

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1749800023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/30/2006

Comment # 1

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 3 Line 19 Fig/Table# Subclause 1

The contents of Cause 1 is ambiguous insofar as it could be taken as an instruction to replace the contents of the existing 802.1D Clause 1 with the supplied Scope and Purpose text (and in the unlikely event that this is the intent, then my vote will remain Disapprove!).
The Editor's Note at the top of the page is inappropriate at this stage of the project's development & should be deleted.

Suggested Remedy

As there is no sensible place for any of this material in the existing 802.1D Clause 1, the heading "!. Overview" should be removed, and the Scope and Purpose text incorporated into the editorial note above by inserting an introductory para indicating that the Scope and Purpose shown are copied from the 16k PAR and are not intended to find their way into the final text of IEEE Std 802.1D.
Strike the Editor's NOTE at the top of the page.

GroupResolution

Decision of Group: Principle

Accepted-Modified

On page 3, line 17, replace the text as:

~~1. Overview~~ Editor's Note-the Scope and Purpose as presented here are copied from the 802.16k PAR. are informational only. and are not intended for incorporation into the base document.

Reason for Group's Decision/Resolution

Removal of the Editor's Note at the top of the page is inappropriate. The DRAFT is in Sponsor Ballot pending final approval and publication and the Editor's Note is necessary to clarify the application of material per the embedded Editorial instructions in the document.

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1749900023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/30/2006

Comment # 2

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☒ Satisfied ☐ Page 3 Line 33 Fig/Table# Subclause 4

Improve clarity

Suggested Remedy

replace "alphabetical position" with "collating sequence"

GroupResolution

Decision of Group: Agree

Accepted

replace "alphabetical position" with "collating sequence"

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1750000023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/30/2006

Comment # 3

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☒ Satisfied ☐ Page 3 Line 48 Fig/Table# Subclause 6.5.5

Spell out acronyms on first use

Suggested Remedy

WMAN -> Wireless Metropolitan Area Network (WMAN)

GroupResolution

Decision of Group: Agree

Accepted

WMAN -> Wireless Metropolitan Area Network (WMAN)

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1750200023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/30/2006

Comment # 4

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☒ Satisfied ☐ Page 3 Line 42 Fig/Table# Subclause 6.5.5

Clarity.

Suggested Remedy

Replace the instruction as follows:

"Insert the following as new subclause 6.5.5, renumbering the existing subclause 6.5.5 as 6.5.6:"

GroupResolution

Decision of Group: Agree

Accepted

Replace the instruction as follows:

"Insert the following as new subclause 6.5.5, renumbering the existing subclause 6.5.5 as 6.5.6:"

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

Comment by: 1750300023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/30/2006

Comment # 5

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 3 Line 51 Fig/Table# Subclause 6.5.5

The use of the word "directly" doesn't improve the clarity here, and begs the question as to what might be supported indirectly. Also, there seems to be a distinction being made between support of bridging and support of the ISS which is not helpful. This text should be re-worded to improve clarity.

Suggested Remedy

Replace "...the Packet CS that support bridging." with "...the Packet CS that support the ISS."

Replace "...directly support neither bridging nor the ISS." with "...do not support the ISS."

Group Resolution**Decision of Group: Principle**

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging~~ the ISS. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part) and clause 5.2.6 (Packet CS IP specific part) directly support neither bridging nor the ISS. Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively.~~ A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence

parameter of the M_UNITDATA.indication, then

- 1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC
- 2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1750400023 JEFFREE, ANTHONY A Membership Status: Member Date: 08/30/2006

Comment # 6 Document under Review: IEEE P802.16k/D2a Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☒ Satisfied ☐ Page 3 Line 28 Fig/Table# Subclause 2

Need to add a reference in Clause 2 to IEEE Std 802.16.

