existing. Operation of annex J over POTS is not a standard.				
The comment also applies to the following sections:				
63.1.1.3 page 384 line 15				
63.1.1.4.2 page 386 line 12				
63.1.3.10 page 395 line 6 to 13				
63.1.3.13.1.3 page 397 line 16				
<i>SuggestedRemedy</i>				
Remove the annex J over POTS option.				
Proposed Response		Response Status	O	

CI 63	SC 63.1.2.1	P 386	L 3739	# 794
Artman, Doug		Texas Instruments		
Comment Type	T	Comment Status	D	
It is unclear as to whether EFM should maintain the feature of ADSL Annex J supporting up to four frame bearers. There are numerous sections in Annex J that would need to be modified if EFM chose to support less than 4 frame bearers. These sections include the one referenced in this subclause, as well as subclauses 63.1.2.5, 63.1.2.6, 63.1.2.6.2, 63.1.2.10.1.1, and 63.1.2.10.3.				
<i>SuggestedRemedy</i>				
EFM should restrict the number of frame bearers to 1 and each of these subclauses should be modified as appropriate to reflect this restriction.				
Proposed Response		Response Status	O	

CI 63	SC 63.1.2.1	P 386	L 4143	# 795
Artman, Doug		Texas Instruments		
Comment Type	T	Comment Status	D	
Numerous subclauses in Clause 63 refer to sections in ADSL Annex J (G.992.3) which talk about the concept of a network timing reference (NTR). The additional subclauses in Clause 63 include 63.1.2.3 and 63.1.2.8.1				
<i>SuggestedRemedy</i>				
We should eliminate the concept of an NTR from 2PASS-TL and modify the specified subclauses in Clause 63 as appropriate.				
Proposed Response		Response Status	O	

CI 63	SC 63.1.2.11	P 389	L 50	# 423
Tzannes, Marcos		Aware		
Comment Type	TR	Comment Status	D	
SRA is a very useful feature because it provides robustness to changing channel conditions by enabling data rate adaptation without errors or service interruption. If rate adaptation is not desirable for a particular link G.992.3 provides a MIB controlled parameter (RA_MODE) that can be used to disable or enable SRA. DRR applies only to systems with more than one latency path and for that reason should not be used in the EFM standard.				
<i>SuggestedRemedy</i>				
The EFM standard shall support optional SRA as defined in G.992.3				
The EFM standard shall not support DRR.				
Proposed Response		Response Status	O	

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CI 63	SC 63.1.2.11	P 389	L 5054	# 797	
Artman, Doug		Texas Instruments			
Comment Type	T	Comment Status	D		
G.992.3 supports 3 forms of On-line Reconfiguration (OLR): Bitswap, Dynamic Rate Repartioning (DRR) and Seamless Rate Adaptation (SRA). Bitswap adjusts the number of bits applied to specific tones while keeping the total number of bits allocated constant. DRR also keeps the total number of bits constant, but readjusts the number of bits allocated to different latency paths. SRA is capable of modifying not only the bit distribution among all carriers but can also modify the overall data rate by adjusting the total number of bits allocated. In G.992.3 bitswap is required while DRR and SRA are optional. The EFM Task Force needs to decide whether they want to maintain support for DRR and SRA for 2PASS-TL. The other relevant subclauses in Clause 63 are 63.1.2.11.1, 63.1.2.11.1.1, 63.1.2.11.2 and 63.1.3.16.					
<i>SuggestedRemedy</i>					
EFM should maintain support for bitswap but simplify the OLR protocol and eliminate support for DRR and SRA. DRR is not required with only a single latency path and SRA has no utility if we are nailing the data rate up at 2 Mbps. It is suggested to modify the referenced subclauses as necessary to remove support for DRR and SRA.					
Proposed Response		Response Status	O		

CI 63	SC 63.1.2.12	P 390	L 26	# 424	
Tzannes, Marcos		Aware			
Comment Type	TR	Comment Status	D		
Power management (L3 and L2) is a very useful feature because it provides power saving when data transmission requirements are reduced. If Power Management is not desirable for a particular link G.992.3 provides a MIB controlled parameter (PM_MODE) that can be used to disable or enable Power Management.					
<i>SuggestedRemedy</i>					
The EFM standard shall support Power Management as defined in G.992.3					
Proposed Response		Response Status	O		

