Cl **30** *SC* **30.11** *P* **45** *L* **18** # **99200**

Matt, Squire — Hatteras Networks

Comment Type **T** *Comment Status* **A** *D1.2 #491*

Suggest new element to cover remote configuration.

SuggestedRemedy

Add objects to cover: OAM_configuration, OAM_PDU_configuration, extension, and remote MAC address.

Proposed Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Delete sub-clause 30.11.2.
Delete oRemote from Fig 30-3, Fig 30-4.

Add attributes for suggested remedy in 30.11.1.

Editor will elaborate.

Cl **58** *SC* **58.9.9** *P* **190** *L* # **99107**

Diab, Wael William — Cisco Systems

Comment Type **TR** *Comment Status* **A** *D1.1 #695*

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* **U**

ACCEPT IN PRINCIPLE.

Needs more work by the ad-hoc & look at a jitter numbes for TP1/TP2/TP3.

Cl **59** *SC* **59.8.9** *P* **209** *L* # **99108**

Diab, Wael William — Cisco Systems

Comment Type **TR** *Comment Status* **A** *D1.1 #697*

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* **U**

ACCEPT IN PRINCIPLE.

Needs more work by the ad-hoc.

Jitter numbers remain for 1000BASEEXand BX as informaytive (with the exception of TP2 for BX).

Also, 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."

Cl **60** *SC* **60.1.1** *P* **210** *L* **1** # **99048**

Dawe, Piers — Agilent

Comment Type **TR** *Comment Status* **R** *D1.0 #264*

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.

SuggestedRemedy

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.

At the November meeting the commentor asked to postpone till the next cycle

Cl **60** *SC* **60.8.9** *P* **238** *L* # **99109**

Diab, Wael William — Cisco Systems

Comment Type **TR** *Comment Status* **A** *D1.1 #694*

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* **U**

ACCEPT IN PRINCIPLE.

Needs more work by the ad-hoc & look at a jitter number for TP3.

Jitter numbers remain for 100BASE LX and BX as informative (with the exception of TP2 & TP3).

Cl **60** *SC* **60.8.9.3** *P* **239** *L* **6** # **99110**

Thatcher, Jonathan — World Wide Packets

Comment Type **TR** *Comment Status* **A** *D1.1 #861*

the BER should be less than, not greater than 10e-3.
Also, in line 1, -3dBe ?

SuggestedRemedy

Change per comment

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

This issue needs more disicussion in the ad-hoc.

Cl **61** *SC* **61.2.3.1.2** *P* **302** *L* **29** # **99207**

Barrass, Hugh — Cisco Systems

Comment Type **TR** *Comment Status* **D** *D1.2 #605*

It is entirely unnaceptable that an error is detected in one sublayer and not propagated to further sublayers.

If the FEC detects, but cannot correct an error (or errors) in a frame then an error signal must be passed upwards with that frame. Detected errors must not be "swept under the carpet."

SuggestedRemedy

Comment #653 referenced in the footnote must be reconsidered (and accepted).

Proposed Response *Response Status* **U**

Stays unresolved.

Cl **62** *SC* **62.1.4.1.2** *P* **322** *L* **54** # **99113**

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* **W**

UNRESOLVED COMMENT. Reference comment 653.
See 605

Cl **62A** *SC* **62A.3** *P* **377** *L* *#* **99114**

Simon, Scott Cisco Systems, Inc.

Comment Type **TR** *Comment Status* **R**

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 4 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 >= 6 and n <= 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. etc.

Also, add the following note to the bottom of 62A.3.1

Ed. Note: Comformance 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* **U**

REJECT.

Cl **64** *SC* **64** *P* *L* *#* **99000**

Diab, Wael William Cisco Systems

Comment Type **TR** *Comment Status* **A** *D1.0*

There is no mention on the constraint for the local time stamping. I believe that there is an inherent assumption that the delay throuh 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 trnsmition.