Suggested Remedy

Do it.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Editor to add appropriate reference information for IEEE Std 802.16 for clause 2. References

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1750500023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/30/2006

Comment # 7

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☒ Satisfied ☐ Page 3 Line 51 Fig/Table# Subclause 6.5.5

There are several references to 5.2.5 of 802.16 being the "802.1 Packet CS", whereas the actual title of 5.2.5 is "IEEE Std 802.1Q-1998 virtual local area network (VLAN) specific part". (It is actually entirely unclear to me why the standard needs to make a distinction between an ordinary 802.3 frame and an ordinary 802.3 frame that happens to carry a VLAN tag, but that is a separate issue...)

Suggested Remedy

Replace all references in this document to "802.1 Packet CS" with something that better reflects the title of 5.2.5, perhaps "802.1Q VLAN-tagged Packet CS".

Next time 802.16 is revised, consider removing the distinction between these two packet services by removing the 802.1Q VLAN-tagged Packet CS from the document and (if necessary, which I doubt it really is) explaining that the 802.3 Packet CS can carry VLAN-tagged frames.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging~~ the ISS. Clause 5.1 (ATM CS). Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part) and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS. Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both the~~ 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively~~. A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not

necessary for convergence sublayers not applying classification to the destination MAC address.

Since ~~neither~~ the 802.3 specific part of the packet CS ~~nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

- 1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC
- 2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1750600023 JEFFREE, ANTHONY A Membership Status: Member Date: 08/30/2006

Comment # 8 Document under Review: IEEE P802.16k/D2a Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☒ Satisfied ☐ Page 3 Line 61 Fig/Table# Subclause 6.5.5

What is CPS an abbreviation of?

Suggested Remedy

Expand the acronym and add it to the list in Clause 4.

GroupResolution Decision of Group: Agree

Accepted

Expand the acronym and add it to the list in Clause 4.

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1754800023 JEFFREE, ANTHONY A

Membership Status: Member

Date: 08/31/2006

Comment # 9

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 4 Line 30 Fig/Table# Subclause 6.5.5.2

I am having great difficulty understanding why this subclause, and indeed the "802.1 Packet CS", is necessary at all, given the existence of the 802.3 Packet CS and the description of how it supports the ISS in 6.5.5.1. It is highly likely that an 802.3 packet service will carry both "regular" Ethernet/LLC frames and frames that carry 802.1Q tags (and/or 802.1 backbone provider bridging tags, security tags, or any other kind of tag that we in 802.1, or indeed others, for example in the IETF, might invent in the future). What is the implication here? That there needs to be a distinct Packet CS for each type of encapsulation that might be operating on the link? That sounds completely wrong to me from an architectural point of view, and at best, a recipe for confusion and needless work in the future.

Suggested Remedy

Remove 6.5.5.2 and its subclauses, and also remove the priority mapping in 7.7.5 as this is redundant in what is effectively an emulated 802.3 service.

Remove the "802.1 Packet CS" from the 802.16 standard.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 6.5.5.2

Delete 7.7.5

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) and ~~5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports bridging. Clause 5.1 (ATM CS), Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part) and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS.~~ Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation. Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection oriented MAC service. ~~Both the 802.3 and 802.1 packet CS~~ utilizes this service to present ~~either the 802.3 or ISS MAC service respectively.~~ The 802.3 packet CS does not provide a port based transparent connection

between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.

Since ~~neither~~ the 802.3 specific part of the packet CS ~~nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

- 1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC
- 2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC can not protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This project does not have scope to make amendment to the IEEE 802.16 Stds, only to the 802.1D standard. See the Scope, 'The scope of this project is limited to amending 802.1D to support Bridging of the IEEE 802.16 MAC.' However, there is ongoing work in 802.16g to create a 'Generic Packet Convergence Sublayer' designed to alleviate several concerns that have been raised concerning the 802.16 CS structure, and there is a contemplated revision project that may revise or deprecate this section in the IEEE 802.16 Stds.

The editorial changes to 6.5.5 use this same remedy applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1837000023 KAROCKI, PIOTR Membership Status: Member Date: 09/10/2006

Comment # 10 Document under Review: IEEE P802.16k/D2a Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 4 Line 32 Fig/Table# Subclause 6.5.5.2

Make "(informational)" separate line, i.e. add parapgraph break after it.

