#15 Type: T TF: TF2 Clause: 4.3, 6.2 Page: Line: - Commenter: Kevin A Noll / Tibit Communications

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

IEEE 1904.2 was originally chartered because there was a need to allow "remote" management of EPON ONUs or EPOC CNUs, which is naturally a one to many (manager to ONU) relationship. The architecture and rules defined in the D2.0 text describe a one-to-one relationship which aligns with IEEE 802.3. This alignment is understandable, but raises a question of scalability. Using the draft as written, it would be necessary to have a one-to-one relationship (one manager MAC to one ONU MAC). If an implementer wishes to manage multiple ONUs from a single "server", which is a completely reasonable expectation, then the "server" would need to have multiple MACs. It is not uncommon for a single S-OLT to have 64 or more PON ports, each serving 64 to 128 ONUs. This scale would require the "manager" to have up to 4096 to 8192 MACs, and it would not be unreasonable to expect a single "manager" server to support multiple S-OLTs. How does the draft standard support this level of scalability?

See tf2_2011_noll_1.pdf. This comment should be rejected as it has no proposed changes.

Rightfully so, no proposed changes to the draft at this time.

#1 Type: TR TF: TF2 Clause: 0 Page: 0 Line: 0 Commenter: Glen Kramer / Broadcom

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: Satisfied Category: -

This is a follow-up for the issue discussed in comment #2 againts D1.1. In all the rule examples, we compare two different constants, when the intent is to compare a field value to a constant value. The proposed solution was outlined in tf2_2010_kramer_1.pdf. In addition, throughout the draft, the same field uses many different names. For example, DstAddr, DestAddr, DestinationAddres. Sometimes, a field is accessed via field Id, sometimes it is accessed directly using the fiewld name.. Finally, many special elements (frame fields, variables, primitives, etc.) use different formating in different parts of the draft.

All the changes are shown in tf2_2011_kramer_1_diff.pdf and tf2_2011_kramer_1_clean.pdf 1) Field IDs were replaced everywhere with field names. Field Ids only introduced and used where Rule TLV is defined. 2) Field names were aligned across the draft 3) All special elements were formatted using the scheme adopted in 1904.1: - Message names, Interface names, TLV names, management attributes - Times New Roman italcs - frame fields, variables, constants, functions, primitives, TLV fields - Courier New 4) Tables in Anenx 8A reformated according to the style used in the rest of the document.

-

#2 Type: E TF: TF2 Clause: FM Page: 2 Line: 1 Commenter: Marek Hajduczenia / Charter

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

Abstract is missing

Use the text for abstract as defined in 1.1 right now, i.e., "This standard describes control mechanisms and management methods necessary to enable creation and 3 operation of virtual links in Ethernet-based subscriber access networks. The key characteristics of the Virtual Link Control (VLC) mechanisms are: - The ability to transit Layer 2 bridges in a single IEEE 802 Media Access Control (MAC) domain to allow remote device management; - Extensibility to accommodate new protocols and new types of devices; - The ability to simultaneously send messages to multiple VLC-aware stations. The standard describes the message format, as well as processing operations at the stations participating in the VLC protocol."

use the following text: "This standard describes control mechanisms and management methods necessary to enable creation and operation of virtual links in Ethernet-based subscriber access networks. The key characteristics of the Virtual Link Control (VLC) mechanisms are: - The ability to transit Layer 2 bridges in a single IEEE 802 Media Access Control (MAC) domain to allow remote device management; - Extensibility to accommodate new protocols and new types of devices; - The ability to simultaneously send messages to multiple VLC-aware stations. The standard describes the message format, as well as processing operations at the stations participating in the VLC protocol."

#3 Type: E TF: TF2 Clause: FM Page: 2 Line: 2 Commenter: Marek Hajduczenia / Charter

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

Keywords are missing

Use the following list of keywords: Virtual Link Control (VLC) protocol, remote station management; organization specific extensions, VLC Protocol Data Unit (VLC PDU)

Use the following list of keywords: Virtual Link Control (VLC) protocol, remote station management, organization specific extensions, VLC Protocol Data Unit (VLCPDU)

#4 Type: E TF: TF2 Clause: FM Page: 4 Line: 2 Commenter: Marek Hajduczenia / Charter

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

Text of the introduction is missing

Use the text for abstract as defined in 1.1 right now, i.e., "This standard describes control mechanisms and management methods necessary to enable creation and 3 operation of virtual links in Ethernet-based subscriber access networks. The key characteristics of the Virtual Link Control (VLC) mechanisms are: - The ability to transit Layer 2 bridges in a single IEEE 802 Media Access Control (MAC) domain to allow remote device management; - Extensibility to accommodate new protocols and new types of devices; - The ability to simultaneously send messages to multiple VLC-aware stations. The standard describes the message format, as well as processing operations at the stations participating in the VLC protocol."

Use the text for abstract as defined in 1.1 right now, i.e., "This standard describes control mechanisms and management methods necessary to enable creation and operation of virtual links in Ethernet-based subscriber access networks. The key characteristics of the Virtual Link Control (VLC) mechanisms are: - The ability to transit Layer 2 bridges in a single IEEE 802 Media Access Control (MAC) domain to allow remote device management; - Extensibility to accommodate new protocols and new types of devices; - The ability to simultaneously send messages to multiple VLC-aware stations. The standard describes the message format, as well as processing operations at the stations participating in the VLC protocol."

