

Cl 05 SC 5.2 scope P0 L0 # 1

Engwer, Darwin

Comment Type T Comment Status X

I'm not sure exactly what issues raised by the QSE SG members are preventing acceptance of the proposed PAR. I suspect that it may have something to do with concern over the scope of the proposed work. Individuals may be reluctant to reopen the 802.11e standard for a multitude of reasons.

SuggestedRemedy

One potential solution (since the volume of work is expected to be small) would be for an individual to craft detailed proposed revisions to 802.11e-2005 to explicitly identify the items that need to be changed to "harmonize" 802.11e with WMM v1.1 and place those in a document submission in the form of editing instructions as would be the case for the final output of the QSE TG. This may help to more precisely (very precisely) bound the scope of the TG effort.

Another potential solution would be to enumerate the expected changes in outline form, perhaps by referencing the 802.11e vs WMM comparison shown in submission 11-07-0314-00.

I recognize that these are extraordinary suggestions, but the QSE effort certainly seems to be unique in terms of 802.11 WG efforts.

Proposed Response Response Status

Cl 05 SC 5.2 scope P0 L0 # 2

Engwer, Darwin

Comment Type T Comment Status X

Another potential area of concern is the effect of (or the process related to) incorporating material or concepts from subsequent revisions of the WMM document, which are sure to be developed by the WFA during the term of the QSE project.

SuggestedRemedy

State how these additional WMM extensions would be handled (or not) during the course of the QSE TG work. (I recognize that this could simultaneously help and hinder the PAR resolution effort.

Proposed Response Response Status

Cl 05 SC 5.5 P0 L0 # 3

Engwer, Darwin

Comment Type T Comment Status X

This is perhaps the area of greatest concern for me, personally. How will the "amendment provide a single, converged mechanism" while still adhering to the statement in clause 5.2 Scope that says "[the TG] is not allowed to invalidate existing device compliance with 802.11e and will not deprecate any operational mode or feature introduced in 802.11e-2005"?

I presume one would start by adding the WMM material to 802.11. Now instead of two distinct and incompatible mechanisms for QOS [in two different documents] we would have two distinct and incompatible mechanisms for QOS within _one_ document. How would an implementor know which to develop and support? The choice is still unclear. Seems like a WFA WMM certification document would still be needed. But more importantly the PICS proforma clause would also need to be modified to explicitly call out the WMM feature set. But, according to the statement in the scope "no existing modes or features would be deprecated". How would that be accomplished? Would it be done by creating a _new_ QOS configuration top level entry and tying it to the WMM requirements only? i.e. without modifying the existing 802.11e PICS proforma configuration entries at all?

SuggestedRemedy

Explain more clearly how both of the cited statements (and goals) of "a single converged mechanism" and "no invalidation or deprecation" can be accomplished.

Proposed Response Response Status

CI 05 SC 5.2 P0 L0 # 4 [REDACTED]
Trainin, Solomon

Comment Type T Comment Status X

"5.2 Scope of Proposed Standard: This amendment will align the Quality of Service specification developed as 802.11e and that of the Wi-Fi Alliance Wi-Fi Multimedia (WMM) specification version 1.1. The scope is specifically limited to harmonizing functionality addressed in the WMM specification and is not allowed to invalidate existing device compliance with 802.11e and will not deprecate any operational mode or feature introduced in 802.11e-2005."

The WiFi Alliance currently certifies devices that contain WMM spec based features as well IEEE QoS based features in the same device w/o any problem. For example number of devices that supports both .11g and .11n successfully passed the certification of WMM, WMM PS and .11n. Important to say that the .11n intensively uses the QoS of 802.11e-2005. No problems expected to come with certification of the Admission Control.

So there is no problem with certification of existent and in progress features

SuggestedRemedy

No need of the amendment: "Convergence with existing Quality of Service implementation." Stop to work on it.

Proposed Response Response Status O

CI 05 SC 5.4 P0 L0 # 5 [REDACTED]
Trainin, Solomon

Comment Type T Comment Status X

"5.4 Purpose of Proposed Standard: Prior to the approval of 802.11e, the Wi-Fi Alliance approved a Quality of Service specification, titled Wi-Fi Multimedia, and began certifying the interoperability of equipment incorporating this specification. This has reduced the adoption of 802.11e significantly. Convergence of WMM and 802.11e functionality will decrease confusion in the market from multiple QoS standards."

The WMM is a subset of IEEE QoS definition. There is no substantial differences in implementation of the features currently defined in both WMM and IEEE. For example the MSDU sequence numbers that is defined per TID in the IEEE spec and w/o any relation to TID in WMM spec does not make any difference in the implementation of the receiver part as long it supports only the WMM defined subset. So the WMM spec does not limit any progress in WiFi Alliance to implement and certify yet not tested QoS features.

SuggestedRemedy

No need of the amendment: "Convergence with existing Quality of Service implementation." Stop to work on it.

Proposed Response Response Status O

CI 00 SC ALL P0 L0 # 6 [REDACTED]
Kobayashi, Mark

Comment Type T Comment Status X

WMM seems sufficient and this standard body should just reference this work.

SuggestedRemedy

Discontinue PAR and 5 criteria process in this study group. No need for this task group

Proposed Response Response Status O

CI 02 SC 2.1 Title P0 L0 # 7 [REDACTED]
Rosdahl, Jon

Comment Type ER Comment Status X

In the Title you call out a Convergence, but in other areas, it is called out as a Harmonization. Not certain the difference, but it should be consistent

SuggestedRemedy

make the title/scope/purpose us a consistent vocabulary.

Proposed Response Response Status O

CI 00 SC Type P0 L0 # 8 [REDACTED]
Rosdahl, Jon

Comment Type ER Comment Status X

The Type of Project points to the 802.11-1999 which does not include the 11e amendment. This should be set to the ambiguous 802.11 standard or the 802.11-2007 version.

SuggestedRemedy

change the standard that is referenced.

Proposed Response Response Status O

Cl 01 SC 1.1 project number P0 L0 # 9

Rosdahl, Jon

Comment Type ER Comment Status X

is the 802.11aa being assigned to this project already determined? Until it is, it may be better to leave blank and allow the IEEE staff to fill it in.

SuggestedRemedy

if the aa has not been definitively assigned, leave blank for the IEEE staff to fill in, otherwise ensure that the correct value is inserted here.

Proposed Response Response Status O

Cl 05 SC 5.2 Scope P0 L0 # 10

Rosdahl, Jon

Comment Type ER Comment Status X

The scope statement says that it is aligning, but limited to Harmonizing, but at the same time will not be allowed to invalidate compliance or operational mode in the original 11-e,

SuggestedRemedy

1. a consistency in the wording to match the title, (change one or the other)
2. As you cannot change the WMM sped from inside IEEE, what you are doing is modifying the 11e functionality to comply with the WMM spec. If that is so, state it as such.

Proposed Response Response Status O

Cl 05 SC 5.4 Purpose P0 L0 # 11

Rosdahl, Jon

Comment Type ER Comment Status X

The Purpose statement says it is converging -- to converge one would think that both specs were changing. As the IEEE can only change one, I think that the WG is concerned that this is simply an adoption of the WFA version.

SuggestedRemedy

use consistent description of what the Task group will be doing: convergin, harmonizing, or aligningà.or if it is simply adoption state it as such.

Proposed Response Response Status O

Cl 00 SC general P0 L0 # 12

Rosdahl, Jon

Comment Type ER Comment Status X

I honestly do not have a problem with having one way to do QOS. The 11e battles were long and tideous to get what was put in place. Towards the end, the battle was more with appathy than technology issues. The WiFi Alliance choose to go ahead and do something different with some of the same people that were debating in the IEEE. They were able to get the votes in the WFA that they could not get in the IEEE 802.11e. To me this resentment still lingers. Identifying the main points of this resentment will be the key to getting the PAR approved. IMHO

SuggestedRemedy

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Proposed Response Response Status O

Cl 00 SC 0 P0 L0 # 13

Worstell, Harry

Comment Type ER Comment Status X

The PAR is to too vague and the scope is too broad. It specifies a harmonization between an external organization and the IEEE 802.11 Standard. There is no indication that the external organization will change any part of it's documentation or Private specification.