Suggested Remedy

GroupResolution Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1837100023 SAYOGO, BARTIEN

Membership Status: Member

Date: 09/10/2006

Comment # 11

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

<u>Comment</u>	<u>Type</u>	<u>General</u>	<u>Part of Dis</u>	<input type="checkbox"/>	<u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>999</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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Does this draft relate to IEEE Std 802.1D or 802.16? Part 1D relates to MAC Bridges, but Part 16 relates to Air Interface for Fixed Broadband Wireless Access Systems.

In my opinion the right title is: IEEE Std for Local and Metropolitan Area Networks - Part 1D: Media Access Control (MAC) Bridges - Amandment 1: Bridging of 802.16.

Suggested Remedy

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Commenter does not make a specific request for remedy.

The name of the document is defined by the PAR. The PAR defines the project name as 'Standard for Local and Metropolitan Area Networks: Media Access Control (MAC) Bridges - Bridging of 802.16

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1885700023 COORDINATION, EDITORIAL

Membership Status: Member

Date: 09/18/2006

Comment # 12

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 999 Line 0 Fig/Table# Subclause 0

Has met all editorial requirements.

Suggested Remedy

GroupResolution

Decision of Group: Agree

Accepted

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1891800023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # 13

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 3 Line 46 Fig/Table# Subclause 6.5.5

The subclause applies to IEEE Std 802.16, and not specifically to 802.16-2004, so the year of that particular revision should not be included.

Suggested Remedy

Change subclause title to "Support by IEEE Std 802.16 (WMAN)"

GroupResolution

Decision of Group: Agree

Accepted

Change subclause title to "Support by IEEE Std 802.16 (WMAN)"

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1891900023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # **14**

Document under Review: **IEEE P802.16k/D2a**

Ballot ID: **P802.16k/D2a**

Comment Type **General** Part of Dis ☐ Satisfied ☐ Page **4** Line **35** Fig/Table# Subclause **6.5.5.2**

The sentence "See figure 1 of IEEE Std 802.16 for reference." is problematic. Reference to a particular figure number in another document is dangerous, particularly when the two documents are maintained by different groups. Figure number change. It would be safer to reference only the clause number, which is likely to be stable.

Suggested Remedy

Change "See figure 1 of IEEE Std 802.16 for reference." to:
"Refer to the IEEE 802.16 reference model in Clause 1 of IEEE Std 802.16."

GroupResolution

Decision of Group: **Principle**

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1892000023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # 15

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

<u>Comment</u>	<u>Type</u>	<u>General</u>	<u>Part of Dis</u>	<input type="checkbox"/>	<u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	999	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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In the format "IEEE Std 802.x", the "Std" should be capitalized.

Suggested Remedy

Throughout the document, change terms of the format:

"IEEE std 802.x" to:

"IEEE Std 802.x".

GroupResolution

Decision of Group: Agree

Accepted

Throughout the document, change terms of the format:

"IEEE std 802.x" to:

"IEEE Std 802.x".

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1892100023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # 16

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type General Part of Dis ☐ Satisfied ☐ Page 3 Line 62 Fig/Table# Subclause 6.5.5

"connection oriented" is missing a hyphen.

Suggested Remedy

Change "connection oriented" to "connection-oriented".

GroupResolution

Decision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging~~ the ISS. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part)~~ and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS. Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively.~~ A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC

2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1892200023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # 17

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type General Part of Dis ☐ Satisfied ☐ Page 3 Line 64 Fig/Table# Subclause 6.5.5

"point to point" is missing its hyphens.

Suggested Remedy

Change "point to point" to "point-to-point".

GroupResolution

Decision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging the ISS~~. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part)~~ and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS~~. ~~Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively~~. A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC

2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1892300023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # 18

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type General Part of Dis ☐ Satisfied ☐ Page 4 Line 6 Fig/Table# Subclause 6.5.5

"Can not" should be one word.