CI 63	SC 63.1.2.12	P 390	L 2630	# 798	
Artman, Doug		Texas Instruments			
Comment Type	T	Comment Status	D		
G.992.3 supports a Power Management mode wherein the ATU-C will dramatically reduce the downstream data rate (and subsequently save ATU-C power) when there is no data to be transmitted. The EFM Task Force must address this feature and determine if this should be supported as part of 2PASS-TL. The other relevant subclauses in Clause 63 pertaining to this issue are 63.1.3.5.1, 63.1.3.7, 63.1.3.7.2, 63.1.3.7.4, 63.1.3.7.5, 63.1.3.7.6, 63.1.3.17 and 63.1.4.					
<i>SuggestedRemedy</i>					
2PASS-TL should continually maintain a constant bit rate of 2 Mbps and not support this mode. The subclauses specified above should be modified to remove support for the power management mode.					
Proposed Response		Response Status	O		

CI 63	SC 63.1.2.4	P 387	L 913	# 796	
Artman, Doug		Texas Instruments			
Comment Type	T	Comment Status	D		
G.992.3 (ADSL2) provides support for multiple latency paths through the PHY layer. The EFM Task Force must decide if they want to maintain support for multiple latency paths as in G.992.3, or limit the number of potential latency paths and to what number do they wish to limit this to. In addition, the task force must decide if they want the latency on each path to be configurable (as in G.992.3 or fixed to a certain value. This issue is relevant not only to the subclause but also subclauses 63.1.2.5, 63.1.2.6, 63.1.2.6.2, 63.1.2.7.2, 63.1.2.10.1.1 and 63.1.2.10.3.					
<i>SuggestedRemedy</i>					
2PASS-TL should provide support for only 1 latency path, but the latency on that path should be provisionable as currently supported in G.992.3. The referenced subclauses of Clause 63 should be modified as appropriate to reflect this limitation.					
Proposed Response		Response Status	O		

CI 63	SC 63.1.3.10	P 395	L 3	# 799	
Artman, Doug		Texas Instruments			
Comment Type	E	Comment Status	D		
The subclause reference in the first sentence is wrong.					
<i>SuggestedRemedy</i>					
The first sentence should be modified as follows: Spectral masks for the different service options are defined in subclauses 63.1.5 and 63.1.6.					
Proposed Response		Response Status	O		

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CI 63	SC 63.1.3.14	P 403	L 3036	# 801	
Artman, Doug		Texas Instruments			
Comment Type	T	Comment Status	D		
G.992.3 provides for an optional Short Initialization Procedure. The EFM Task Force needs to discuss support for this optional procedure and decide whether it should be supported in 2PASS-TL.					
<i>SuggestedRemedy</i>					
The primary utility of the Short Initialization Procedure is to provide a quicker training session to get to Showtime if the modems were previously in Showtime and need to retrain due to a change in line conditions. Although this feature is optional in G.992.3 and vendors could choose whether to provide support, we should just eliminate this from 2PASS-TL to further simplify the standard. It is unclear yet how well this feature will truly work as it has yet to be implemented in ADSL chipsets.					
Proposed Response		Response Status	O		

CI 63	SC 63.1.3.5.1	P 391	L 5254	# 800	
Artman, Doug		Texas Instruments			
Comment Type	T	Comment Status	D		
The EFM Task Force needs to decide whether 2PASS-TL should support the rate adaptive nature of G.992.3 or fix the US/DS rates to 2 Mbps in each direction. Modifications to this section (and possibly others) are required if the rate is to be fixed.					
<i>SuggestedRemedy</i>					
EFM should maintain the rate adaptive nature of G.992.3 and allow the ATU-C to simply provision the acceptable rates. No modifications are required to the text, other than an explanatory note. The Editor's Comment should be removed.					
Proposed Response		Response Status	O		

CI 63	SC 63.1.5	P 406	L 29	# 33	
Kimpe, Marc		ADTRAN			
Comment Type	TR	Comment Status	D		
The title of clause 63.1.5 is "PSD Masks and Transmit Power- EFM Long Reach system operating in the frequency band over POTS". Clause 63 was meant to include the standard by reference with deviation from the standard highlighted, yet clause 63.1.5 does not exist within annex J and is listed here.					
<i>SuggestedRemedy</i>					
1- Clearly mark what are the changes with respect to existing standards. 2- remove all sections related to annex J over POTS.					
Proposed Response		Response Status	O		

