

#16 Type: ER TF: TF2 Clause: all Page: Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

Correct grammar, punctuation, and spelling

Changes as highlighted in tf2_2008_noll_2.pdf

Changes as highlighted in tf2_2008_noll_2.pdf, less any changes to numbering and cross references

#49 Type: TR TF: TF2 Clause: 6.3 Page: Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

This section uses incorrect syntax for the defined primitives, has inconsisten references to functions and parameters defined in this section, refers to functions/methods that are not defined, and generally could be more clear.

Changes as shown in tf2_2008_noll_5.pdf.

The referenced contribution tf2_2008_noll_5.pdf makes more extensive changes than addressing "incorrect syntax for the defined primitives, has inconsisten references to functions and parameters defined in this section, refers to functions/methods that are not defined" and borders on rewrite in many locations for no good reason. Please break it down into specific changes to address specific problems.

#60 Type: TR TF: TF2 Clause: 6.2 Page: Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

This section uses incorrect syntax for the defined primitives, has inconsisten references to functions and parameters defined in this section, refers to functions/methods that are not defined, and generally could be more clear.

Changes as shown in tf2_2008_noll_12.pdf.

Changes as tracked in referenced contribution are very confusing, since there are also reference deletion (I assume they are NOT intended) and there is a lot of rewrite included that borders on rewrite for clarification. This will need to be discussed.

#7 Type: T TF: TF2 Clause: 1.1 Page: 12 Line: 2 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

After the PAR modification draft is approved by the WG, update subclause 1.1 Scope with the new Scope text from the PAR.

Per comment

-

#2 Type: T TF: TF2 Clause: 1.2 Page: 12 Line: 12 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: 1.2

The text in 1.2 Coverage doesn't explain what is actually covered in this standard.

Modify this subclause as shown in tf2_2008_kramer_5.pdf.

-

#17 Type: TR TF: TF2 Clause: 1.2 Page: 12 Line: 22 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: 1.2

The current text refers to a "universal management channel". This seems to be inconsistent with the new standard name.

Replace "there is a pressing need to provide a universal management channel compatible with Ethernet and that would allow network operators to manage a variety of devices in access network or in subscriber premises in a uniform and consistent way." with "there is a pressing need to provide a method to transport a variety of protocols over bridged Ethernet networks that allows network operators to manage devices in the access network or in subscriber premises in a uniform and consistent way."

See comment #2 for changes to the target text.

#18 Type: TR TF: TF2 Clause: 1.3 Page: 12 Line: 34 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The overview needs to be completed.

Replace "Clause 4..." with "⌚ Clause 4 defines the overall architecture of VLC and defines the service interfaces of VLC. ⌚ Clause 5 defines the structure of a VLC PDU. ⌚ Clause 6 defines the operation of the VLS sublayer. ⌚ Clause 7 defines behavior of certain protocols when operating over VLC. ⌚ Clause 8 defines VLC management, including the VLC configuration protocol. ⌚ Clause 9 is the PICS Proforma for VLC ⌚ Annex 8A is an informative collection of VLC use cases."

Per comment, but use "-" instead of "⌚" symbols.

#8 Type: E TF: TF2 Clause: 3.2 Page: 14 Line: 12 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Acronyms are not sorted

Sort acronyms in alphabetical order

-

#19 Type: TR TF: TF2 Clause: 4.1 Page: 21 Line: 5 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The text should clarify that tunnels are unidirectional.

Create a new paragraph beginning at "That portion of the network..." to form a paragraph that reads "That portion of the network path that xPDUs traverse while they are encapsulated as VLCPDUs is referred to as a tunnel. In VLC, tunnels are defined in one direction only (unidirectional). A bidirectional tunnel is two unidirectional tunnels between the same two stations."

Create a new paragraph beginning at "That portion of the network..." to form a paragraph that reads "That portion of the network path that xPDUs traverse while they are encapsulated as VLCPDUs is referred to as a tunnel. In VLC, tunnels are defined in one direction only (unidirectional). A bidirectional tunnel comprises two unidirectional tunnels between the same two stations."

#20 Type: TR TF: TF2 Clause: 4.1 Page: 21 Line: 8 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The text indicates that VLC is optional and qualifies it being optional in a multi-port device. Adjust for clarity.

Replace "Both VLC client and VLC sublayer are optional, i.e., in any multi-port device, the VLC sublayer may be implemented in only some ports. " with "Both VLC client and VLC sublayer are optional in a station. In a multi-port device, the VLC sublayer and VLC client may be implemented in all ports or any subset of the device's ports. "

Replace "Both VLC client and VLC sublayer are optional, i.e., in any multi-port device, the VLC sublayer may be implemented in only some ports. " with "Both VLC client and VLC sublayer are optional in a station. In a multi-port device, the VLC sublayer and VLC client may be implemented in any subset of the device ports. " Comment: "any subset" implies all, none, and anything in between.