SuggestedRemedy

Be specific as to what you are going to standarize. If you are incorporating a power save mechanism or other mechanisms into the standard, state exactly that.

Proposed Response Response Status O

CI 00 SC 0 P0 L0 # 14

Worstell, Harry

Comment Type ER Comment Status X

It has been indicated in the QSE-SG that the IEEE 802.11e portion of the Standard has flaws that were found in the testing at the external organization and this PAR is going to change the Standard to repair the those alleged errors.

SuggestedRemedy

There is a process in IEEE 802.11 Standards to repair any errors in the Standard and that requires a request for interperation. The maintenance task group will then evaluate the claim and make any corrections as needed. Use the correct process for any such changes.

Proposed Response Response Status O

CI 00 SC 0 P0 L0 # 15

Worstell, Harry

Comment Type ER Comment Status X

The purpose statement says "Prior to the approval of 802.11e, the Wi-Fi Alliance approved a Quality of Service specification, titled Wi-Fi Multimedia, and began certifying the interoperability of equipment incorporating this specification. This has reduced the adoption of 802.11e significantly. Convergence of WMM and 802.11e functionality will decrease confusion in the market from multiple QoS standards.

SuggestedRemedy

The IEEE states that if any organization or company builds to or adopts an early draft of the Standard, they do so at their own risk. Just because one external, NonSDO organization elected to adopt only a portion of the Standard, that doesn't indicate that every company has taken the same direction. By attempting to radically change the standard less than two years after it's publication could possibly be considered restraint of trade and should not be permitted. The Standard was developed in an open forum and in an authorized Standards Development Organization as specified by ANSI where all persons and companies could participate and not in a private organization of only one segment of the industry. Keeping the Standard independent and open is vital to developing good standards.

Proposed Response Response Status O

CI 00 SC 0 P0 L0 # 16

Worstell, Harry

Comment Type ER Comment Status X

The external organization's specification uses MS IDs and not T-Specs

SuggestedRemedy

We need to follow the Standard as other companies are following the Standard.

Proposed Response Response Status O

CI 00 SC 0 P0 L0 # 17

Worstell, Harry

Comment Type ER Comment Status X

The Wi-Fi Alliance specification is Cpyright material and not open to the public. All IEEE documents and Standards are copyright material. This now becomes a major legal conflict between the Wi-Fi Alliance and the IEEE

SuggestedRemedy

I see no resolution to this issue therefore the group should be desolved until such time as this and the issues above can be resolved

Proposed Response Response Status O

CI 00 SC general P0 L0 # 18

Marshall, Bill

Comment Type ER Comment Status X

This "poll" was specifically established to collect comments, and NOT a yes/no vote. See the WG minutes (11-07-2507-00-0000-minutes-working-group-september-2007.doc, for Friday 21 Sep 2007, at 9.39). The SG chair deliberately "hacked" the voting system to enable a yes/no vote to be cast, and published the instructions at least twice to the 802.11 email reflector. This has undercut the WG chair's position, authority, and intent.

SuggestedRemedy

Quarantine all the yes/no ballots. Completely disregard any results of yes/no votes entered as part of this "poll". Loss of voting rights for anyone who divulges tallies.

Proposed Response Response Status O

CI 00 SC general P0 L0 # 19

Marshall, Bill

Comment Type ER Comment Status X

Two specific items are constantly raised in QSE to justify a Task Group. They are (1) some "bugs" found in TGe after it was published, and (2) Power Save extensions defined in WFA. Regarding (1): there is a mechanism in place in 802.11 to fix bugs, called TGm, and we just finished a revision of the standard that incorporated fixes to all the known problems. None were reported. Any that are discovered now should be sent to TGm for resolution and inclusion in the next revision of the standard. Regarding (2): The WiFi liaison letter noted "The WMM-Power Save features are roughly aligned with U-APSD from the 802.11e amendment, fixing some known errors in U-APSD." These also are items for TGm to consider.

SuggestedRemedy

Resolve the problems found in 802.11e-2005 in TGmb

Proposed Response Response Status

CI 00 SC 0 P0 L0 # 20

Marshall, Bill

Comment Type E Comment Status X

Type of project "PAR for an amendment to an existing Standard 802.11-1999" should be 802.11-2007

SuggestedRemedy

Either change 1999 to 2007, or make it generic by deleting the "-1999"

Proposed Response Response Status

CI 02 SC 2.1 P0 L0 # 21

Marshall, Bill

Comment Type T Comment Status X

Item 2.1 of the PAR, Title: "Convergence with existing Quality of Service implementation" makes it clear that IEEE 802.11 is expected to adopt the WMM specification, rather than its normal open process of developing standards. The IEEE 802.11 Standard was developed in an open forum and in an authorized SDO, where all persons and companies could participate. WMM was developed in a private organization of only one segment of the industry. Maintaining IEEE 802's status as an SDO is important. Keeping the standards development process independent and open is vital to this goal. Any hint or perception that we are not maintaining the open development process is harmful.

SuggestedRemedy

Change title to reflect this, removing any mention of "existing Quality of Service implementation" or any mention of a non-SDO organization. Add an explicit statement in the scope (5.2) stating that the group will not consider backward compatibility with any specification generated by a non-SDO.

Proposed Response Response Status

CI 05 SC 5.2 P0 L0 # 22

Marshall, Bill

Comment Type ER Comment Status X

Restrictions written into PARs are routinely violated in 802.11 without any consequences. For example, TGk is defining new a regulatory domain (Annex I and Annex J), and TGn is taking liberties with the base standard far far far beyond the changes for High Throughput (e.g., 9.12). No mechanism exists to enforce restrictions written into the PAR

SuggestedRemedy

P&P to be updated to include enforcement of restrictions written into PARs, and a further requirement that any restrictions in PARs not be modified by any amendment to that PAR (i.e., not even by a 75% vote). A model to follow is the legal framework for conservation easements written into deeds for property. Perhaps this change needs to be made at a higher level, such as the 802 P&P, or in the IEEE-SA Operations Manual.

Proposed Response Response Status

CI 05 SC 5.4 P0 L0 # 23
Marshall, Bill

Comment Type ER Comment Status X

Item 5.4 of the PAR states "Prior to the approval of 802.11e, the Wi-Fi Alliance approved a Quality of Service specification, titled Wi-Fi Multimedia, and began certifying the interoperability of equipment incorporating this specification." Every draft published by IEEE contains the following text in a prominent location "This document is an unapproved draft of a proposed IEEE Standard. As such, this document is subject to change. USE AT YOUR OWN RISK! Because this is an unapproved draft, this document must not be utilized for any conformance/compliance purposes." This text makes it clear that WFA took the risk in converting an early draft of TGe into WMM, and it is THEIR risk, not ours. WFA needs to accept the consequences of their actions (or at least some of the consequences of their actions), which they have thus far refused to do.

SuggestedRemedy

Prior to approval of this WG the larger issue of interaction between Wi-Fi Alliance and 802.11 needs to be resolved, and establish the mechanism by which WFA tracks changes made by IEEE. It needs to be clear which of the two organizations is an SDO and which one isn't.

And, 802.11 should start planning now for this same issue to be raised with the TGn amendment.

Proposed Response Response Status O

CI 05 SC 5.4 P0 L0 # 24
Marshall, Bill

Comment Type ER Comment Status X

Although WiFi Alliance has repeatedly offered free copies of their WMM 1.1 specification to 802.11 members, it has not yet done so. They have stated: "The Wi-Fi Alliance would like to resolve this concern by making a copy of the WMM specification v1.1 available without charge to any 802.11 Working Group member participating in any Task Group developing an amendment to incorporate WMM and WMM-Power Save functionality into the 802.11 standard." A careful reading of the offer indicates that it will only be made available AFTER a Task Group has been approved. This makes it extremely difficult to understand the technical feasibility of "converging" or "harmonization" before approving a Task Group to do those jobs.