CI 63	SC 63.1.5.2.2	P 407	L 2849	# 802	
Artman, Doug		Texas Instruments			
Comment Type	TR	Comment Status	D		
The PSD masks for the upstream operating over POTS still need to be specified.					
<i>SuggestedRemedy</i>					
See accompanying contribution for the PSD masks to be used for the upstream direction while operating over POTS. The specified subclause should be modified with the proposed PSD masks.					
Proposed Response		Response Status	O		

CI 63	SC 63.2	P 410	L 56	# 804	
Artman, Doug		Texas Instruments			
Comment Type	E	Comment Status	D		
The sentence beginning with "The copper category" is confusing. I'm not sure what is trying to be said there. Is the intent to inform the reader that the type of copper pairs over which this service is intended identical to those being used in the access network?					
<i>SuggestedRemedy</i>					
Change sentence to: These copper pairs are identical to those currently used in the access network according to ANSI, ETSI and ITU-T standards.					
Proposed Response		Response Status	O		

CI 63	SC 63.2	P 542	L 10	# 99020	
Jackson, Stephen		Hatteras Networks			
Comment Type	E	Comment Status	D		
"the copper networks"					
<i>SuggestedRemedy</i>					
needs clarification, maybe say "public loop plants" like in the preceding paragraph					
Proposed Response		Response Status	W		
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree					

CI 63	SC 63.2	P 542	L 10	# 99020	
Jackson, Stephen		Hatteras Networks			
Comment Type	E	Comment Status	D		
"the copper networks"					
<i>SuggestedRemedy</i>					
needs clarification, maybe say "public loop plants" like in the preceding paragraph					
Proposed Response		Response Status	W		
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree					

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Cl 63	SC 63.2	P 542	L 56	# 99021
Artman, Doug		Texas Instruments		
Comment Type E	Comment Status D			D1.0 #423
The sentence beginning with "The copper category" is confusing. I'm not sure what is trying to be said there. Is the intent to inform the reader that the type of coppers pairs over which this service is intended identical to those being used in the access network?				
SuggestedRemedy				
These copper pairs are identical to those currently used in the access network according to ANSI, ETSI and ITU-T standards.				
Proposed Response	Response Status W			
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				
Cl 63	SC 63.2.2	P 410	L 3132	# 805
Artman, Doug		Texas Instruments		
Comment Type E	Comment Status D			
The word operating is misspelled.				
SuggestedRemedy				
correct spelling				
Proposed Response	Response Status O			

Cl 63	SC 63.2.2	P 410	L 33	# 806
Artman, Doug		Texas Instruments		
Comment Type T	Comment Status D			
The objective under f) doesn't really belong here. Bonding for long reach is being addressed in another clause and this clause should focus on the objectives for the PHY only.				
SuggestedRemedy				
Remove item f)				
Proposed Response	Response Status O			

Cl 63	SC 63.2.2	P 542	L 28	# 99022
Artman, Doug		Texas Instruments		
Comment Type E	Comment Status D			D1.0 #426
The word operating is misspelled.				
SuggestedRemedy				
correct spelling				
Proposed Response	Response Status W			
PROPOSED ACCEPT.				

Cl 63	SC 63.2.2	P 542	L 30	# 99023
Artman, Doug		Texas Instruments		
Comment Type T	Comment Status D			D1.0 #424
The objective under f) doesn't really belong here. Bonding for long reach is being addressed in another clause and this clause should focus on the objectives for the PHY only.				
SuggestedRemedy				
Remove item f)				
Proposed Response	Response Status W			
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				
Cl 63	SC 63.2.2 (e)	P 542	L 29	# 99024
Jackson, Stephen		Hatteras Networks		
Comment Type E	Comment Status D			D1.0 #401
figure "6" should be "5"				
SuggestedRemedy				
change to "5"				
Proposed Response	Response Status W			
PROPOSED ACCEPT.				