#21 Type: TR TF: TF2 Clause: 4.1 Page: 21 Line: 15 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text states "The CTE behavior is governed by a set of rules that are either statically configured or dynamically provisioned by the NMS (see 6.1)." Since an NMS would need to be a VLC-Aware station to implement VLC Configuration protocol, it would be more broadly correct to say that rules are provisioned by a VLC Client. This would also make it clear that it is possible for two UMT-aware peers to autonomously configure one another. It should be possible for rules to be configured locally on a UMT-aware device without an NMS.

Replace "The CTE behavior is governed by a set of rules that are either statically configured or dynamically provisioned by the NMS (see 6.1)." with "The CTE behavior is governed by a set of rules that are either statically configured or dynamically provisioned by a VLC Client (see 6.1) ." To maintain consistency, in 6.1 line 12, replace "Some of the rules are statically pre-configured (i.e., available and active at all times); other rules are dynamically added/deleted by NMS when tunnels are established or destroyed." with "Some of the rules are statically pre-configured (i.e., available and active at all times); other rules are dynamically added/deleted when tunnels are established or destroyed."

-

#22 Type: ER TF: TF2 Clause: 4.1 Page: 21 Line: 21 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

All VLCPDUs carry a payload. Could be clarified.

Replace "Any payload-carrying VLCPDU " with "Any non-VLC_CONFIG VLCPDU "

-

#23 Type: ER TF: TF2 Clause: 4.1 Page: 21 Line: 23 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

All VLCPDUs carry a payload. Could be clarified.

Replace "Any payload-carrying VLCPDU " with "Any VLCPDU "

-

#24 Type: TR TF: TF2 Clause: 4.3.1.2 Page: 24 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: VLC primitives

VLCSI:VLCPDU primitives and semantics are missing.

Insert text as shown in tf2_2008_noll_10.pdf

See comment #10 for proposed text

#27 Type: TR TF: TF2 Clause: 4.3.1.4 Page: 24 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: VLC primitives

The semantic in subclause 4.3.1.4 for OMCI is not consistent with 5.2.3, the indication() primitive is missing "when generated" and "effect of receipt" subclauses, the text states that the OMCI client communicates with the CTE, which is incorrect since it communicates with the VLC sublayer.

Update per tf2_2008_noll_7.pdf

-

#10 Type: TR TF: TF2 Clause: 4.3.1.1 Page: 24 Line: 1 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: VLC primitives

Missing definitions of primitives used by the VLC sublayer

1) Add definitions for MACCSI:MA_DATA primitives and simply reference 802.3 2) Add definitions for VLCSI:MA_DATA primitives and simply reference 802.3 3) Add definitions for VLCSI:VLPDU primitives The exact changes are shown in tf2_2008_kramer_3.pdf

Changes per comment. However, we need to discuss at the call whether "Implementation of the VLCSI:VLCPDU.request primitive is mandatory." statements should be converted into "shall" statements and become testable.

#4 Type: T TF: TF2 Clause: 4.3.1.3 Page: 24 Line: 7 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: VLC primitives

There is no VLCSI:OAMPDU interface and VLCSI:OAMPDU request and indication primitives do not exist. The OAMPDU interface and primitives exist only at the OAMSI interface between the OAM sublayer and OAM client. See Figure 4-2.

Delete subclause 4.3.1.3

-

#25 Type: TR TF: TF2 Clause: 4.3.1.4 Page: 24 Line: 11 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text reads "The OMCI Client communicates with the VLC CTE using the following service primitives:". This is incorrect as the OMCI Client communicates with the sublayer and not the CTE.

Replace "The OMCI Client communicates with the VLC CTE using the following service primitives:" with "The OMCI Client communicates with the VLC sublayer using the following service primitives:"

-

#26 Type: TR TF: TF2 Clause: 4.3.1.4.1.1 Page: 24 Line: 18 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text reads "from the OMCI Client entity to the VLC CTE:". This is incorrect as the OMCI Client communicates with the sublayer and not the CTE.

Replace "from the OMCI Client entity to the VLC CTE" with "from the OMCI Client entity to the VLC sublayer"

-

#9 Type: T TF: TF2 Clause: 4.3.1.4.1.2 Page: 24 Line: 22 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: VLC primitives

Set of parameters in VLCSI:OMCI primitives does not correspond to OMCI frame that we defined in 5.2.3. At the last meeting, we decided to follow G.988 definition and use 8-byte globally-unique ONU serial numbers. But the primitives show separate vendor_id and 4-byte vendor-specific serial number.

Align OMCI primitive parameters with the OMCI VLCPDU. Add references to 5.2.3. Make the same change for the indication primitive in 4.3.1.4.2

-

#3 Type: TR TF: TF2 Clause: 4.3.1.4.2 Page: 25 Line: 20 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: VLC primitives

Missing "4.3.1.4.2.3 When Generated" and "4.3.1.4.2.4 Effects of Receipt" subclauses

Unless a text is suggested by another comment, add the two missing subclause headers with editor's note that text is needed.