Suggested Remedy

Change "Can not" to "Cannot".

GroupResolution

Decision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging~~ the ISS. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part)~~ and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS. Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively.~~ A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC

2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1892400023 MARKS, ROGER B

Membership Status: Member

Date: 09/20/2006

Comment # 19

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type General Part of Dis ☐ Satisfied ☐ Page 4 Line 21 Fig/Table# Subclause 6.5.5.1

This sentence has grammatical errors:

"When the 802.16 SS has registered with the BS, authenticated, performed capabilities negotiation and the 802.3 Packet CS has established the active MAC CPS service flows necessary to carry 802 frames then the value of the MAC_Operational parameter shall be determined by the procedure described in 6.5.1 otherwise the value of MAC_Operational shall be FALSE."

Suggested Remedy

Change sentence to:

"After the 802.16 SS has registered with the BS, authenticated, and performed capabilities negotiation, and after the 802.3 Packet CS has established the active MAC CPS service flows necessary to carry 802 frames, then the value of the MAC_Operational parameter shall be determined by the procedure described in 6.5.1. Beforehand, the value of MAC_Operational shall be FALSE."

GroupResolution

Decision of Group: Principle

Accepted-Modified

Change:

When the 802.16 SS has registered with the BS, authenticated, performed capabilities negotiation and the 802.3 Packet CS has established the active MAC CPS service flows necessary to carry 802 frames then the value of the MAC_Operational parameter shall be determined by the procedure described in 6.5.1 otherwise the value of MAC_Operational shall be FALSE."

To:

"After the 802.16 SS has registered with the BS, authenticated, and performed capabilities negotiation, and after the 802.3 Packet CS has established the active MAC CPS service flows necessary to carry 802 frames, then the value of the MAC_Operational parameter shall be determined by the procedure described in 6.5.1. Beforehand, the value of MAC_Operational shall be FALSE."

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1892900023 BOURGEOIS, MONIQUE J

Membership Status: Member

Date: 09/20/2006

Comment # 20

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 3 Line 33 Fig/Table# Subclause 4

Spelling error "approproate." Please run a spell check.

Suggested Remedy

GroupResolution

Decision of Group: Agree

Accepted

Spelling error "approproate." Please run a spell check.

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1904800023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 21

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 3 Line 58 Fig/Table# Subclause 6.5.5

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging~~ the ISS. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part)~~ and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS. Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively.~~ A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC

2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1904900023 CASTELOW, DAVID A Membership Status: Member Date: 09/21/2006

Comment # 22 Document under Review: IEEE P802.16k/D2a Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 4 Line 27 Fig/Table# Subclause 6.5.5.1

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution Decision of Group: Agree

Accepted

Replace "IEEE std 802" with "IEEE Std 802"

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905000023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 23

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 1 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905100023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 24

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 3 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905200023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 25

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 5 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905300023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 26

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 8 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905400023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 27

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 11 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905500023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 28

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 11 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905600023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 29

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 24 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905700023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 30

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 28 Fig/Table# Subclause 6.5.5.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905800023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 31

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 41 Fig/Table# Subclause 6.5.5.2.1
Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1905900023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 32

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 6 Line 14 Fig/Table# Subclause 6.5.5.2.2
Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906000023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 33

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial

Part of Dis ☐ Satisfied ☐

Page 6

Line 15

Fig/Table#

Subclause 6.5.5.2.2

Use "Std" not "std"

Suggested Remedy

Replace "IEEE std 802" with "IEEE Std 802"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906100023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 34

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

<u>Comment</u>	<u>Type</u>	<u>Part of Dis</u>	<u>Satisfied</u>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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Editorial

☐☐

7

Incorrect fonts for document title.