Cl 63	SC 63.2.3	P 410	L 41	# 807
Artman, Doug		Texas Instruments		
Comment Type TR	Comment Status D			
The following statement should be removed: "When the above specification is superseded by an approved revision, the revision shall apply." We should be referencing a single standard here, and not leaving the door wide open to any other follow-on standards that may come later. I believe 802.3 should create a definitive standard and reference a specific standard if it exists, but not set itself up to have its standards implicitly modified by others.				
SuggestedRemedy				
Remove this sentence.				
Proposed Response	Response Status O			

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CI 63	SC 63.2.3	P 542	L 36	# 99025
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	D1.0 #425
The following statement should be removed: "When the above specification is superseded by an approved revision, the revision shall apply." We should be referencing a single standard here, and not leaving the door wide open to any other follow-on standards that may come later. I believe 802.3 should create a definitive standard and reference a specific standard if it exists, but not set itself up to have its standards implicitly modified by others.				
SuggestedRemedy				
Remove this sentence.				
Proposed Response		Response Status W		
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				

CI 63	SC 63.2.4.1.1	P 411	L 7	# 808
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	
The acronyms STU-C and STU-R are not defined previously.				
SuggestedRemedy				
Editor should appropriately define these acronyms or use more generic terms.				
Proposed Response	Response Status O			

CI 63	SC 63.2.4.1.1	P 543	L 4	# 99026
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	D1.0 #427
The acronyms STU-C and STU-R are not defined previously.				
SuggestedRemedy				
Editor should appropriately define these acronyms or use more generic terms.				
Proposed Response		Response Status W		
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				

CI 63	SC 63.2.4.1.3	P 411	L 27	# 809
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	
The acronym OC-TC is not defined or referenced in Figure 63-2.				
SuggestedRemedy				
Editor should appropriately define this entity.				
Proposed Response	Response Status O			

CI 63	SC 63.2.4.1.3	P 543	L 23	# 99027
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	D1.0 #428
The acronym OC-TC is not defined or referenced in Figure 63-2.				
SuggestedRemedy				
Editor should appropriately define this entity.				
Proposed Response		Response Status W		
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				

CI 63	SC 63.2.4.2	P 411	L 4748	# 810
Artman, Doug		Texas Instruments		
Comment Type	T	Comment Status	D	
The statement "The PMD allows the optional use of a 4-wire mode and of repeaters to increase the reach or capacity of a copper link" should be modified to take out the 4-wire mode part. This feature should be adequately described in the bonding clause.				
SuggestedRemedy				
Change sentence to "The PMD allows the optional use of repeaters to increase the reach of a copper link."				
Proposed Response	Response Status O			

CI 63	SC 63.2.4.2	P 543	L 41	# 99028
Jackson, Stephen		Hatteras Networks		
Comment Type	E	Comment Status	D	D1.0 #404
Data mode may use any of several levels of TC.				
SuggestedRemedy				
Strike last sentence in (c)				
Proposed Response	Response Status W			
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				

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Cl 63	SC 63.2.4.2	P 543	L 43	# 99029
Jackson, Stephen		Hatteras Networks		
Comment Type	E	Comment Status	D	D1.0 #402
Since IEEE is creating its own bonding (loop aggregation) spec, the G991.2 PMD 4-wire mode is not relevant to this standard.				
SuggestedRemedy				
Strike sentence.				
Proposed Response		Response Status	W	
PROPOSED ACCEPT IN PRINCIPLE: Need updated material or presentation to discuss and then agree				
Cl 63	SC 63.2.4.2	P 543	L 4344	# 99030
Artman, Doug		Texas Instruments		
Comment Type	T	Comment Status	D	D1.0 #429
The statement "The PMD allows the optional use of a 4-wire mode and of repeaters to increase the reach or capacity of a copper link" should be modified to take out the 4-wire mode part. This feature should be adequately described in the bonding clause.				
SuggestedRemedy				
Change sentence to "The PMD allows the optional use of repeaters to increase the reach of a copper link."				
Proposed Response		Response Status	W	
PROPOSED ACCEPT IN PRINCIPLE: Need updated material or presentation to discuss and then agree				
Cl 63	SC 63.3.1.2	P 412	L 3443	# 811
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	
The agreement reached in 802.3ah was to reference G.shdsl as one of the potential long reach PHYs. This text is referring to "Enhanced SHDSL" or G.shdsl.bis which is a potential standard currently being discussed in other standards bodies. Although there are agreements in ITU-T to support higher data rates in G.shdsl.bis, there are no agreements on how this is to be accomplished. We should keep our reference to what was agreed in EFM, G.shdsl, and potentially consider later revisions of G.shdsl in a subsequent revision of the EFM standard.				
SuggestedRemedy				
Remove the value of 81 and reference to subclause editor's note in line 34, and remove the subclause editor's note in lines 37-43.				
Proposed Response		Response Status	O	