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 necesseraly delay.
D1.0 #672

Cl **64** *SC* **64.1.2** *P* **124** *L* **53** # **99204**

I2R, Onfig Team — Institute For Infocomm

Comment Type **TR** *Comment Status* **A** *D1.2 #409*

The number of MAC instances and clients supported for P2PE is N+1. However, for shared LAN emulation it is 2N+1

SuggestedRemedy

Add another passage or sentence to indicate this.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Add paragraph in compatibility considerations describing use of shared emulation

Cl **64** *SC* **64.1.3** *P* **125** *L* # **99205**

I2R, Onfig Team — Institute For Infocomm

Comment Type **TR** *Comment Status* **A** *D1.2 #433*

From Fig 56-4, we can't see clearly the relationship between Mac Control Client and the OMP function block.

For example, as is known the Discovery Processing block needs to indicate the Mac Control Client the results(Ma_Control.indication(denied/accepted)) or states(Ma_Control.indication(in_progress)) of the discovery process.

On the other side the Mac Control Client generates Ma_Control.request() to control the transmit of the OMP function block.

And the OMP.request() and OMP.indication() can only be used within the OMP function block.

SuggestedRemedy

See the file: raymond_cmts_2_0103.pdf.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

See kramer_cmts_3_0103.pdf for exact solution.

Cl **64** *SC* **64.2.6.1.6** *P* **113** *L* **11** # **99002**

Bharati, Barnali — Wipro Technologies

Comment Type **TR** *Comment Status* **A** *D1.0*

In 'PERIODIC TRANSMISSION' state should there not be a check if variable 'register == true'? So that no report is sent untill registration is complete or if the ONU has been deregistered.

SuggestedRemedy

Proposed Response *Response Status* **U**

ACCEPT.

D1.0 #188 discovery

Cl **64** *SC* **64.3.6.1.6** *P* **155** *L* *#* **99206**

I2R, Onfig Team Institute For Infocomm

Comment Type **TR** *Comment Status* **A** *D1.2 #431*

Figure 56-22

1. There is only one instance, one LLID per ONU, therefore when an LLID is deregistered or reset, the MAC should not be destroyed, but rather become inactive.
2. The following timers are set but their timeouts are not checked anywhere: IDLE_timer, grant_window, wait_for_register_msg.
3. When an ONU does not receive REGISTER within max_register_wait, it should assume collision and wait for next discovery window. In the present state diagram, as long as the next discovery gate hasn't come, ONU will respond to any delayed REGISTER. wait_for_register_msg timer is not working.
4. Differences of reregister, Nack and unsupported capability are not shown.
5. When an ONU is asked to reregister at the next discovery window, i.e. Force registration flag is true, it should immediately go back to wait for next discovery gate rather than WAIT state.

SuggestedRemedy

1. For states UNICAST DISCOVERY and DEREGISTER, cancel checking of if(me==Broadcast_ID) and their "false" link to END state.
2. Check timeout(IDLE_timer) before START TX, check timeout(grant_window) before STOP TX.
3. Let state ARRIVING REGISTER follow STOP TX sequentially, rather than returning to REGISTERING. If timer wait_for_register_msg times out before receiving a REGISTER, go back to wait for next discovery window.
4. In ARRIVING REGISTER, check for the following possibilities separately: Force reregistration, capability not supported, Nack. The responses are shown in dotted box.
5. If ONU is forced reregistration, go to wait for next discovery window.

Please refer to file raymond_cmts_3_0103.pdf. The modified states/paths are highlighted. (raymond_cmts_4_0103.pdf is not highlighted).

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Plese separate to multiple commetns in the future.

1. ACCEPT

2. ACCEPT IN PRINCIPAL, no need to check grant_window based on previous comments

3. ACCEPT

4. ACCEPT

5. ACCEPT

Cl **64** *SC* **64.3.6.1.6** *P* **156** *L* **10** *#* **99203**

I2R, Onfig Team Institute For Infocomm

Comment Type **TR** *Comment Status* **A** *D1.2 #430*

There is no explicit description about the process of deregister. Neither can we see clearly how the deregister process is done between ONU and OLT from figure 56-23.

SuggestedRemedy

(1) Add explicit text description like following for the deregister process into line 4 of page 146:

For the registered ONU, it can also send REGISTER_REQ (set the corresponding bit in it) message to OLT for deregistering itself. When the OLT receive such REGISTER_REQ it will deregister the associated ONU and send a REGISTER (set the corresponding “flag” field in REGISTER MPCPDU) message to inform this ONU that it has been deregistered. Upon receipt of this REGISTER message, the “registered” variable for this ONU is set to false. So the whole process of deregister is completed. This ONU will try to reregister at the earliest opportunity, once allowed.