SuggestedRemedy

Nothing that the IEEE can do. This group can do nothing until WFA makes WMM 1.1 available.

Proposed Response Response Status O

CI 05 SC 5.5 P0 L0 # 25
Marshall, Bill

Comment Type ER Comment Status X

Item 5.5 of the PAR, Need for the project: "Implementers of 802.11 Quality of Service are faced with a problem of incorporating two distinct and incompatible mechanisms for Quality of Service. This amendment will provide a single, converged mechanism that will eliminate this problem." Goal of "a single converged mechanism" is totally unrealistic without an agreement from WFA to adopt the output document as their document as well. One trivial example is WMM's use of Vendor-Specific information elements instead of TSPECs -- IEEE 802.11 will never standardize the contents of a Vendor Specific IE. As a result, the output of a QSE TG will necessarily be different than the WMM specification. Since this output result is still different than the WFA's WMM specification, another round of "harmonization" will necessarily be initiated, with the same rhetoric as the current one. There is no end in sight.

SuggestedRemedy

Nothing that the IEEE can do. This group should do nothing until WFA agrees to adopt the output of this group as WMM 1.2.

Proposed Response Response Status O

Cl 06 SC 6.1b P0 L0 # 26

Marshall, Bill

Comment Type ER Comment Status X

The PAR states "It is possible, though unlikely, that portions of the Wi-Fi Alliance Wi-Fi Multimedia specification might need to be incorporated into this amendment." This is completely counter to the statements in 5.5, "This amendment will provide a single, converged mechanism ..." The copyright issue is likely to be a real issue

SuggestedRemedy

Nothing that the IEEE can do. This group can do nothing until WFA agrees to release their copyright on WMM 1.1.

Proposed Response Response Status O

Cl 00 SC General P0 L0 # 27

Montemurro, Michael

Comment Type T Comment Status X

This PAR and 5 criteria should refer to IEEE 802.11-2007 not IEEE 802.11e-2005.

SuggestedRemedy

Replace IEEE 802.11e-2005 with IEEE 802.11-2007

Proposed Response Response Status O

Cl 05 SC 5.2 P0 L0 # 28

Montemurro, Michael

Comment Type T Comment Status X

The description here refers only to WMM version 1.1. I think that any changes or clarification of Admission Control procedures should also be within scope of this amendment.

SuggestedRemedy

Add the following sentence at the end of 5.2:

"Consideration will be made to include changes to harmonize WMM Admission Control with IEEE 802.11 (2007)

Proposed Response Response Status O

Cl 05 SC 5.4 P0 L0 # 29

Montemurro, Michael

Comment Type T Comment Status X

If you look at the process of the Wi-Fi Alliance for WMM and compare it with the process for WPA/WPA2. Both took interim versions of an IEEE 802.11 amendment and created an interoperability specification and test plan. In the case of WPA, feedback from the Wi-Fi Alliance was incorporated into IEEE 802.11i to make the standard more interoperable. That is the purpose of this work.

SuggestedRemedy

Keep the first sentence of the section and replace the remaining content of the section with the following:

"The WMM specification took an interim version of IEEE 802.11e for EDCA operation and made changes to allow implementations to become more interoperable. The purpose of this amendment is to harmonize those changes with IEEE 802.11e."

Proposed Response Response Status O

Cl 00 SC general P0 L0 # 30

Moorti, Rajendra

Comment Type T Comment Status X

Since the industry already has WMM (through WFA), I don't see a need for another body to standardize it.

SuggestedRemedy

Leave .11e alone since everyone just deals with WFA WMM.

Proposed Response Response Status O

Cl 05 SC 5.2 P0 L0 # 31

Chu, Liwen

Comment Type T Comment Status X

Maybe "The scope is specifically limited to harmonizing functionality addressed in the WMM specification and is not allowed to invalidate existing device compliance with 802.11e and will not deprecate any operational mode or feature introduced in 802.11e-2005." is too restrictive.

SuggestedRemedy

Please change to "The scope is limited to harmonizing functionality addressed in the WMM specification and will not deprecate any operational mode or feature introduced in 802.11e-2005 if possible."

Proposed Response Response Status

Cl 05 SC 5.2 P0 L0 # 32

Chu, Liwen

Comment Type T Comment Status X

The main difference between WMM1.1 and 802.11e-2005 is on EDCA admission control. This section seems to include WMM admission control in IEEE 802.11 standard. But we know that there is some problems in WMM 1.1 admission control which is fixed by a WFA technical group. But unfortunately these bug fixings are not in WMM 1.1. I think WMM 1.1 admission control should be updated in the new group.

SuggestedRemedy

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Proposed Response Response Status

Cl 05 SC 5.2 P0 L0 # 33

Hinsz, Christopher

Comment Type T Comment Status X

I continue to believe that the phrase "not allowed to invalidate existing device compliance with 802.11e" causes the proposed TG serious issues. There is no agreed upon means by which compliance it tested/validated within the IEEE. Forcing a TG to evaluate proposals against an unmeasurable sope limitation of 'invalidation of existing devices' is not a practical concern.

SuggestedRemedy

Ideally I believe that this clause should be deleted as being confusing and possibly impossible for the TG to follow. However, if the idea is that the new text would be compatible with existing equipment then the language should be changed to reference backwards compatibility with the original 802.11e standard.

Proposed Response Response Status

Cl 05 SC 5.2 P0 L0 # 34

Hamilton, Mark

Comment Type T Comment Status X

The scope statement is still vague, and seems to be the cause of much controversy, yet it seems answers lie in Clause 5.5 and (Five Criteria) Clause 17.5.2. This can be corrected by adding statements that the amendment will result in a single, converged mechanism for Quality of Service between 802.11 and WMM, and emphasize (make it its own sentence?) that it will not invalidate existing devices that are in compliance with the existing 802.11.

SuggestedRemedy

Change 5.2 to: "This amendment will align the Quality of Service specification developed as 802.11e and that of the Wi-Fi Alliance Wi-Fi Multimedia (WMM) Specification version 1.1, to provide a single, converged mechanism for Quality of Service. The scope is specifically limited to harmonizing functionality addressed in the WMM Specification, and will not deprecate any operational mode of feature introduced in 802.11e-2005. Further, the scope is restricted to not allow changes that will invalidate the compatibility of any existing devices that are in compliance with 802.11-2007.

Proposed Response Response Status

CI 00 SC General P0 L0 # 35

Myles, Andrew

Comment Type T Comment Status X

It is vital the 802.11 standard reflects the needs of the market place.

In the case of QoS features for 802.11, the market place has decided (rightly or wrongly) that it will use QoS features defined in WMM and not those defined in 802.11e-2005.

The evidence for this "decision" is that 100's millions of WMM devices are being manufactured each year, in contrast to the very small number of 802.11e compliant devices. Indeed, it is not clear that any commercial 802.11e compliant devices exist that implement the feature set addressed by WMM.

SuggestedRemedy

The 802.11 WG should develop an amendment that incorporates the QoS features as they are being used by the industry and 100's of millions of new devices each year.

The alternative is for industry practice and the standard to continue diverging as further features are added by industry to the WMM base. This path leads to irrelevance for the 802.11 WG and a less desirable and riskier standards development process for industry.

Proposed Response Response Status

CI 05 SC 5.2 P0 L0 # 36

Myles, Andrew

Comment Type T Comment Status X

The current scope states, "This amendment will align the Quality of Service specification developed as 802.11e and that of the Wi-Fi Alliance Wi-Fi Multimedia (WMM) specification version 1.1."

It is unclear what "align" means in this context. One reasonable interpretation is that both WMM and the equivalent features of 802.11e-2005 are modified as part of the alignment process. However, modifying WMM as part of the alignment process defeats the purpose of the whole exercise, which is to recognise industry practice in the standard.

SuggestedRemedy

Change the scope so that it is clear that WMM is being incorporated into the 802.11 standard in a way that allows interoperability with existing WMM and WMM-Power Save certified products.