See comment #27

#28 Type: ER TF: TF2 Clause: 5.1 Page: 26 Line: 12 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

This statement could be more clear.

Replace "NOTE – The station identified by DestinationAddress might not be VLC-aware, in which case the VLC tunnel is terminated before the VLCPDU reaches that station." with "NOTE – The station identified by DestinationAddress might not be VLC-aware, in which case the VLC tunnel must be terminated before the xPDU can be delivered to that station."

The rewording does not offer any visible improvement while adding also a "MUST" keyword that is not expected to be used in the draft.

#29 Type: ER TF: TF2 Clause: 5.1 Page: 26 Line: 17 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

This statement could be more clear.

Replace "NOTE – The station identified by SourceAddress might not be VLC-aware, in which case the VLC tunnel is initiated after the xPDU leaves that station." with "NOTE – The station identified by SourceAddress might not be VLC-aware, in which case the xPDU must be encapsulated in a VLCPDU after the xPDU leaves the station identified by SourceAddress."

The rewording does not offer any visible improvement while adding also a "MUST" keyword that is not expected to be used in the draft.

#31 Type: TR TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The description for L2_Subtype has "(e.g. MAC-in-MAC)". While MAC-in-MAC is a completely valid frame to put in L2_Subtype VLCPDUs, this might cause confusion about the purpose of the standard.

remove "(e.g. MAC-in-MAC)"

-

#11 Type: T TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

VLC encapsulation is especially suitable for Slow Protocol tunneling and can carry all Slot protocol subtypes with zero overhead and minimal frame modifications, as long as Slow Protocol subtypes are aligned with VLC subtypes, as is already done for OAM subtype 0x03.

Reserve the range of subtypes 0x01 to 0x0A for use by Slow Protocols. This also will consolidate unused/reserved ranges in Table 5-1 from 4 to 3. The proposed Table 5-1 is shown in tf2_2008_kramer_4.pdf.

-

#32 Type: TR TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The description for L3_Subtype has "(plus TPID)". Align with field names used in 5.2.5

Replace "represents a generic L3 packet (plus TPID) carried within the VLCPDU " with "represents a generic L3 packet and its Ethertype which are carried within the VLCPDU "

Replace "represents a generic L3 packet (plus TPID) carried within the VLCPDU " with "represents a generic L3 packet and its Ethertype carried within the VLCPDU "

#30 Type: TR TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The table reserves two subtypes for VLC Discovery. Subclause 4.1.1 specifically removes discovery from the scope of the standard. How is it possible to allocate any values to discovery when the function is not specified?

Replace "Reserved for VLC Discovery protocol; ignored on reception" with "Reserved; ignored on reception"

-

#14 Type: T TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Table 5-1 uses VLC_config subtype name, which following the 1904-adopted styles should be VLC_CONFIG (in Courier New). But VLC_CONFIG is also used as a VLCPDU message name (60 occurrences). We should change either the subtype or the message name to avoid ambiguity. In table 5-1, first row, we use VLC_Request and VLC_Response VLCPDU. These message names are not used anywhere else in the draft. That is because we have one message VLC_CONFIG that is used as both the request and the response (determined by the MsgCode field).

In Table 5-1: 1) Change VLC_config to VLC_SUBTYPE (2 instances) 2) Use the following description for the VLC_SUBTYPE row: VLC_SUBTYPE identifies VLC_CONFIG VLCPDUs used for configuring the VLC Classification and Translation Engine (see 6.1). Apply proper format to VLC_SUBTYPE and VLC_CONFIG.

-

#13 Type: E TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Currently, draft uses very inconsistent formatting for the special elements: constants, variables, functions, primitive names, field names, etc.

Align formats of all special elements with what was used in other 1904 standards (1904.1 and 1904.1-ConformanceN). All assigned codepoints (VLC_ETHERTYPE, field codes in Table 6-2, VLC subtypes in Table 5-1) are to be treated (formatted) as constants. Note that table 5-1 in tf2_2008_kramer_4.pdf shows the correct format for subtypes/constants (Courier New ALL_CAPS with underscores)

Note for implementation: implement last, after all comments and new material is incorporated into the draft.

#33 Type: ER TF: TF2 Clause: 5.2 Page: 27 Line: 8 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The word "represents" is used in the descriptions of the subtype values. "identifies" would be more accurate and would align with the language used in the description of VLC_config

In each table entry replace "represents" with "identifies"

#34 Type: ER TF: TF2 Clause: 5.2.2 Page: 27 Line: 14 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The word "generic" is used to describe a type of VLCPDU, but this is not well defined. Each time this occurs, it appears to mean simply "VLCPDU". This occurs in multiple locations throughout the text.