Suggested Remedy

Alter fonts for Appendix headers

GroupResolution

Decision of Group: Agree

Accepted

Alter fonts for Appendix headers

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906200023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 35

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

<u>Comment</u>	<u>Type</u> Editorial	<u>Part of Dis</u> <input type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 7	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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No page number

Suggested Remedy

Add page number

GroupResolution

Decision of Group: Agree

Accepted

Add page number

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906300023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 36

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 5 Line 1 Fig/Table# Subclause 6.5.5.2

Either "make use of" or "use", not "make use".

Suggested Remedy

Replace "802.16 may make use the" by "802.16 may use the"

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906400023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 37

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

<u>Comment</u>	<u>Type</u>	<u>Technical</u>	<u>Part of Dis</u>	<input type="checkbox"/>	<u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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The requirement to encode "frame_check_sequence" according to 6.5.5.1 (page 4, line 14) appears to be in direct conflict with the fact that the frame_check_sequence is not transmitted by the 802.16 MAC, as noted in 6.5.5 (page 4, line 1).

Suggested Remedy

Delete "and frame_check_sequence" at page 4, line 13.

GroupResolution

Decision of Group: Agree

Accepted

Delete "and frame_check_sequence" at page 4, line 13

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906500023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # 38

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☐ Satisfied ☐ Page 4 Line 5 Fig/Table# Subclause 6.5.5

In order to guarantee delivery of PHS packets, there needs to be a guarantee that the management messages themselves are CRC protected. This is already true for Sca, OFDM and ODFMA, but not for the >10GHz SC PHY mode of 802.16.

Suggested Remedy

Modify page 4, line 5 to read "1) Data transferred on the 802.16 Primary Management CID and any service flow using this MAC CS shall enable the 802.16 MAC CRC."

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Commenter is correct, but behavior requirements for the Primary Management connection in 802.16 should not be specified in the 802.16k Amendment of 802.1D, but are more properly specified in IEEE 802.16 Stds.

Group's Notes

Editor's Notes

Editor's Actions

Comment by: 1906700023 CASTELOW, DAVID AMembership Status: MemberDate: 09/21/2006Comment # 39Document under Review: IEEE P802.16k/D2aBallot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 3 Line 45 Fig/Table# Subclause 6.5.5

Comment refers to entire section 6.5.5: The draft document includes descriptions of two CS, in sections 6.5.5.1 and 6.5.5.2 but does not clearly identify which of the 8 CS defined in 802.16e-2005 these two refer.

Suggested Remedy

Modify section 6.5.5 to indicate the operation for all packet CS supported by 802.16.

GroupResolutionDecision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging the ISS~~. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part)~~ and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS~~. ~~Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both the~~ 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively~~. A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

- 1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC
- 2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1906800023 CASTELOW, DAVID A

Membership Status: Member

Date: 09/21/2006

Comment # **40**

Document under Review: **IEEE P802.16k/D2a**

Ballot ID: **P802.16k/D2a**

Comment Type **Technical** Part of Dis ☒ Satisfied ☐ Page **3** Line **45** Fig/Table# Subclause **6.5.5**

Comment refers to entire section 6.5.5: IEEE 802.16e-2005 defines two CS (see IEEE 802.16e-2005 section 11.13.19.1, values 10 and 11) that do NOT distinguish between IEEE 802.3/Ethernet with or without VLAN. As a consequence it is not clear if the SDU should include the SNAP header.

Suggested Remedy

Provide descriptions of how the single CS (type 10 or 11) is to be used to determine the correct behaviour in 802.1D, as the presence/absence of 802.1Q VLAN tags will lead to different implementations, one including the SNAP headers (as with 6.5.5.2), the other not (as 6.5.5.1).

GroupResolution

Decision of Group: **Principle**

Accepted-Modified

Delete 6.5.5.2

Delete 7.7.5

Reason for Group's Decision/Resolution

Snap headers removed

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1921600023 NIKOLICH, PAUL

Membership Status: Member

Date: 09/21/2006

Comment # 41

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 8 Line Fig/Table# Subclause table a.6

the precise nature of the change to table a.6 is not evident to me by looking at the PDF of the document. Are the lines strike-throughs or underscores? This may be the case for others as well, you may want to clarify exactly what needs to be changed in this table

Suggested Remedy

GroupResolution

Decision of Group: Principle

Accepted-Modified

Editor to revise the editorial instruction for the table as:

Change the first row of table A.6 Media Access Control Methods, by adding a line for 802.16 and 802.17. as follows:

Editor to correct underscoring of added lines of information to table to lessen uncertainty as to the material being underscored.