The suggested new text is, "This amendment will incorporate into 802.11-2007 the elements of Wi-Fi Alliance Wi-Fi Multimedia (WMM) specification version 1.1 that are certified by the Wi-Fi Alliance as WMM and WMM-Power Save. The process of incorporation will ensure compatibility with existing WMM and WMM-Power Save devices."

Proposed Response Response Status

CI 05 SC 5.2 P0 L0 # 37

Myles, Andrew

Comment Type T Comment Status X

The current scope states, "The scope is specifically limited to harmonizing functionality addressed in the WMM specification and is not allowed to invalidate existing device compliance with 802.11e and will not deprecate any operational mode or feature introduced in 802.11e-2005"

The WG has two main choices. It could replace the relevant parts of 802.11-2007 with the equivalent WMM & WMM-PS features. Alternatively, it could add the WMM & WMM-PS functionality to the existing functionality, giving the user a choice. Each path has advantages and disadvantages.

SuggestedRemedy

The rationale approach is to replace the existing functionality with that defined by WMM & WMM-PS because it:

- * Creates one standard with one option without adversely affecting any known commercial devices
- * Avoids the need to maintain to slightly different options as later amendments are made to the standard

However, it is recognised that many are reticent to remove existing material from 802.11-2007 without understanding the details of the WMM & WMM-PS features. Therefore it is suggested the text make it clear the existing QoS features in 802.11-2007 should remain unchanged, albeit with the possibility of removing them in a later amendment.

The suggested new text is, "The scope is specifically limited to incorporating functionality addressed by the Wi-Fi Alliance's WMM and WMM-Power Save certifications and does not allow equivalent features in 802.11-2007 to be removed or deprecated in any way. The 802.11 WG may consider removal or deprecation of these features in another SG in the future"

Proposed Response Response Status

CI 05 SC 5.4 P0 L0 # 38

Myles, Andrew

Comment Type T Comment Status X

The current purpose clause states, "Prior to the approval of 802.11e, the Wi-Fi Alliance approved a Quality of Service specification, titled Wi-Fi Multimedia, and began certifying the interoperability of equipment incorporating this specification. This has reduced the adoption of 802.11e significantly. Convergence of WMM and 802.11e functionality will decrease confusion in the market from multiple QoS standards."

The history of who did what when is not really relevant to the future. The reality is that the market place has adopted WMM and WMM-PS and has ignored the equivalent QoS features in 802.11-2007.

SuggestedRemedy

The suggested new text is, "There are hundreds of millions of devices being manufactured annually based on the WMM v1.1 specification. In contrast no known commercial devices use the equivalent features in 802.11-2007 despite these features being ratified for almost three years. The market place has clearly adopted the QoS features certified by the Wi-Fi Alliance as WMM and WMM-Power Save over the equivalent features in 802.11-2007. This amendment will re-align the QoS features of 802.11-2007 with what industry is implementing, thus ensuring the ongoing relevance of the 802.11 standard."

Proposed Response Response Status

CI 05 SC 5.5 P0 L0 # 39

Myles, Andrew

Comment Type T Comment Status X

The current "need for the project" text states, "Implementers of 802.11 Quality of Service are faced with a problem of incorporating two distinct and incompatible mechanisms for Quality of Service. This amendment will provide a single, converged mechanism that will eliminate this problem."

This statement is false because there will still be multiple mechanisms given the current intention to not remove or deprecate existing QoS features in 802.11-2007.

SuggestedRemedy

This clause should probably focus on the "need" in terms of urgency rather than restate the purpose

The suggested new text is, "The 802.11 WG is currently developing amendments to 802.11 based on QoS features that are not used by industry. Industry will be forced to rework these amendments in other forums to allow these new features to operate on the base defined by the WMM v1.1 specification. This reqwork takes additional time, slowing adoption of new features, and invariably results in changes, thus making the 802.11 standard even less aligned with market reality. This amendment is urgently required to ensure the 802.11 standard serves the need of industry for useful new features in a timely manner"

Proposed Response Response Status O

CI 17 SC 17.5.1 P0 L0 # 40

Myles, Andrew

Comment Type T Comment Status X

The text states, "This amendment to 802.11 capitalizes on the already demonstrated market success of the existing standard and the industry certification efforts of the Wi-Fi Alliance. The amendment avoids a potential for a competitive split in the market, where the Wi-Fi Alliance duplicated the work of the 802.11e task group".

This text is unsatisfactory in a number of ways:

* The proposed amendment does not avoid the potential for a competitive split in the market place. Rather it avoids a split between what the market is implementing and what the standards defines.

* It seems to blame the Wi-Fi Alliance for "duplicating the work of the 802.11e task group", without recognising the agonisingly slow progress of the 802.11e task group. Casting blame at this point is also not a useful exercise.

SuggestedRemedy

Suggested new text is, "802.11, as certified for interoperability by the Wi-Fi Alliance, is a very successful standard. The amendment enables its ongoing success by incorporating WMM and WMM-Power Save functionality, thus avoiding continuing and widening the divergence between what the market is implementing (WMM and WMM-Power Save) and what the 802.11 standard specifies"

Proposed Response Response Status O

CI 17 SC 17.5.4 P0 L0 # 41

Myles, Andrew

Comment Type T Comment Status X

The text states, "Both 802.11e and the Wi-Fi Multimedia specifications have been implemented, demonstrating their technical feasibility. This amendment will not increase the complexity of these existing solutions by any noticeable amount."

However, it is not clear that 802.11e has been implemented with proven interoperability by anyone. It is also not clear that the technical feasibility of 802.11e is even relevant given that it is not topic of the amendment

SuggestedRemedy

Suggested new text is, "The WMM v1.1 specification has been implemented with proven interoperability as WMM and WMM-Power Save, demonstrating the technical feasibility of this amendment. The amendment will not increase the complexity of these existing solutions by any noticeable amount, if at all."

Proposed Response Response Status O

CI 17 SC 17.5.5 P0 L0 # 42

Myles, Andrew

Comment Type T Comment Status X

The text states, "This amendment addresses solely the incompatibilities between the 802.11e and Wi-Fi Multimedia specifications. Each of these specifications has been implemented economically and is currently fielded. This amendment will merge the two specifications into a compatible whole, without appreciably increasing the cost or complexity of the implementation"

However, this statement has a number of problems:

- * it is not clear that 802.11e has been implemented by anyone with proven interoperability
- * It is not clear that the economic feasibility of 802.11e is even relevant given that it is not topic of the amendment.
- * It is unlikely that the amendment will merge the two specifications into a compatible whole. Rather, it will merge them into a single document

SuggestedRemedy

Suggested new text is, "The WMM v1.1 specification has been implemented with proven interoperability as WMM and WMM-Power Save, demonstrating the economic feasibility of this amendment. The amendment will not increase the complexity or costs of these existing solutions by any noticeable amount, if at all."

Proposed Response Response Status O

CI 00 SC Type of Project P0 L0 # 43

Myles, Andrew

Comment Type E Comment Status X

802.11-1999 should be 802.11-2007

SuggestedRemedy

0

Proposed Response Response Status O

CI 02 SC 2.1 P0 L0 # 44

Myles, Andrew

Comment Type T Comment Status X

The title currently includes "Convergence with existing Quality of Service implementation"

However, "convergence": is not really accurate and "existing Quality of Service implementation" is not very specific

SuggestedRemedy

Change title to "Incorporation of WMM"

Proposed Response Response Status O

CI 05 SC 5.2 P0 L0 # 45

Ashley, Alex

Comment Type T Comment Status X

The word "align" troubles me because it is not really two specifications aligning because QSE can only modify the 802.11 specification whilst WMM stays the same. In reality align means "adopt", and I would prefer us to be honest in the scope statement.

SuggestedRemedy

I am going to assume that "adopt" is not going to be acceptable to members of the study group. How about something along the lines of "Extensions to 802.11 to incorporate the features provided by the WMM specification that are not already provided by IEEE 802.11-2007" ?