Cl 63	SC 63.3.1.2	P 544	L 32	# 99031
Jackson, Stephen		Hatteras Networks		
Comment Type	E	Comment Status	D	D1.0 #405
isn't the correct formula:				
2(n*64 + i*8) kbps				
?				
SuggestedRemedy				
verify				
Proposed Response		Response Status W		
PROPOSED ACCEPT IN PRINCIPLE. Will look into it				
Cl 63	SC 63.3.1.2	P 544	L 3238	# 99032
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	D1.0 #430
The agreement reach in 802.3ah was to reference G.shdsl as one of the potential long reach PHYs. This text is referring to "Enhanced SHDSL" or G.shdsl.bis which is a potential standard currently being discussed in other standards bodies. Although there are agreements in ITU-T to support higher data rates in G.shdsl.bis, there are no agreements on how this is to be accomplished. We should keep our reference to what was agreed to in EFM, G.shdsl, and potentially consider later revisions of G.shdsl in a subsequent revision of the EFM standard.				
SuggestedRemedy				
Remove the value of 81 and reference to subclause editor's note in lines 32 and 33, and remove the subclause editor's note in lines 34-38.				
Proposed Response		Response Status W		
PROPOSED ACCEPT.				
Cl 63	SC 63.3.1.3	P 412	L 52	# 813
Artman, Doug		Texas Instruments		
Comment Type	T	Comment Status	D	
This section should be removed as it refers to bonding which is covered in another clause.				
SuggestedRemedy				
Remove this section.				
Proposed Response		Response Status O		

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Cl 63	SC 63.3.1.3	P 412	L 54	# 812
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	
There is a reference to a non-existent subclause (63.2.1.2)				
SuggestedRemedy				
Subclause editor should clarify the reference and what is intended.				
Proposed Response		Response Status	O	
Cl 63	SC 63.3.1.3	P 544	L 47	# 99033
Artman, Doug		Texas Instruments		
Comment Type	E	Comment Status	D	D1.0 #431
There is a reference to a non-existent section (63.2.1.2)				
SuggestedRemedy				
Subclause editor should clarify the reference and what is intended.				
Proposed Response		Response Status	W	
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				
Cl 63	SC 63.3.1.3	P 544	L 48	# 99034
Jackson, Stephen		Hatteras Networks		
Comment Type	E	Comment Status	D	D1.0 #406
4 wire mode is out-of-scope due to the 802.3ah bonding mechanism				
SuggestedRemedy				
strike comments				
Proposed Response		Response Status	W	
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				
Cl 63	SC 63.3.1.3	P 544	L 4853	# 99035
Artman, Doug		Texas Instruments		
Comment Type	T	Comment Status	D	D1.0 #432
This section should be removed as it refers to bonding which is covered in another clause.				
SuggestedRemedy				
Remove this section.				
Proposed Response		Response Status	W	
PROPOSED ACCEPT IN PRINCIPLE. Need updated material or presentation to discuss and then agree				