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1922300023 VAN LEEUWEN, RICHARD M

Membership Status: Member

Date: 09/22/2006

Comment # 42

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 999 Line Fig/Table# Subclause 6.5.5, 7.7.5

Changes are required to make this draft amendment to IEEE Std 802.1D compatible with 802.16.

Currently, this version is NOT compatible in the following areas:

It refers to a "802.1 Packet CS", but the .16 std calls this the "IEEE Std 802.1Q-2003 VLAN CS" (in 5.2.5) or the "Packet, IEEE 802.1Q VLAN" CS (in 11.13 CS specification).

The statement "The user_priority parameter of the M_UNITDATA primitive is not encoded in the MAC CPS MSDU." (6.5.5.2) is incorrect, as the user priority is carried in the VLAN tag.

It refers to a Priority byte in the MAC CPS MSDU (6.5.5.2), but there is no such byte defined in 802.16.

It states incorrectly that access_priority may be used in classification. There is no classifier rule parameter defined for this.

It states that "IEEE std 802.16 imposes no limit on the length of a MAC CPS MSDU" (6.5.5.2). However, 802.16 section 5.2.5.2 specifies the Ethertype as one of the classification parameters, implying that there is a Length/Ethertype in the SDU; This limits the length to 1500.

Suggested Remedy

All references to the 802.16 "802.1 Packet CS" should be replaced by "802.1Q VLAN Packet CS".

The majority of section 6.5.5.2 (page 4 line 38 through page 5 line 5) should be replaced by:

"The IEEE 802.1Q VLAN Packet CS provides the Enhanced ISS as described in IEEE Std 802.1Q-2003 clause 6.4."

The paragraph starting with "IEEE std 802.16 imposes no limit on the length of a MAC CPS MSDU..." (page 5 lines 24..28) should be deleted.

Sections 6.5.5.2.1 and 6.5.5.2.2 should be deleted.

Section 7.7.5, Table 7-4, should specify value '0' for Access Priority for all values of user_priority (similar to IEEE 802.3).

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 6.5.5.2

Delete 7.7.5

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1922700023 GIESBERTS, PIETER-PAUL

Membership Status: Member

Date: 09/22/2006

Comment # 43

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☐ Satisfied ☐ Page 4 Line 38 Fig/Table# Subclause 6.5.5.2

Changes are required to make this draft amendment to IEEE Std 802.1D compatible with 802.16.

Currently, this version is NOT compatible in the following areas:

It refers to a "802.1 Packet CS", but the .16 std calls this the "IEEE Std 802.1Q-2003 VLAN CS" (in 5.2.5) or the "Packet, IEEE 802.1Q VLAN" CS (in 11.13 CS specification).

The statement "The user_priority parameter of the M_UNITDATA primitive is not encoded in the MAC CPS MSDU." (6.5.5.2) is incorrect, as the user priority is carried in the VLAN tag.

It refers to a Priority byte in the MAC CPS MSDU (6.5.5.2), but there is no such byte defined in 802.16.

It states incorrectly that access_priority may be used in classification. There is no classifier rule parameter defined for this.

It states that "IEEE std 802.16 imposes no limit on the length of a MAC CPS MSDU" (6.5.5.2). However, 802.16 section 5.2.5.2 specifies the Ethertype as one of the classification parameters, implying that there is a Length/Ethertype in the SDU; This limits the length to 1500.

Suggested Remedy

All references to the 802.16 "802.1 Packet CS" should be replaced by "802.1Q VLAN Packet CS".