Proposed Response Response Status O

CI 05 SC 5.2 P0 L0 # 46

Ashley, Alex

Comment Type T Comment Status X

If WMM and 11e are incompatible, how is it possible for the scope to be "à" and is not allowed to invalidate existing device compliance with 802.11e and will not deprecate any operational mode or feature introduced in 802.11e-2005."? If the specifications are not compatible, it seems that it is impossible to meet this requirement and still end up with something that can support WMM.

SuggestedRemedy

Hopefully you can reject this comment by explaining how the "not allowed to invalidate" statement can be met whilst still being able to support WMM. If this is not possible, I would like the scope statement modified to say that there will be modifications to existing compliance and provide some details on these modifications.

Proposed Response Response Status

CI 05 SC 5.2 P0 L0 # 47

Ashley, Alex

Comment Type E Comment Status X

I thought that 11e was now part of the baseline?

SuggestedRemedy

Should references to 11e be replaced with 802.11-2007 ?

Proposed Response Response Status

CI 05 SC 5.4 P0 L0 # 48

Ashley, Alex

Comment Type T Comment Status X

Do we know for a fact that the creation of WMM has "... reduced the adoption of 802.11e significantly"? Maybe there were other market factors that had an impact on the (lack of) deployment of 11e?

SuggestedRemedy

I think the sentence can be deleted, without reducing the strength of the purpose statement.

Proposed Response Response Status

CI 05 SC 5.4 P0 L0 # 49

Ashley, Alex

Comment Type T Comment Status X

I would like to see more than just "decrease confusion in the market" as a reason for the QSE group. The "confused" market still seems to be working quite well! I would like to see interoperability as the main reason for needing this amendment. If we can work out how to make 11e and WMM devices interoperate on the same network then we will have achieved something far more significant than a less confused market.

SuggestedRemedy

Add interoperability between 11e-2005 and WMM devices to the purpose (and scope?).

Proposed Response Response Status

CI 17 SC 17.5.3 P0 L0 # 50

Ashley, Alex

Comment Type T Comment Status X

What does "The resulting amendment will still maintain the distinct identity of the QoS extensions established in 802.11e." mean?

SuggestedRemedy

Delete the sentence

Proposed Response Response Status

CI 17 SC 17.5.5 P0 L0 # 51

Ashley, Alex

Comment Type T Comment Status X

Essentially the same as my comment on section 5.2, which is the use of the word "merge" troubles me because it is not really a merge, it is an adoption of WMM.

SuggestedRemedy

Change to "This amendment will provide compatibility between the two existing specifications, without appreciably increasing the cost or complexity of the implementation"

Proposed Response Response Status

CI 05 SC 5.2 P0 L0 # 52

Inoue, Yasuhiko

Comment Type T Comment Status X

It is not clear to me whether harmonization of admission control mechanism is within the scope of this activity. In my understanding, WMM 1.1 includes power save mechanism corresponding to APSD. However, admission control is not included in WMM 1.1. I strongly support to include the admission control mechanism within the scope of this activity.

SuggestedRemedy

Consider the admission control within the scope of this activity.

Proposed Response Response Status O

CI 17 SC 17.5.3 P0 L0 # 53

Cam-Winget, Nancy

Comment Type T Comment Status X

The first and last sentence of this paragraph seem contradictory. Perhaps the last paragraph is meant to read "The resulting amendment will still maintain the distinct identity of the QoS extensions established in 802.11e but ensure inclusion of WMM."

SuggestedRemedy

As in the comment.

Proposed Response Response Status O

CI 00 SC General P0 L0 # 54

Cam-Winget, Nancy

Comment Type T Comment Status X

It is important to have 802.11 proceed with this work as otherwise, there will be continued divergence in this space should WMM persist as standalone and its adoption/deployment grows.

SuggestedRemedy

0

Proposed Response Response Status O

CI 00 SC General P0 L0 # 55

Gong, Michelle

Comment Type T Comment Status X

When an IEEE standard amendment and an industry standard start off with different designs and are being maintained and revised in parallel, the gap between the two specs will only get bigger and bigger. It's a problem now and it won't go away in the future.

SuggestedRemedy

Approve the PAR and 5 criteria defined in QSE SG. It's better to do the work sooner rather than later.

Proposed Response Response Status O

CI 05 SC 5.4 P0 L0 # 56

Thomson, Allan

Comment Type T Comment Status X

Change "This has reduced the adoption of 802.11e significantly" to "This has reduced the relevance of the 802.11 standards process and the adoption of 802.11e significantly"

SuggestedRemedy

As per comment.

Proposed Response Response Status O

CI 05 SC 5.5 P0 L0 # 57

Thomson, Allan

Comment Type T Comment Status X

"amechanism that will eliminate this problem". Will the single converged mechanism be interoperable with 802.11e and WMM? If so, state that the single converged mechanism will provide a interoperable mechanism, or state that it won't.

SuggestedRemedy

As per comment.

Proposed Response Response Status O

CI 05 SC 5.6 P0 L0 # 58
 Thomson, Allan
 Comment Type T Comment Status X
 Aren't WMM/Wifi Alliance stakeholders more than 802.11? It is important that this standard get adopted by Wifi Alliance so they are very much stakeholders.
 SuggestedRemedy
 Add Wifi Alliance/WMM as stakeholders.
 Proposed Response Response Status O

CI 00 SC 1 P0 L0 # 59
 McCann, Stephen
 Comment Type E Comment Status X
 Typo "PAR for an amendment to an existing Standard 802.11-1999"
 SuggestedRemedy
 PAR for an amendment to an existing Standard 802.11-2007
 Proposed Response Response Status O

CI 01 SC 1.2 P0 L0 # 60
 McCann, Stephen
 Comment Type E Comment Status X
 Need to complete this line
 SuggestedRemedy
 Standard for harmonising WFA WMM with IEEE 802.11e
 Proposed Response Response Status O

CI 02 SC 2.1 P0 L0 # 61
 McCann, Stephen
 Comment Type T Comment Status X
 Suggested alternative name
 SuggestedRemedy
 Vendor QoS updates
 Proposed Response Response Status O

CI 05 SC 5.2 P0 L0 # 62
 McCann, Stephen
 Comment Type T Comment Status X
 Does the bounding of the scope to WMM v1.1, prevent any investigation into current harmonisation of further WMM work within the WFA?
 SuggestedRemedy
 Perhaps relax to scope to include all current and future WMM releases, although I do appreciate how difficult this is to pin down.
 Proposed Response Response Status O

CI 05 SC 5.4 P0 L0 # 63
 McCann, Stephen
 Comment Type T Comment Status X
 Can we state which version of WMM was approved prior to .11e
 SuggestedRemedy
 Clarify all version numbers with this clause.
 Proposed Response Response Status O

Cl 05 SC 5.4 P0 L0 # 64

McCann, Stephen

Comment Type T Comment Status X

The sentences "This has reduced the adoption of 802.11e significantly. Convergence of WMM and 802.11e functionality will decrease confusion in the market from multiple QoS standards.", although true, don't really help with the purpose of this PAR. These could be interpreted as political opinions rather than facts.

SuggestedRemedy

Please move these sentences to clause 7.4, or event the 5Criteria part.

Proposed Response Response Status O

Cl 05 SC 5.4 P0 L0 # 65

McCann, Stephen

Comment Type T Comment Status X

It may be useful to the membership, if a slightly longer "potted" history was to be written in clause 7.4. But please avoid the gore and erotic bits!

SuggestedRemedy

0

Proposed Response Response Status O

Cl 05 SC 5.5 P0 L0 # 66

McCann, Stephen

Comment Type T Comment Status X

Again, it may be useful to spell out WMM version numbers in this text. As an outsider, it may look like that this PAR will actually result in a single combined version of WMM 1.1 and IEEE 802.11e. I'm still unsure as to whether this is exactly what is sought after here. I personally do not appreciate the functionality within WMM 1.1, but even so the version number issue appears to be quite an important point.

SuggestedRemedy

Perhaps this PAR should be striving to produce a single combined version of WMM and IEEE 802.11e.

Proposed Response Response Status O

Cl 05 SC 5.6 P0 L0 # 67

McCann, Stephen

Comment Type T Comment Status X

Shouldn't the WFA be included as a stakeholder?