Cl 63	SC 63.3.14.4.1.2	P 491	L 29	# 99036
Frazier, Howard		Dominet Systems		
Comment Type	E	Comment Status	D	D1.0 #509
IEEE Style manual limits us to 5 levels of indenture, e.g. 63.3.14.4.1				
SuggestedRemedy				
Renumber subclauses using limit of 5 levels of indenture.				
Proposed Response		Response Status	W	
PROPOSED ACCEPT.				
Cl 63	SC 63.4.1.2	P 415	L 5054	# 814
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	
There are no agreements yet within ITU-T as to how to create a G.shdsl.bis, and we should remove all references to this. Previous agreements in 802.3ah were limited to G.shdsl.				
SuggestedRemedy				
Remove this note.				
Proposed Response		Response Status	O	
PROPOSED ACCEPT.				
Cl 63	SC 63.4.1.2	P 547548	L 52541	# 99037
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	D1.0 #433
There are no agreements yet within ITU-T as to how to create an G.shdsl.bis, and we should remove all references to this. Previous agreements in 802.3ah were limited to G.shdsl.				
SuggestedRemedy				
Remove this note.				
Proposed Response		Response Status	W	
PROPOSED ACCEPT.				
Cl 63	SC 63.4.1.3.3	P 416	L 2931	# 815
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	
This note refers to a standard which does not yet exist and has no substantial technical agreements yet. We should remove this note and keep our references to G.shdsl.				
SuggestedRemedy				
Remove this note.				
Proposed Response		Response Status	O	
PROPOSED ACCEPT.				

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Cl 63	SC 63.4.1.3.3	P 548	L 2122	# 99038
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	D1.0 #434
This note refers to a standard which does not yet exist and has no substantial technical agreements yet. We should remove this note and keep our references to G.shdsl.				
SuggestedRemedy				
Remove this note.				
Proposed Response				
PROPOSED ACCEPT.				
Response Status				
W				
Cl 63	SC 63.4.8.1	P 421	L 3033	# 816
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	
There have been no agreements within 802.3ah to include an enhanced version of SHDSL, and discussion in ITU-T has not yet reached the point where agreements on expanding the bandwidth of SHDSL have been made. We should remove this note and keep our references to G.shdsl (as agreed earlier).				
SuggestedRemedy				
Remove this note.				
Proposed Response				
Remove this note.				
Response Status				
O				

Cl 63	SC 63.4.8.1	P 553	L 1719	# 99039
Artman, Doug		Texas Instruments		
Comment Type	TR	Comment Status	D	D1.0 #435
There have been no agreements within 802.3ah to include an enhanced version of SHDSL, and discussion in ITU-T has not yet reached the point where agreements on expanding the bandwidth of SHDSL have been made. We should remove this note and keep our references to G.shdsl (as agreed earlier).				
SuggestedRemedy				
Remove this note.				
Proposed Response				
PROPOSED ACCEPT.				
Response Status				
W				

Cl 63	SC Table 63-1	P 547	L 42	# 99040
Jackson, Stephen		Hatteras Networks		
Comment Type	E	Comment Status	D	D1.0 #403
T1E1.4 has acted to approve 32 TC-PAM and to study 64 and 128 TC-PAM; letter to this effect sent to ITU-T SG14/Q4.				
SuggestedRemedy				
Add necessary data to this chart to reference expanded constellations.				
Proposed Response				
PROPOSED ACCEPT IN PRINCIPLE: Once ITU-T or T1E1.4 add higher order constellation to SHDSL, then will not see any problem accepting the comment				
Response Status				
W				
Cl 64A	SC 64A	P 426	L 19	# 566
Dawe, Piers		Agilent		
Comment Type	E	Comment Status	D	
This might be a good place to include some informative material on upgrade possibilities re-using fibre outside plant.				
SuggestedRemedy				
per comment				
Proposed Response				
Remove this note.				
Response Status				
O				

C/ 64A	SC 64A.2.1	P 426	L 6	# 565
Dawe, Piers	Agilent			
Comment Type	TR	Comment Status	D	
The statement "EFM optical and copper links are specified to operate over a temperature range of (TBD)" is NOT the case; this is an informative annex. Trying to write one-size-fits-all temperature specs is a lost cause - temperatures vary with climate, with internal/external placing of equipment, with where the temperature is measured, with operator preferences for/against fans, We must stay out of this swamp. By defining spectral limits that allow a seamless trade-off in the wavelength range/spectral width space we have much less need for tying ourselves to temperature limits. <i>Suggested Remedy</i> Write something fairly brief, informative, not too quantitative: Temperature coefficient of wavelength, FP & DFB Operating temperature window, DFB Reliability Fans Climate? And let the market participants get on with their business. Specifically, replace the sentence quoted with "EFM optical and copper links may be required to operate over a wider temperature range than traditional campus-oriented Ethernet links."				
Proposed Response		Response Status	O	