The majority of section 6.5.5.2 (page 4 line 38 through page 5 line 5) should be replaced by:

"The IEEE 802.1Q VLAN Packet CS provides the Enhanced ISS as described in IEEE Std 802.1Q-2003 clause 6.4."

The paragraph starting with "IEEE std 802.16 imposes no limit on the length of a MAC CPS MSDU...." (page 5 lines 24..28) should be deleted.

Sections 6.5.5.2.1 and 6.5.5.2.2 should be deleted.

Section 7.7.5, Table 7-4, should specify value '0' for Access Priority for all values of user_priority (similar to IEEE 802.3).

GroupResolution

Decision of Group: Principle

Superceded by resolution of Comment 009

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1922800023 SEAMAN, MICHAEL J

Membership Status: Member

Date: 09/22/2006

Comment # 44

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type General Part of Dis ☐ Satisfied ☐ Page 4 Line 10 Fig/Table# Subclause 6.5.5.1

There is clearly something wrong with this amendment's definition of 2 rather than 1 way of supporting the ISS with no way indicated of making an interoperable choice of the method to be used. This indicates a further problem in the 802.16 standards itself. I would expect the 802.3 packet CS to be used exclusively. If option priority or any other capabilities are provided by the other CS they could as well be provided by the 802.3 CS and ignored on transmission or receipt by clients with no knowledge beyond basic 802.3.

There have been other comments about the interoperability confusion caused by 802.16s redefinition of the lower sublayers of protocol identification, instead of using Ethertypes - many of which are already assigned - and the already standard methods of carrying protocols over Ethernet, so this issue is clearly bigger than just this amendment. See for example draft-[iab-link-encaps.txt](#).

Suggested Remedy

Remove the support of the ISS by the 802.1 CS from this document entirely, and add a note deprecating the use of that CS. 802.16 should further reduce the number of different 'services' supported. Attempts to be all things to all men are not useful.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 6.5.5.2

Delete 7.7.5

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging the ISS~~. Clause 5.1 (ATM CS). Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part) and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor the ISS~~. Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation. Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to

present ~~either the 802.3 or ISS MAC service respectively~~. A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

- 1) Any service flow using this MAC CS shall enable the 802.16 MAC CRC
- 2) PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This project does not have scope to make amendment to the IEEE 802.16 Stds, only to the 802.1D standard. See the Scope, 'The scope of this project is limited to amending 802.1D to support Bridging of the IEEE 802.16 MAC.' However, there is ongoing work in 802.16g to create a 'Generic Packet Convergence Sublayer' designed to alleviate several concerns that have been raised concerning the 802.16 CS structure, and there is a contemplated revision project that may revise or deprecate this section in the IEEE 802.16 Stds.

The editorial changes to 6.5.5 use this same remedy applied to several comments, addressing several different commenters concerns

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1924600023 TURNER, STEPHEN J

Membership Status: Member

Date: 09/22/2006

Comment # 45

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 5 Line 2 Fig/Table# Subclause 6.5.5.2

There is no provision in 802.16 for classifying on the access_priority.

Suggested Remedy

Remove text.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 6.5.5.2

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1924700023 TURNER, STEPHEN J

Membership Status: Member

Date: 09/22/2006

Comment # 46

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 5 Line 35 Fig/Table# Subclause 6.5.5.2.1

I see no justification for including the access_priority in the MSDU, as it is not used for classification.

Suggested Remedy

Remove field from MSDU.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 6.5.5.2

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1924800023 TURNER, STEPHEN J

Membership Status: Member

Date: 09/22/2006

Comment # 47

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 6 Line 14 Fig/Table# Subclause 6.5.5.2.2

I see not justification for a SNAP-encoded TPID when an Ethernet-encoded TPID would suffice.