SuggestedRemedy

Add WFA as a stakeholder.

Proposed Response Response Status O

Cl 06 SC 6.1.b P0 L0 # 68

McCann, Stephen

Comment Type T Comment Status X

Is the intention to study this issue of copyright permissions within the proposed TG? Is there an defined path to how this issue can be resolved? I wouldn't want copyright issues between IEEE and WFA to be a showstopper for this.

SuggestedRemedy

Perhaps a statement about a possible process to resolve this issue, may be useful her: e.g. the TG will strive to establish whether copyright issues are relevant or not.

Proposed Response Response Status O

Cl 07 SC 7.1 P0 L0 # 69

McCann, Stephen

Comment Type T Comment Status X

Have you considered any QoS harmonisation issues within 802.16m?

SuggestedRemedy

Maybe worth a check?

Proposed Response Response Status O

Cl 17 SC 17.5.1 P0 L0 # 70
 McCann, Stephen
 Comment Type T Comment Status X
 Maybe worth saying that WFA pre-empted the work of 802.11e. Duplicated sounds as though 11e did the work, finished; and then WFA did the same work again.
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 17 SC 17.5.2 P0 L0 # 71
 McCann, Stephen
 Comment Type T Comment Status X
 Maybe worth re-iterating some of the earlier text about not affecting any of the existing 11e functionality (I think that's right), or being compatible with existing 11e implementations.
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 17 SC 17.5.3 P0 L0 # 72
 McCann, Stephen
 Comment Type T Comment Status X
 This clause appears to be saying that future 11aa (let's call the possible TG that for now) compliant devices will be different from WMM devices as far as the WFA is concerned. Is that right? If so, I'm not so happy about that, as surely this PAR should be attempting to harmonise 11e devices with WMM 1.1 (or future versions of WMM). The words "distinct identity" worry me.
 SuggestedRemedy
 I think this clause needs to be clearly re-worded, to state that one harmonised WMM product will be the output of all this activity.
 Proposed Response Response Status O

Cl 17 SC 17.5.5 P0 L0 # 73
 McCann, Stephen
 Comment Type T Comment Status X
 This text appears to be at odds with my above comment about 17.5.3
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 00 SC General P0 L0 # 74
 McCann, Stephen
 Comment Type T Comment Status X
 I honestly think that this initiative and PAR are a genuinely reasonable attempt to harmonise WMM 1.1 with 11e, however I must admit that I'm still left with some doubt in my mind, as to what exactly is being harmonised, and rather uncertain as to what the ultimate goal is from WFA, in terms of whether there will be one or two feature sets at the end of the day. I am concerned as to whether this PAR may lead to a WMM+11aa type of device, where 11aa effectively refers to 11em (i.e. fixed 11e).
 SuggestedRemedy
 I think some clarification of the WMM objectives within this PAR & 5Criteria would assist the IEEE 802.11 membership.
 Proposed Response Response Status O

Cl 00 SC General P0 L0 # 75
 McCann, Stephen
 Comment Type E Comment Status X
 Some of the 5Criteria responses are quite short. It maybe useful to expand some of these up. Please remember that there are (a few) IEEE 802.11 members who are not members of the WFA and need a little more help with the background here. The 5Criteria document essentially sets the business case for the PAR, and I still think its a little lacking in places. More detailed justification can only serve to help this document.
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 00 SC General P0 L0 # 76
 McCann, Stephen
 Comment Type E Comment Status X
 I think it would be useful to include some liaison/relationship with the WFA WMM members, directly within this PAR, to indicate that some sort of relationship will be established.
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 00 SC General P0 L0 # 77
 McCann, Stephen
 Comment Type E Comment Status X
 Although this comment, is not within the scope of this IEEE 802.11 poll, I strongly urge the WFA to reciprocate the intention of this IEEE 802.11 PAR and possible set up a WFA project to assist and directly liaise with IEEE 802.11aa if approved.
 SuggestedRemedy
 0
 Proposed Response Response Status O

Cl 00 SC 1 P0 L0 # 78
 Hart, Brian
 Comment Type T Comment Status X
 I don't know what is holding this up. Standards are about building markets. If you use 11e, you have no one to interoperate with, so if you want to participate in the market, you have to start by complying with WiFi, then add your favorite 11e extensions. QSE is proposing to do all this merging work for you.
 SuggestedRemedy
 Create the TG
 Proposed Response Response Status O

Cl 00 SC 1 P0 L0 # 79
 Hart, Brian
 Comment Type T Comment Status X
 Without QSE, we work on 802.11 but it is a polite fiction because any and all 802.11 work has to be run past WMM, & rewritten where legacy compliance is affected.
 SuggestedRemedy
 Create the TG
 Proposed Response Response Status O

Cl 00 SC General P L # 80
 Durand, Roger RIM
 Comment Type E Comment Status X
 The industry really needs to address the differences between 802.11e and WiFi WMM. Not doing so will become a major problem across time. The industry should in effect expand and/or enhance the 802.11e to accomodate the WMM work while carefully avoiding any disabling of already existing capabilities that are orthogonal to WMM. I beleive the present PAR wording supports this intent.
 SuggestedRemedy
 Proposed Response Response Status O

Cl 00 SC General P L # 81
 Sharon, Ariel
 Comment Type T Comment Status X
 This PAR implies that alignment changes may be necessary in both 802.11-2007 and Wi-Fi documentations (albeit only changes that do not impact commercial products already deployed). A mechanism that is acceptable to both 802.11 WG and Wi-Fi is needed in order to implement this mutual relationship. This mechanism should be addressed somewhere in the PAR and 5 Criteria document and an agreement from Wi-Fi to comply with this mechanism needs to be assured.
 SuggestedRemedy
 Proposed Response Response Status O

CI 00 SC General P L # 82
Hillman, Garth AMD

Comment Type T Comment Status X

This study group is not addressing the right issue. The issue is NOT suggested_remedy = The QSE-SG chair, 802.11 WG chair and the WFA BOD chair (and acting Managing Director) agree that this study group should be desolved and a committee of WFA and IEEE officers formed to create an agreement between the organizations that would prevent WFA and IEEE from developing specifications which overlap in the future. I do not believe that this situation is too politically complex to solve if there is a genuine willingness to solve the problem; certainly all the right people are intimately knowledgeable on how the situation arose and therefore how to prevent it in the future. The WFA was formed as the Marketing and Certification non-profit organization for the WLAN industry and IEEE 802.11 is the 'communication' (PHY and MAC) standards non-profit organization for the WLAN industry. (Why can't both sides be happy with their sphere of influence?) Once the agreement has been reached the QSE-SG could be reconstituted for the purpose of harmonization if it makes sense in the market; I am positive that PAR and 5C would be adopted quickly and an amendment approved in record time.

This is not the first time this situation has arisen and, I predict with high confidence that if this action is not taken we will be wasting time on similar situations in the future.

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC General P L # 83
Benveniste, Mathilde Avaya

Comment Type T Comment Status X

The modifications to be introduced by the WMM spec to the 802.11 standard have no technical justification. Certain modifications had been proposed in the past, while TGe was deliberating and rejected by the 802.11 task group. Allowing an outside organization to impose changes to the 802.11 standard, is equivalent to handing over the standards making authority to the WiFi Alliance. The WiFi Alliance is supposed to 'test' interoperability; not formulate a different standard. Having actively participated in the formulation of the 802.11 standard in question, and being familiar with the deliberations of the WiFi task group while drafting the WMM spec, I see no technical reason to adopt the technical changes the WMM spec would introduce into the 802.11 standard. I believe further that adopting the WMM spec sets a significant precedent. The standards making responsibility would be taken away from the IEEE SA and handed over to an industry consortium, where only a group smaller than its full membership has ultimate voting power.

SuggestedRemedy

Reject the proposal to incorporate the WMM spec as part of the 802.11 standard.