Replace "generic VLCPDU" with "VLCPDU" in 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 8.1.1

#35 Type: ER TF: TF2 Clause: 6.1 Page: 34 Line: 11 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

Figure 6-1 is referenced in subclause 6.1, but does not appear until subclause 6.1.1.1.1

Move figure 6-1 to subclause 6-1. (also shown in tf2_2008_noll_6.pdf)

Figure is anchored at the top of the page to avoid wasting more than half of a page of empty space.

#36 Type: TR TF: TF2 Clause: 6.1 Page: 34 Line: 11 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The sentence states "Fundamentally, a CTE instance is simply a table that stores multiple rules." Is it necessary that a CTE contains "multiple rules", or is it possible that the CTE contains zero or more rules?

Replace "multiple rules" with "zero or more rules".

Replace "multiple rules" with "at least one rule".

#37 Type: TR TF: TF2 Clause: 6.1 Page: 34 Line: 12 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text states "Some of the rules are statically pre-configured (i.e., available and active at all times); other rules are dynamically added/deleted by NMS when tunnels are established or destroyed." - I believe that the latest draft removes any necessary static entries (e.g. for VLC Config) and all rules are installed by the NMS.

Replace "Some of the rules are statically pre-configured (i.e., available and active at all times); other rules are dynamically added/deleted by NMS when tunnels are established or destroyed." with "Rules are dynamically added or deleted by NMS to establish or destroy tunnels, respectively."

#38 Type: TR TF: TF2 Clause: 6.1.1.1.1 Page: 35 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

Figure 6-1 contains blocks for "VLC Interface Adapter", "OMCI Interface Adapter", "OAM Interface Adapter", Dispatcher, and Multiplexor, but none of these blocks is described in the text.

Modify the text according to tf2_2008_noll_6.pdf

It is unclear what the specific changes need to be done. Text seems to be moved around but the newly added text is hanging, i.e., it is placed directly under L1 header, which created problems for cross referencing. A new L2 header would need to be added to introduce new proposed text.

#40 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 36 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

It is also not possible to classify on fields deeper than ETH_TYPE_LEN in an L2 frame, nor on arbitrary fields in the payload of a VLCPDU. It would be helpful for classifying L2 and L3 types to be able to reference the payload of an xPDU or of the VLCPDU. For example, one would like to classify only L3 frames with DHCP.

Add field_codes as shown in tf2_2008_noll_11.pdf

#57 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 36 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

Table 6-1 defines the VLC_ETH_TYPE field code. The field this code references always has the value 0xA8-C8. Does it make sense for rules to compare VLC_ETH_TYPE to VLC_TYPE or to have actions that add the VLC_ETH_TYPE field with a value of VLC_TYPE?

Add the text "the VLC_ETH_TYPE field will always contain the value 0xA8-C8" to the description of VLC_ETH_TYPE.

Already defined as a constant in 6.2.2 Constants

#39 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 36 Line: 5 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The text states "The field codes are shown in all capital letters as opposed to the field names, which are shown as a mixture of capital and lowercase letters" However, none of the references tables calls out a "field name". I think "field name" refers to the italicized names in the Description column. Also, not all table entries have an italicized field name. Lastly, these field names are not used elsewhere in the draft. Are they even necessary?

Remove the field names from the description column and remove "The field codes are shown in all capital letters as opposed to the field names, which are shown as a mixture of capital and lowercase letters". If this is not acceptable to the TF, then Replace "The field codes are shown in all capital letters as opposed to the field names, which are shown as a mixture of capital and lowercase letters" with "The field codes are shown in all capital letters as opposed to the field names, which are shown in italics and are a mixture of capital and lowercase letters" and italicize "Outermost MAC Destination Address", "Outermost MAC Source Address", "Outermost Ethernet Type/Length" in table 6-2

Replace "The field codes are shown in all capital letters as opposed to the field names, which are shown as a mixture of capital and lowercase letters" with "The field codes are shown in all capital letters as opposed to the field names, which are shown in italics and are a mixture of capital and lowercase letters" and italicize "Outermost MAC Destination Address", "Outermost MAC Source Address", "Outermost Ethernet Type/Length" in table 6-2

#41 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 36 Line: 5 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

It is currently only possible to classify and manipulate two VLAN tags. It is common for an Ethernet frame to have 3 or more tags and for a device to classify on 3 or more tags.

Add field codes as shown in tf2_2008_noll_9.pdf

Topic was debated via email and conclusion was that support for at least two tag manipulation is required per 802.1Q, while anything beyond that is vendor specific.

#44 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 37 Line: 4 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

Table 6-2 indicates "The result of the COPY operation is undefined if the field indicated by the TARGET_FIELD_CODE is already present in the frame or if the field indicated by the SOURCE_FIELD_CODE is not present in the frame. The result is also undefined if the fields identified by the TARGET_FIELD_CODE and SOURCE_FIELD_CODE are not of the same size." Undefined behavior leads to interoperability issues. It seems that the most likely to be implemented behavior is to REPLACE the target field if it is already present *and* of a compatible length; do nothing if the source field is not present, do nothing if the fields are of incompatible length.