(2) Change figure 56-23 in page 156 correspondingly.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Editor will add text to describe deregistration process to 56.3.6 header.

Cl **64** *SC* **64.3.8.1.6** *P* **166** *L* *#* **99201**

I2R, Onfig Team — Institute For Infocomm

Comment Type **TR** *Comment Status* **A** *D1.2 #432*

1. If ONU is in WAIT state waiting for timeout(IDLE_timer) while GATE messages keep coming in and being processed, START TX may be delayed. Effective grant length is reduced. In fact it is not necessary to update grants immediately during a grant execution, as long as the next grant is not chosen yet.
2. To choose the earliest grant, Gate processing must go through all existing grants every time. If the grant list is in a sorted order, read/comparison operations will be minimized.
3. Checking whether a grant is valid in state SORT is confusing. It can be simplified.
4. In SORT state, if the chosen grant is outdated, it should be removed from grant_list and then repeat SORT state.
5. If the grant list is empty, ONU should enter WAIT to wait for next incoming gate.
6. Since only normal grants are passed to Gate Processing, it is not necessary to check if (!discovery) in state PROGRAM

SuggestedRemedy

1. Execute TURN LASER ON, START TX, STOP TX in a sequential order. Grants can be updated while waiting for timeout(grant_start). It would give a clearer view of transmission sequence.
2. insert_list would first compare a new grant with the last grant in list and onwards and insert in a time order. The grant list would then be sorted. The next grant is just the next in the list.
3. In SORT state, check if (local_time < current_grant.start+current_grant.length-laser_on_time-IDLE_time-laser_off_time) would be sufficient to select the next valid grant.
4. In SORT, if the selected grant is not valid, remove it from grant list.
5. If grant list empty, go to WAIT for next incoming gate.
6. Delete if (!discovery) in state PROGRAM.

Please refer to file raymond_cmts_1_0103.pdf.

Proposed Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Check for discovery flag is redundant and should be removed.

Diagram is to be split to two sub diagrams:

1. control of grant window
2. protocol element

see diagram GATE-protocol.pdf and GATE-grant.pdf

Cl **64** *SC* **64.4.2** *P* **146** *L* *#* **99102**

Miyoshi, Hidekazu — Sumitomo Electric Indu

Comment Type **T** *Comment Status* **D** *gate D1.1 #634*

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* **W**

PROPOSED REJECT.

Mechanisms in MPCP should remain independent of specific DBA algorithms.

Vendors may already use PAD/Reserved fields for exchange of proprietary information.

Motion to approve editor's response

M: Tom Dineen S: Ariel Maislos

Y: 15 N: 8 A: 2

Motion to accept suggested remedy and make appropriate changes to text

M: Hideoki Miyoshi S: Glen Kramer

Y: 7 N: 15 A: 3

Cl **64** *SC* **64.4.6** *P* **176** *L* **6** # **99202**

I2R, Onfig Team — Institute For Infocomm

Comment Type **TR** *Comment Status* **R** *D1.2 #429*

The "Success" flag in this page is not necessary. Because for the simplification of the discovery process, when the ONU's registration is denied by OLT, the OLT don't need to send a GATE to the ONU for the transmission of the REGISTER_ACK . That is to say when the ONU is informed by the REGISTER message that its registration is denied for whatever reasons it does not need to send any REGISTER_ACK message to OLT.

SuggestedRemedy

Take out the "Success" flag field in the REGISTER_ACK MPCPDU and delete the sentence of OMP.REQUEST (SA,DA,opcode=REGISTER_ACK,success=false) in line 7-8 of figure 56-22 in page 155 correspondingly.

Proposed Response *Response Status* **U**

REJECT.
Success=1 flag informs OLT that registration is complete fr the ONU.
Success=0 flag informs OLT that in spite of sucessful REGISTER, ONU is NACKing the registration.

Cl **64** *SC* **Figure 64-11** *P* **108** *L* # **99006**

Bharati, Barnali — Wipro Technologies

Comment Type **TR** *Comment Status* **A** *D1.0*

OMP indication REGISTER_ACK can arrive in the 'INSIDE REGISTER WINDOW' state before timeout of 'register_window_size'. This is missing.