Proposed Response Response Status O

CI 00 SC General P L # 84
Hansen, Christopher Broadcom Corporation

Comment Type E Comment Status X
Abstain

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC P L # 85
 Ellis, Mike BBC
 Comment Type E Comment Status X
 This whole process risks setting a dangerous precedent, especially in the light of the widespread adoption and certification of
 SuggestedRemedy
 The WiFi Alliance should stick to doing its job certifying equipment and not try to act as a second-tier standardisation body.
 Proposed Response Response Status O

CI 00 SC General P L # 86
 Walker, Jesse Intel
 Comment Type T Comment Status X
 I believe the proposed PAR defines a scope suitable for QSE to develop enhancements to 802.11 QoS. In particular, there is sufficient latitude for participants to evolve any submission used as the starting point for the QSE work.
 SuggestedRemedy
 Proposed Response Response Status O

CI 00 SC General P L # 87
 Chen, Yi-Meng ISSC
 Comment Type T Comment Status X
 Does QSE-SG only work on WMM and 802.11e? As I know, WFA also has WMM-SA spec and related to 802.11e HCCA. Since QSE-SG has the chance to align WFA WMM and 802.11e, why not also align WFA WMM-SA and 802.11e.
 SuggestedRemedy
 Proposed Response Response Status O

CI 00 SC General P L # 88
 Loc, Peter Marvell Semi
 Comment Type T Comment Status X
 This alignment may cause more confusion and will raise question regarding the compatibility of devices that conform to the alignment spec. vs the current WFA spec.
 SuggestedRemedy
 Focus on aligning WFA and IEEE on Video, Mesh, Voice etc.
 Proposed Response Response Status O

CI 00 SC General P L # 89
 Moorti, Rajendra Broadcom Corp
 Comment Type T Comment Status X
 Since the industry already has WMM (through WFA), I don't see a need for another body to standardize it.
 SuggestedRemedy
 Leave .11e alone since everyone just deals with WFA WMM.
 Leave .11e alone since everyone just deals with WFA WMM.
 Proposed Response Response Status O

CI 00 SC General P L # 90
 Poncini, Victoria Microsoft
 Comment Type E Comment Status X
 I am in favor of the submitted PAR and 5 Criteria as currently written. I have no additional changes to add.
 SuggestedRemedy
 Proposed Response Response Status O

CI 00 SC General P L # 91
 Hiertz, Guido R. Philips

Comment Type T Comment Status X

I see no need to reflect a market variant of the 802.11e mechanisms in the standard. WMM has been derived from the 802.11e standard. Hence, the WMM specification is a slightly changed variant of the 802.11e.

Anyway, implementors/vendors are free to interpret the 802.11 standard as they like to do. There are no means, correct implementation of IEEE standards could be enforced. Thus, today's 802.11 market already has a lot of different solutions. Especially big companies introduce proprietary extensions that provide additional capabilities but also do bind their customers to their solutions. Hence, compatibility exists for a small set of functions only.

To me, it's more important the standard remains consistent and cohesive. The standard is general guideline for the design of systems. Changing the 802.11 standard to adapt it to a derivative implementations seems to open the door for any future feature that has significant market importance. Vendors of proprietary extensions could argue their solution is as important and as widely used as the WMM spec. and therefore the 802.11 should change.

Since Annex C has become informative, there is no precise way to describe the 802.11 standard. Languages are imprecise and subject to interpretation of reader or audience. The need for TGm and the existence of the

SuggestedRemedy

Leave things as they are. WMM is in the market. WFA knows how to handle it and to incorporate it into future amendments.

People know WMM from marketing. It's a good brand. There is no need to adapt converge WMM and 802.11e. I cannot detect confusion in the market.

Proposed Response Response Status

CI 00 SC General P L # 92
 Miller, Robert AT&T

Comment Type T Comment Status X

Members of 802.11 and the QSE SG:

I wish to speak against approval of a QSE Study Group PAR and 5-Criteria or formation of a Task Group to harmonize the Wi-Fi Alliance WMM certification criteria with the 802.11e standard for the following reasons:

1. I believe the process is inappropriate according to the normal flow of 802 standards. Insufficient evidence has been provided to show that the 802.11e standard is non-functional in any way other than the observation that it is not fully coherent with the Wi-Fi WMM certification specifications. If evidence of malfunction is available, it should be addressed via the appropriate process, the 802.11 maintenance process. In such a case, this process should repair the errors/omissions, but keep the basic structure and protocols intact as has been done in previous maintenance TGs.

Moreover, the QSE Study Group was attended by a substantial number of 802.11 members. The opinions expressed and votes tallied indicated substantial opposition to modification of the standard in this instance, and inability to reach closure on a PAR and 5 Criteria satisfactory to both the SG and WG membership is a matter of record. The current juncture has been reached by a ruling of the SG chair which sought to move the group past deadlock by a procedural ruling of questionable merit attempting to convert a "consensus" process to "simple majority". Subsequent attempts to modify the WG chair's ruling on the QSE matter by manipulation of the comment process (attempts to convert comments to "votes" in the web-based system) excites further speculation as to the comfort of the SG chair with the 802 process and rules.

2. The adoption of the out-of-process flow that would be created by acceptance of the QSE initiative's changes sets a dangerous precedent for an accredited IEEE standard. Accreditation of the IEEE Standards Association is granted by ANSI, whose rules are in alignment with the U.S. National Technology Transfer and Advancement Act of 1995. Since the Wi-Fi Alliance is a self-identified marketing and certification-targeted industry organization, by definition it routinely is involved with information out-of-scope for an accredited standard, particularly involving competition, price, and marketing/feature selection details. Furthermore, its closed membership and non-transparent process is characterized by several aspects that are unlikely to support accreditation. The specification it offers was produced without adherence to the substantial number of checks-and-balances developed by ANSI (refer to document "ANSI Essential Requirements: Due process requirements for American National Standards", dated January, 2006.

Some important features of this process (from the document) are, for example:

Openness

Participation shall be open to all persons who are directly and materially affected by the activity in question. There shall be no undue financial barriers to participation. Voting membership on the consensus body shall not be conditional upon membership in any

organization, nor unreasonably restricted on the basis of technical qualifications or other such requirements.

Lack of dominance

The standards development process shall not be dominated by any single interest category, individual or organization. Dominance means a position or exercise of dominant authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints.

Balance

The standards development process should have a balance of interests. Participants from diverse interest categories shall be sought with the objective of achieving balance.

Notification of standards development and coordination

Notification of standards activity shall be announced in suitable media as appropriate to demonstrate an opportunity for participation by all directly and materially affected persons.

Consideration of views and objections

Prompt consideration shall be given to the written views and objections of all participants, including those commenting on the PINS announcement or public comment listing in Standards Action.

Consensus vote

Evidence of consensus in accordance with these requirements and the accredited procedures of the standards developer shall be documented.

Appeals

Written procedures of an ANSI-Accredited Standards Developer (ASD) shall contain an identifiable, realistic, and readily available appeals mechanism for the impartial handling of procedural complaints regarding any action or inaction. Procedural complaints include whether a technical issue was afforded due process. Appeals shall be addressed promptly and a decision made expeditiously. Appeals procedures shall provide for participation by all parties concerned without imposing an undue burden on them. Consideration of appeals shall be fair and unbiased and shall fully address the concerns expressed. With such embarrassments as 802.20's restart, 802 recently took a close look at processes and procedures to minimize abuse of process and perception of undue influence, changing some provisions of the standards flow to ensure transparency, promote fairness, and minimize liability. It should extend that inspection to this situation.

3. The proposed changes violate previous precedents. In the past, transfer of an industry forum-created de-facto standard to an accredited standards body has been accommodated, but only if the entire existing external standard has been subjected to review/modification by the accredited body, for example the Bluetooth standard (an example cited by the QSE SG chair). In this case, the precedent does not apply because the 802.11e standard anticipated the WMM specification. Accordingly its adoption seeks to modify elements of an existing standard.