Replace "The result of the COPY operation is undefined if the field indicated by the TARGET_FIELD_CODE is already present in the frame or if the field indicated by the SOURCE_FIELD_CODE is not present in the frame. The result is also undefined if the fields identified by the TARGET_FIELD_CODE and SOURCE_FIELD_CODE are not of the same size." with "The result of the COPY operation is the same as REPLACE if the field indicated by the TARGET_FIELD_CODE is already present in the frame and the fields are of the same length. The result of the COPY operation is to make no change if the field indicated by the SOURCE_FIELD_CODE is not present in the frame. The result is to make no change if the fields identified by the TARGET_FIELD_CODE and SOURCE_FIELD_CODE are not of the same size."

Replace "The result of the COPY operation is undefined if the field indicated by the TARGET_FIELD_CODE is already present in the frame or if the field indicated by the SOURCE_FIELD_CODE is not present in the frame. The result is also undefined if the fields identified by the TARGET_FIELD_CODE and SOURCE_FIELD_CODE are not of the same size." with "The result of the COPY operation is the same as REPLACE if the field indicated by the TARGET_FIELD_CODE is already present in the frame and the fields are of the same length. If the field indicated by the SOURCE_FIELD_CODE is not present in the frame, the COPY operation makes no changes to the frame. If fields identified by the TARGET_FIELD_CODE and SOURCE_FIELD_CODE are not of the same size, the COPY operation makes no changes to the frame."

#43 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 37 Line: 4 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

Table 6-2 indicates "The result of the REPLACE operation is undefined if the field indicated by the TARGET_FIELD_CODE is not present in the frame". Undefined behavior leads to interoperability issues. It seems that most likely to be implemented behavior will be to treat the REPLACE as a do-nothing.

Replace "The result of the REPLACE operation is undefined if the field indicated by the TARGET_FIELD_CODE is not present in the frame" with "The result of the REPLACE operation is to make no changes if the field indicated by the TARGET_FIELD_CODE is not present in the frame"

Replace "The result of the REPLACE operation is undefined if the field indicated by the TARGET_FIELD_CODE is not present in the frame" with "When the field indicated by the TARGET_FIELD_CODE is not present in the frame, the REPLACE operation makes no changes to the frame."

#42 Type: TR TF: TF2 Clause: 6.1.1.1.2 Page: 37 Line: 4 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

Table 6-2 indicates "The result of the REMOVE operation is undefined if the field indicated by the TARGET_FIELD_CODE is not present in the frame". Undefined behavior leads to interoperability issues. It seems that the most likely to be implemented behavior will be to treat the REMOVE as a do-nothing.

Replace "The result of the REMOVE operation is undefined if the field indicated by the TARGET_FIELD_CODE is not present in the frame" with "The result of the REMOVE operation is to make no changes if the field indicated by the TARGET_FIELD_CODE is not present in the frame"

Replace "The result of the REMOVE operation is undefined if the field indicated by the TARGET_FIELD_CODE is not present in the frame" with "When the field indicated by the TARGET_FIELD_CODE is not present in the frame, the REMOVE operation makes no changes to the frame."

#45 Type: TR TF: TF2 Clause: 6.1.2 Page: 38 Line: 22 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

When reading this draft, one must regularly refer back this subclause to remember the meaning of these labels. It would be easier to read the text if the labels were more clear. An "Ingress Tunnel Exit Rule" is simply a Tunnel Exit Rule that is applied in the Ingress CTE. Similarly, an "Egress Tunnel Entrance Rule" is a Tunnel Entrance Rule that is applied in the Egress CTE.

changes as shown in tf2_2008_noll_1b.pdf

It is not clear what the proposed changes simply. Discussion at the meeting is likely needed.

#46 Type: TR TF: TF2 Clause: 6.1.3 Page: 39 Line: 20 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

The text states "In a VLAN-enabled L2 network, the management entity responsible for VLC port configuration and provisioning is expected to be aware of VLAN topology and to participate in MVRP if necessary." - This text creates a requirement for the entity elsewhere referred to as the NMS. This external entity is not specified by this standard and placing requirements on such an entity should be out of scope of the standard.

Strike the text "In a VLAN-enabled L2 network, the management entity responsible for VLC port configuration and provisioning is expected to be aware of VLAN topology and to participate in MVRP if necessary."

This is not a requirement, just a statement of fact from 802.1Q architecture perspective.

#63 Type: TR TF: TF2 Clause: 6.2.2 Page: 40 Line: 29 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: post-deadline

The DST_ADDR description reads "This constant identifies a field in a frame, as defined in Table 6 2." This doesn't tell the reader which subtype in Table 6-2 should be referenced.

Replace "This constant identifies a field in a frame, as defined in Table 6 2." with "This constant identifies the DST_ADDR field in a frame, as defined in Table 6 2."