Suggested Remedy

Change SNAP-encoded TPID to Ethernet-encoded TPID.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 6.5.5.2

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

2006/06/25

IEEE 802.16-06/050r3

Comment by: 1924900023 TURNER, STEPHEN J

Membership Status: Member

Date: 09/22/2006

Comment # 48

Document under Review: IEEE P802.16k/D2a

Ballot ID: P802.16k/D2a

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 6 Line 18 Fig/Table# Subclause 7.7.5

Since 802.16 access_priority is in effect a service flow attribute (cf. 11.13.5 of 802.16), there can be no direct mapping of user_priority to access_priority unless an operator elects to create a classifier rule using the user_priority field within the TCI.

Suggested Remedy

Remove this table.

GroupResolution

Decision of Group: Principle

Accepted-Modified

Delete 7.7.5

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions

Comment by: 1926900023 RIEGEL, MAXIMILIANMembership Status: MemberDate: 09/22/2006Comment # 49Document under Review: IEEE P802.16k/D2aBallot ID: P802.16k/D2a

Comment Type General Part of Dis ☒ Satisfied ☐ Page 3 Line 63 Fig/Table# Subclause

A pair of communicating peer entities ... create a point-to-point LAN

Suggested Remedy

A pair of communicationg entities based on the GP CS defined in 802.16g create a point to point LAN, as defined. The 802.1 CS does not provide transparent forwarding but requires the synchronization between the Classifier in the 802.1Q convergence sublayer and the MAC addresses learned in the Standard Learning Bridge database.

GroupResolutionDecision of Group: Principle

Accepted-Modified

Modify the text in 6.5.5 as:

The WMAN MAC access method is specified in IEEE Std 802.16. Clause 5 of that standard specifies the Service Specific Convergence Sublayers (CS) that implement the 802.16 MAC service. Clauses 5.2.4 (802.3 Packet CS) ~~and 5.2.5 (802.1 Packet CS)~~ describes the modes of the Packet CS that supports ~~bridging~~ the ISS. Clause 5.1 (ATM CS). ~~Clause 5.2.5 (IEEE Std 802.1Q-2003 virtual local area network (VLAN) specific part)~~ and clause 5.2.6 (Packet CS IP specific part) directly support ~~neither bridging nor~~ the ISS. ~~Multiple encapsulation methods are provided in Clause 5, however bridging function is based on the underlying transport method only, and is indifferent to link layer control encapsulation.~~ Clause 6 specifies the MAC Common Part Sublayer (MAC CPS) transmission and reception procedures and Annex C describes the MAC CPS service definition.

In IEEE Std 802.16 there is no explicit definition of the MAC service definition for the ~~802.1 Packet CS nor the~~ 802.3 Packet CS. The 802.3 Packet CS MAC service is defined in IEEE ~~s~~Std 802.3 clause 2 ~~and the 802.1 Packet CS MAC service is defined to be the ISS (6.4).~~

The 802.16 MAC CPS presents a connection-oriented MAC service. ~~Both t~~The 802.3 ~~and 802.1~~ packet CS utilizes this service to present ~~either the 802.3 or ISS MAC service respectively.~~ A pair of communicating peer CS entities between an 802.16 BS and and 802.16 SS create a point-to-point LAN as defined in 6.4.3. ~~The 802.3 packet CS does not provide a port based transparent connection between the BS and the SS. Synchronization between the Classifier in the 802.3 convergence sublayer and the learned MAC address table in the Standard Learning Bridge is required to establish forwarding of frames over IEEE802.16 to the corresponding SS. This synchronization of the classification process in the BS and the learned MAC address table in the Standard Learning Bridge is not necessary for convergence sublayers not applying classification to the destination MAC address.~~

Since ~~neither the 802.3 specific part of the packet CS nor the 802.1 specific part of the packet CS~~ forwards the frame_check_sequence parameter of the M_UNITDATA.indication, then

1)Any service flow using this MAC CS shall enable the 802.16 MAC CRC

2)PHS validation shall not be turned off for this service flow (since 802.16 MAC CRC ~~can not~~cannot protect suppressed MAC header fields).

Reason for Group's Decision/Resolution

This same remedy is applied to several comments, addressing several different commenters concerns

Group's Notes

Accepted without opposition

Editor's Notes

Editor's Actions