SuggestedRemedy

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
D1.0 #182 discovery

Cl **64** *SC* **Figure 64-11** *P* **108** *L* # **99007**

Bharati, Barnali — Wipro Technologies

Comment Type **TR** *Comment Status* **A** *D1.0*

State 'CHECK DESTRUCT ID' can appear before 'INDICATE DEREGISTER', otherwise it might lead to unnecessary indication.

SuggestedRemedy

Proposed Response *Response Status* **U**

ACCEPT.
D1.0 #185

Cl **64** *SC* **Figure 64-11** *P* **108** *L* **25** # **99008**

Bharati, Barnali — Wipro Technologies

Comment Type **TR** *Comment Status* **A** *D1.0*

ONU_timer[SA] can expire in the 'INSIDE REGISTER WINDOW' state.

SuggestedRemedy

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 goverened by the timer.
Should consider adding additional state-machine with ONU perspective
D1.0 #181 discovery

Cl **64** *SC* **Figure 64-11** *P* **108** *L* **35** # **99009**

Bharati, Barnali — Wipro Technologies

Comment Type **TR** *Comment Status* **A** *D1.0*

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.

SuggestedRemedy

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
D1.0 #184

Cl **64** *SC* **Figure 64-8** *P* **100** *L* **11** # **99010**

Bharati, Barnali — Wipro Technologies

Comment Type **TR** *Comment Status* **A** *D1.0*

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 (I presume, variable 'me' would have proper MAC address)

SuggestedRemedy

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-llid 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

D1.0 #177 discovery

Cl **65** *SC* **65.2.5.2.1** *P* **171** *L* **46** # **99105**

Brown, Benjamin — AMCC

Comment Type **T** *Comment Status* **A** *D1.1 #385*

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* **U**

ACCEPT IN PRINCIPLE.

Attempt to create a figure based on suzuki_2_0901.pdf, slide 9, referencing an ITU document.

Cl **66A** *SC* **66A.2** *P* **460** *L* **8** # **99208**

Thatcher, Jonathan — World Wide Packets

Comment Type **TR** *Comment Status* **D** *extended temp D1.2 #678*

Extended temperature support for [100,1000]BASE-[LX10,BX10-U,BX10D] is mandatory.

Temperature range must be -40 to +85 degrees C. It is critical that our optical specifications be consistent with this range.

It is not clear that this information should be part of C59 / C60. There appears to be no tie between these clauses.

SuggestedRemedy

Add these specifications to 64A.

Clarify document structure and add references as needed.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

0. Informatively reference existing international standards as appropriate.

1. Include evironmental temperature range in C64A to be -40C to +85C

2. Include 100BASE-LX10; 100BASE-BX; 1000BASE-BX; 1000BASE-LX10; and 1000BASE-PX10/20

3. Reference each port type (EFM optical PMDs), to make it clear that each extended temperature PMD shall meet this temperature range and the associated optical specifications (e.g. in clauses 58, 59, 60)

Previously agreed to extended temperature range (-40 to 85):
1000BASE-LX
1000BASE-PXU
1000BASE-BXU

Starting text: "An EFM optical PMD that is intended for -40 to 85 degree extended temperature operation shall meet the optical associated optical specifications over this range.

Include evironmental temperature range in C64A to be -40C to +85C. EFM physical layer specifications apply to outside plant operating temperaturesranging between -40 to 85 degrees C."

Cl **66A** *SC* **66A.2.1** *P* **458** *L* **7** # **99209**

Dawe, Piers
Agilent

Comment Type **TR** *Comment Status* **D** *extended temp D1.2 #296*

802.3 doesn't do temperature specs. They are out of scope.

Note comment # 565 to D1.1.

SuggestedRemedy

Delete 'Explicit requirements for the operating temperature range are given for 1000BASE-LX10.' Change 'Other values' to 'Specific requirements and values'.

If this section is expanded, make the distinction between the temperature of the terminals (could be inside or outside) and of the outside plant (cabling) itself - outside by definition, but temperature range varies by geography.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

To be discussed at the Vancouver meeting