The whole point of aligning variable and field code names was to allow for 1:1 mapping, without unnecessary repetition. No changes needed.

#64 Type: TR TF: TF2 Clause: 6.2.2 Page: 40 Line: 31 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: post-deadline

The ETH_TYPE_LEN description reads "This constant identifies a field in a frame, as defined in Table 6 2." This doesn't tell the reader which subtype in Table 6-2 should be referenced.

Replace "This constant identifies a field in a frame, as defined in Table 6 2." with "This constant identifies the ETH_TYPE_LEN field in a frame, as defined in Table 6 2."

The whole point of aligning variable and field code names was to allow for 1:1 mapping, without unnecessary repetition. No changes needed.

#62 Type: TR TF: TF2 Clause: 6.2.2 Page: 41 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: post-deadline

The OMCI_SUBTYPE description reads "This constant represents a VLCPDU subtype as defined in Table 5 1." This doesn't tell the reader which subtype in Table 5-1 should be referenced.

Replace "This constant represents a VLCPDU subtype as defined in Table 5 1." with "This constant represents the OMCI_Subtype VLC subtype value as defined in Table 5 1."

The whole point of aligning variable and field code names was to allow for 1:1 mapping, without unnecessary repetition. No changes needed.

#65 Type: TR TF: TF2 Clause: 6.2.2 Page: 41 Line: 9 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: post-deadline

The SRC_ADDR description reads "This constant identifies a field in a frame, as defined in Table 6 2." This doesn't tell the reader which subtype in Table 6-2 should be referenced.

Replace "This constant identifies a field in a frame, as defined in Table 6 2." with "This constant identifies the SRC_ADDR field in a frame, as defined in Table 6 2."

The whole point of aligning variable and field code names was to allow for 1:1 mapping, without unnecessary repetition. No changes needed.

#66 Type: TR TF: TF2 Clause: 6.2.2 Page: 41 Line: 11 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: post-deadline

The SUBTYPE description reads "This constant identifies a field in a frame, as defined in Table 6 2." This doesn't tell the reader which subtype in Table 6-2 should be referenced. Further, there is no "SUBTYPE" in table 6-2.

Replace "SUBTYPE" with "VLC_SUBTYPE" and replace "This constant identifies a field in a frame, as defined in Table 6 2." with "This constant identifies the VLC_SUBTYPE field in a frame, as defined in Table 6 2."

The proposed change is wrong - SUBTYPE is just any of the defined subtypes.

#58 Type: TR TF: TF2 Clause: 6.2.3 Page: 41 Line: 34 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text refers to the "RemoveField" method. This method should be defined in the "Functions" section.

Add the text according to tf2_2008_noll_13.pdf

-

#47 Type: TR TF: TF2 Clause: 6.2.4 Page: 42 Line: 4 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text states "If multiple rules matched the frame, the function returns an identification of any of these rules." - This leaves the outcome of rules processing indeterminate if multiple rules match. Typically, rules are processed to find the most specific match and/or first match in an ordered set of rules.

If the standard is to remain silent on what to do when a frame matches multiple rules, then change "This function returns the identification of an ingress rule that matched the frame contained in RxInputPdu structure. If multiple rules match the frame, the function returns an identification of any of these rules. If none of the rules matched the frame, a special value none is returned." to "This function returns the identification of one and only one ingress rule that matches the frame contained in the RxInputPdu structure. It is out of the scope of this standard to specify how this function chooses its return value if multiple rules match the frame. If none of the rules matches the frame, a special value, none, is returned."

-

#59 Type: TR TF: TF2 Clause: 6.2.6 Page: 43 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Fig 6-4 refers to a "ReplaceField" method that is not defined.

Add the text according to tf2_2008_noll_14.pdf

-

#61 Type: TR TF: TF2 Clause: 6.2.6 Page: 43 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: post-deadline

The state diagram refers to OAM_SUBTYPE, but it is not defined in 6.2.2

Add the following to 6.2.2: "OAM_SUBTYPE This constant represents the OAM_Subtype VLC subtype value as defined in Table 5 1."

Add the following to 6.2.2: "OAM_SUBTYPE This constant identifies a field in a frame, as defined in Table 5 1."

#48 Type: TR TF: TF2 Clause: 6.2.6 Page: 43 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

The state diagram in figure 6-4 uses incorrect syntax to assert VLCSI:OMCI.indication() as defined in 4.3.1.4.1.2.

Replace "VLCSI:OMCI.indication(RxOutputPdu)" with "VLCSI:OMCI.indication(omci_serial_number, omci_frame_sdu)" in the PASS_TO_OMCI_CLIENT state. Adjust the state diagram to parse the RxOutputPdu to provide these parameters to the primitive.

Replace "VLCSI:OMCI.indication(RxOutputPdu)" with "VLCSI:OMCI.indication(omci_serial_number, omci_frame_sdu)" in the PASS_TO_OMCI_CLIENT state. Reason for change: Typo was fixed The change "Adjust the state diagram to parse the RxOutputPdu to provide these parameters to the primitive." is not clear to me.