4. If the WFA certification specifications were to be harmonized with 802.11e in the open standard, it is not clear if reciprocity or coherence would result either immediately or in the long term. No information has been presented to indicate that the WFA WMM specification

would be "reverse-harmonized" with the existing 802.11e standard. Thus, unless functionality/operational details of the current 802.11e were removed, there would still be no reciprocal mapping between the standard and the Wi-Fi Alliance specification. Moreover, there is no guarantee that changes in the going-forward WMM specification would not require subsequent modification of the 802.11e standard yet again. Such a flow would dilute 802.11 into a "rubber stamp" for the Wi-Fi Alliance's decisions regarding what a valid standard should be.

Moreover, the rate of change of some industry body standards is such that changes would materially devalue the standard's value to, for example, service providers. Service providers rely on a stable standard to ensure that equipment deployed to establish a network enjoys an economic life long enough to justify the large investment. Since QoS-capable systems are only arising currently, it is important that the foundations of the QoS standard remain stable and include all capabilities of the publication, not just a subset. 5. There are restraint-of-trade implications that could open the IEEE SA to litigation. 802.11e is a published standard. Companies building equipment to be compliant with the published standard, but who have chosen not to become members of the Wi-Fi Alliance may be impacted by changes to the standard while they are in-process. This impact may result in additional development costs, invalidation of designs, stranding of produced product, and late arrival to the marketplace and reduction of interoperability. As the change in the standard may not be attributable to a defect, but rather the absence or presence of a feature or function, or difference in a protocol/field detail induced by an external industry group, the standard may be open for liability.

The assertion has been made (on the record) by members of the Wi-Fi Alliance sponsoring the QSE changes that the WFA "is the marketplace", and that it would be "unfortunate" if the standard did not reflect the "mainstream" of existing equipment that has been sold. The QoS capability in the standard is entirely new, and currently represents a very small fraction of all of the 802.11 equipment in the field. The new standard was created to anticipate the need among users to communicate streaming content with minimum impairment using the 802.11 medium. As multimedia applications such as video and VoIP are only emerging now, it seems very premature to claim that existing implementations of WMM-compliant equipment represent the "decision" of the marketplace and its users. Rather I assert that the Wi-Fi Alliance is attempting to co-opt the decision of users by removing marketplace choice.

Suggested Remedy

Handle errors in the standard via through the maintenance process, removing the potential for difficulties expressed in the above.

Proposed Response

Response Status

CI 00 SC General P L # 93
Ji, Lusheng AT&T

Comment Type T Comment Status X

I voted no for the original QSE-SG PAR and Five Criteria document (07-0029-05) at the closing plenary of the May 2007 meeting. The reason for my no vote is not because I disapprove anything particular in the 07-0029-05 document. I voted no because I disapprove the result that the 07-0029-05 document is seeking, the authorization of forming a new task group aiming at aligning the IEEE 802.11e standard with WFA WMM specification.

1. Although the QSE advocates for harmonizing functionality between 11e and WMM, from the 5.4 Purpose of Proposed Standard section of 07-0029-05 and the reasons I have been given during QSE meetings in particular those from the chair of WFA, I could conclude nothing but that the task group 07-0029-05 aiming for will try to completely replace 11e with WMM specification. Any other outcome will still leave a gap between the new standard and market, the Purpose of Proposed Standard will still be not fulfilled.

2. Forcing market status quo upon a standard is wrong. Not only does this invalidate many WG members work on 11e, more importantly what does not dominate the market today may become valuable tomorrow. This is especially true for 11e. For instance consumer electronics vendors are just beginning to realize that WMM is not enough for providing the level of QoS needed for delivering video over WiFi and beginning to explore and implement the rest of 11e standard.

3. IEEE 802.11 standard has many sections and options that are not widely available on today's market. For instance the Infrared PHY, FHSS, PCF, PBCC, etc. They have not reduced adoption of 802.11. I see no reason the difference between 802.11e and today's WMM would do so either. Besides, if QSE starts a precedent, shall we charter new task groups changing those as well? What about future amendments?

SuggestedRemedy

Proposed Response Response Status O

CI 00 SC General P L # 94
Worsham, James AT&T

Comment Type T Comment Status X

I stand opposed to the approval of the QSE SG PAR and 5-criteria as well as the formation of a TG to harmonize the existing 802.11e standard with the Wi-Fi Alliance (WFA) Wireless Multimedia (WMM) certification document.

The 802.11e standard was adopted following IEEE SA policies and procedures. The IEEE SA is accredited by ANSI and as a condition of that accreditation follows the ANSI rules with regards to openness, lack of dominance, balance, etc. The WFA, on the other hand, is self-identified as a marketing and certification-targeted industry organization with a closed membership and non-transparent process that as such is not and likely never will be accredited as a standards making organization. As a result, WMM is not a standard but a document used for internal WFA certification purposes only.

While I recognize the value of organizations such as the WFA and documents such as WMM it is clear that they are not a standards making organization or standard respectively. WMM must be subservient to the "base" 802.11e standard. I also recognize the value of harmonization but in this case it is incumbent upon the WFA to harmonize WMM with 802.11e not vice versa. If in the process of such harmonization the WFA discovers substantial technical issues with the 802.11e standard then such technical issues should be submitted to the 802.11 WG to be handled using the existing standards maintenance process.

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SuggestedRemedy

Proposed Response Response Status O

CI 00 SC General P L # 95
 Hiertz, Guido R. Philips

Comment Type T Comment Status X

1) I see no need to reflect a market variant of the 802.11e mechanisms in the standard. WMM has been derived from the 802.11e standard. Hence, the WMM specification is a slightly changed variant of the 802.11e.
 Anyway, implementors/vendors are free to interpret the 802.11 standard as they like to do. There are no means, correct implementation of IEEE standards could be enforced. Thus, today's 802.11 market already has a lot of different solutions. Especially big companies introduce proprietary extensions that provide additional capabilities but also do bind their customers to their solutions. Hence, compatibility exists for a small set of functions only. To me, it's more important the standard remains consistent and cohesive. The standard is general guideline for the design of systems. Changing the 802.11 standard to adapt it to a derivative implementations seems to open the door for any future feature that has significant market importance. Vendors of proprietary extensions could argue their solution is as important and as widely used as the WMM spec. and therefore the 802.11 should change.
 Since Annex C has become informative, there is no precise way to describe the 802.11 standard. Languages are imprecise and subject to interpretation of reader or audience. The need for TGM and the existence of the "IEEE Standards Interpretations" website proves that the 802.11 standard can be interpreted differently. Thus, there will always be different implementations in the market. Hence, I cannot see any advantage in tweaking the 802.11e standard to become what implementors currently use in the market.
 We should keep the IEEE standard separate from Wi-Fi Alliance's tests and certification programs. IEEE standards provide a general, theoretical framework that needs to be consistent. The IEEE standards are abstract and provide general principles, ideas and solutions. Wi-Fi Alliance's task is different. The WFA ensures compatibility and interoperability of physical implementations of the standard. To me it's no problem, if by certifying and testing real hardware the WFA ends up with a certain variant/interpretation of the IEEE standard. IEEE standards are for basic framework, WFA is for the definition of a specific interpretation.
 2) Still, I cannot find the WMM specification being available for free to non-WFA members. If the WFA's chairman thinks the price for the WMM spec is small, there should be no problem that WFA provides the document for free. If the price is low, there cannot be a big income for the WFA anyway. As the WFA is a rich industry alliance, there should be no problem to waive that small income from selling documents.
 Having an open process and providing free access may help WFA as much as it helps IEEE to define world-wide standards. For some researchers, students and interested people in less rich countries, 25\$ for a slightly changed copy of the 802.11e standard is a lot of money. It's somewhat ignorant to exclude those people. I don't see why those couldn't have ideas as brilliant as those who are able to spend the amount.
 Furthermore, it must be in WFA's own interest that companies implement WMM and not 802.11e. Therefore, I can absolutely see no reason why the spec. is sold.
 Maybe WFA would receive more support if documents would be available at no charge as IEEE standards?

SuggestedRemedy

Leave things as they are. WMM is in the market. WFA knows how to handle it and to incorporate it into future amendments.
 People know WMM from marketing. It's a good brand. There is no need to adapt converge WMM and 802.11e. I cannot detect confusion in the market.

Proposed Response

Response Status