#5 Type: ER TF: TF2 Clause: 1.2 Page: 13 Line: 24 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: TBD Category: -

techniques is misspelled

replace "technigues" with "techniques"

-

#6 Type: ER TF: TF2 Clause: 1.2 Page: 13 Line: 25 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: TBD Category: -

concept is misspelled

replace "consept" with "concept"

-

#7 Type: ER TF: TF2 Clause: 3.5 Page: 20 Line: 9 Commenter: Marek Hajduczenia / Charter

Comment Status: Resolved Response Status: AIP Commenter Satisfaction: Satisfied Category: -

Text of the PICS introduction was copied from 1904.1 and not updated. There is no package information in this document

Replace text on page 20, lines 9 - 20 to read as follows "Each PICS entry is uniquely identified by an item number, comprising a three-letter mnenomic, followed by a sequential number."

Replace text on page 20, lines 17 - 29 to read as follows "Each PICS entry is uniquely identified by an item number, comprising a three-letter mnenomic representing a functional area, followed by a sequential number."

#8 Type: TR TF: TF2 Clause: 4.1 Page: 23 Line: 9 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Reject Commenter Satisfaction: Satisfied Category: -

This paragraph implies that impelementation of VLC in an end station is optional, but is mandatory in a multiport device.

Replace the sentence "Both the VLC client and VLC sublayer are optional in an end station." with "The VLC client is optional and the VLC sublayer is optional in a station". Also, add "Station: An end station or bridge, as defined in IEEE Std 802"

The test states clearly "In a multi-port device, the VLC sublayer and VLC client may be implemented in any subset of the device ports", which expresses the fact that in multi-port device it is also optional.

#9 Type: ER TF: TF2 Clause: 4.3.1.4.1.4 Page: 28 Line: 22 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: TBD Category: -

Cross reference is incomplete

Replace 4.3.1.x with cross reference to 4.3.1.1.1

-

#10 Type: ER TF: TF2 Clause: 4.3.1.4.1.4 Page: 28 Line: 28 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: TBD Category: -

Cross reference is incomplete

Replace 4.3.1.x with cross reference to 4.3.1.3.2

This comment is against page 45, line 28

#11 Type: ER TF: TF2 Clause: 6.2.1 Page: 40 Line: 3 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: TBD Category: -

Subclause 6.2.1 describes a notation for describing CTE rules. This notation is not used anywhere in the draft standard.

Delete "A rule is represented by the following notation: " and the following text to the end of the subclause.

-

#12 Type: ER TF: TF2 Clause: 6.3.1 Page: 45 Line: 20 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Accept Commenter Satisfaction: TBD Category: -

Cross reference is incomplete

Replace 4.3.1.x with cross reference to 4.3.1.1.2

-

#13 Type: TR TF: TF2 Clause: 8.2.1 Page: 65 Line: 24 Commenter: Glen Kramer / Broadcom

Comment Status: Resolved Response Status: AIP Commenter Satisfaction: Satisfied Category: -

Per action item recorded in comment #1 agains D1.1, the draft is missing the definition of Object Context TLV that identifies a port on VLC_aware device together with a direction (Tx/Rx). Also, in addition to VLC counters per rule, we need VLC counters per interface. This is because frames may be processed by the VLC sublayer without any matching rules, and there are no counters to query how many frames went through each interface.

The proposed changes are shown in tf2_2011_kramer_2.pdf. A CTE Table Context TLV is defined in new clause 8.2.3 and a new branch with 6 attributes (counters) is defined in clause 8.2.4.

Changes to draft per proposal with updates to PICS needed to address new requirements.

#14 Type: TR TF: TF2 Clause: 9.5 Page: 72 Line: 1 Commenter: Kevin A Noll / Tibit Communications

Comment Status: Resolved Response Status: Reject Commenter Satisfaction: Satisfied Category: -

All items in PICS for VLC Configuration Protocol are marked mandatory, but the VLC Client, which implements VLC Configuration Protocol, is optional (Clause 4.1 “Both VLC client and VLC sublayer are optional in an end station”) which means that the VLC Configuration Protocol is optional. Therefore the mandatory items in 9.5 should be marked optional.

Mark these items as Optional.

The VLC protocol is optional to implement in the sense that it is optional to comply with IEEE 1904.2 standard. A network device is not required to be VLC aware. However, for devices that claim compliance with IEEE 1904.2, the VLC protocol must be implemented as outlined by PICS. ========== Motion #2: Approve the above comment resolution Yes: ++++ No: ++ Abstain: Motion fails. ========== Motion #3: Add PICS entry for station / device implementation of VLC Configuration Protocol with the value of Y/N. Make all VLC Configuration Protocol PICS conditional mandatory on this new PICS entry. Yes: +++ No: +++ Abstain: Motion fails. ========== We do not have sufficient consensus for a change to the draft. The commenter is welcome to build consensus and bring additional contributions / comments for next version of the draft.