#67 Type: TR TF: TF2 Clause: 6.3.1 Page: 44 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: post-deadline

Why isn't OAM frame transmit covered in this section?

Add the following to section 6.3.1 "An OAMPDU is received from the higher-layer entity (OAM sublayer) via the VLCSI:MA_DATA.request() primitive. Conversion of an OAMPDU to an VLCPDU is accomplished by provisioning the egress CTE rules to match on a MAC destination address equal to the slow protocols address, and ethernet type/length equal to the slow protocols type, and slow protocols subtype equal to the OAM subtype. The CTE rule action for frames matching an OAMPDU will replace the MAC destination address with the MAC address of the intended tunnel exit point and replace the Ethernet Type/Length with the VLC_type value. The resulting VLCPDU is then passed to the MAC sublayer by asserting the MACSI:MA_DATA.request() primitive.

-

#51 Type: TR TF: TF2 Clause: 6.3.3 Page: 44 Line: 35 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text refers to the "AddField" method. This method should be defined in the "Functions" section.

Add the text according to tf2_2008_noll_8.pdf

-

#50 Type: TR TF: TF2 Clause: 6.3.3 Page: 45 Line: 5 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text states "A CTE egress rule is considered misconfigured if applying this rule to the TxInputPdu results in a malformed Ethernet frame being stored in the TxOutputPdu structure.". There is no corresponding action, alert, notification, etc that accompanies the fact that a rule is misconfigured and seems to not provide clarification to expected behavior.

Strike the sentence.

-

#52 Type: TR TF: TF2 Clause: 6.3.4 Page: 45 Line: 10 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text states "If multiple rules match the frame, the function returns an identification of any of these rules." - This leaves the outcome of rules processing indeterminate if multiple rules match. Typically, rules are processed to find the most specific match and/or first match in an ordered set of rules. The description text uses "TxInputPdu" to refer to the input parameter, but the function declaration uses "input_pdu".

change "This function returns the identification of an ingress rule that matched the frame contained in TxInputPdu structure. If multiple rules matched the frame, the function returns an identification of any of these rules. If none of the rules matched the frame, a special value none is returned." to "This function returns the identification of one and only one egress rule that matches the frame contained in the input_pdu structure. It is out of the scope of this standard to specify how this function chooses its return value if multiple rules match the frame. If none of the rules matches the frame, a special value, none, is returned. "

-

#53 Type: TR TF: TF2 Clause: 6.3.6 Page: 46 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The state diagram in fig 6-5 uses "InputPdu" in the transition to FORM_OMCI_FRAME. This is an undefined variable.

Change "InputPdu" to "TxInputPdu"

-

#5 Type: T TF: TF2 Clause: 7 Page: 47 Line: 1 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Clause 7 needs an introduction. Also, currently there is no need for 7.1<TBD> subclause.

Add the following text under main clause 7 header: "This subclause describes protocol-specific behavior or modes of operation that require special provisioning or configuration of the VLC sublayer." Delete "7.1<TBD> "

-

#54 Type: TR TF: TF2 Clause: 7.2.2 Page: 51 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

Table 7-1 shows two cells in the "Conditions" column. It is unclear how this should be interpreted. Is it supposed to be two sets of conditions with the same action? If so, is it an OR or AND between the two cells? The text in 6.1.1 indicates that the conditions in a rule are ANDed together. Applying that would mean that the conditions in Table 7-1 will not accomplish the intended behavior and that Table 7-1 is misformatted.

Replace table 7-1 as shown in tf2_2008_noll_3.pdf

I fail to see what the proposed changes clarify or help with in interpreting the table

#55 Type: ER TF: TF2 Clause: 7.2.2 Page: 51 Line: 1 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Table 7-1 references "VLC_DST_ADD" in the actions column. There is no such field name. Probably should be VLC_DST_ADDR

Replace VLC_DST_ADD with VLC_DST_ADDR

-

#68 Type: TR TF: TF2 Clause: 8.1.2 Page: 54 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: post-deadline

Table 8-4 has "V" as the length of the FieldCode field. Isn't the FieldCode always one octet in length?

Change "V" to "1"

Change "V" to "1" in Field Size column for FieldCode

#69 Type: TR TF: TF2 Clause: 8.1.2 Page: 54 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: post-deadline

Table 8-4 has "L" as the length of the Value field. This should be "V"

Change "L" to "V"

Change "L" to "V" in Field Size column for Value

#6 Type: TR TF: TF2 Clause: 8.2 Page: 55 Line: 1 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Reject Commenter Satisfaction: None Category: -

Section 8.2 Management Attributes is empty.

Use text from tf2_2008_kramer_6.pdf

Contribution not available at this time for review

#56 Type: TR TF: TF2 Clause: 8A.1.2.1 Page: 59 Line: 26 Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

DA and SA and SP_SUBTYPE are used as field codes in the tables throughout Annex 8A. These are invalid field codes. There is also inconsistent casing of other parameters throughout the tables.

Update tables as shown in tf2_2008_noll_4.pdf

Update tables as shown in tf2_2008_noll_4.pdf, less any numbering and cross reference changes.

#1 Type: T TF: TF2 Clause: 8A.4 Page: 76 Line: 1 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The use case title says "Remote PON Management over VLC use case", but the use case is only applicable to ITU-T PON, since it uses OMCI. We may later add a use case for remote IEEE PON management.

Change the title to "Remote ITU-T PON Management over VLC use case"

#71 Type: ER TF: TF2 Clause: 8A.4 Page: 76 Line: 12 Commenter: Pradeep K Kondamuri / Ciena

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The literal used for OLT MAC (L) in the text does not match with what's used in Figure 8A-4.

Replace all occurrences of "L" in 8A.4 text with "T"

#15 Type: TR TF: TF2 Clause: 8A.4 Page: 76 Line: 12 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Figure 8A-4 refers to OLT T and shows MAC address being T, but the text uses L.

Replace standalone "L" with "T" in 8A.4 (when in refers to OLT L or MAC address L (8 occurrences)

#72 Type: TR TF: TF2 Clause: 8A.4.2 Page: 76 Line: 18 Commenter: Pradeep K Kondamuri / Ciena

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

The text in 8A.4.2 does not clearly state that two different VLC tunnels are used for OAM and OMCI

Replace the text in 8A.4.2 with the following text: "Since the Manager is not directly connected to the managed OLT and ONUs, the OAM and OMCI messages need to be carried over VLCPDUs. Since the ONUs in this use case are not VLC aware, OMCI messages are carried over VLCPDUs between the manager and the OLT and in the OLT the OMCI messages are extracted out of VLCPDUs and forwarded to ONUs by the OMCI relay entity shown in Figure 8A-4. Therefore, before the Manager and the OLT are able to exchange OAM messages and the manager and ONUs are able to exchange OMCI messages, two sets of VLC tunnels need to be provisioned: A forward VLC tunnel from Manager to OLT to carry OLT OAM messages. A reverse VLC tunnel from OLT to Manager to carry OLT OAM messages. A forward VLC tunnel from Manager to OLT to carry ONU OMCI messages. A reverse VLC tunnel from OLT to Manager to carry ONU OMCI messages. The establishment of each VLC tunnel involves provisioning of multiple rules to configure the VLC tunnel entrance and exit points. To establish the VLC tunnels from PON controller to OLT, the following rules are provisioned: A VLC tunnel entrance rule at the egress of Manager for OLT OAM messages A VLC tunnel entrance rule at the egress of Manager for ONU OMCI messages To establish the VLC tunnels from OLT to Manager, the following rules are provisioned: A VLC tunnel entrance rule at the egress of OLT for OLT OAM messages A VLC tunnel entrance rule at the egress of OLT for ONU OMCI messages No tunnel exit rule is necessary at the ingress of Manager M or at the ingress of OLT, since the VLC sublayer provides a built-in translation of VLCPDUs with subtype OAM_subtype into OAMPDUs and a built-in translation of VLCPDUs with subtype OMCI_subtype into OMCI frames (see Receive Path Specification in 6.2) Each rule is provisioned using a separate VLC_CONFIG message."

#12 Type: E TF: TF2 Clause: 8A.4.2 Page: 77 Line: 1 Commenter: Glen Kramer / Broadcom

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: -

Paragraph on page 77 lines 1-4 needs to have left-right justified format.

Apply proper format to the paragraph

#70 Type: TR TF: TF2 Clause: 8A.4.2.1 Page: 78 Line: - Commenter: Kevin A. Noll / Tibit Communications

Comment Status: Proposed Response Status: Accept Commenter Satisfaction: None Category: post-deadline

Table 8A-13 refers to the OLT MAC address as "L", but fig 8A-4 uses "T"

In table 8A-13, change "L" to "T" in the actions column and Note

#73 Type: ER TF: TF2 Clause: 8A.4.3 Page: 79 Line: 10 Commenter: Pradeep K Kondamuri / Ciena

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

singular vs plural

replace "Therefore, to delete a tunnel..." with "Therefore, to delete both the VLC tunnels..."

replace "Therefore, to delete a tunnel..." with "Therefore, to delete both VLC tunnels..."

#74 Type: ER TF: TF2 Clause: 8A.4.3 Page: 79 Line: 13 Commenter: Pradeep K Kondamuri / Ciena

Comment Status: Proposed Response Status: AIP Commenter Satisfaction: None Category: -

singular vs plural

replace "To delete a VLA tunnel..." with "To delete both the VLC tunnels..."

replace "To delete a VLA tunnel..." with "To delete both VLC tunnels..."