Comment # **98**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 5   **Line** 4   **Fig/Table#**   **Section** 1.1

The requirements shall conform to the PAR. If not, the PAR needs to be modified.

Suggested Remedy

These requirements ~~are consistent~~ shall comply with the PAR...

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **98**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 5   **Line** 4   **Fig/Table#**   **Section** 1.1

The requirements shall conform to the PAR. If not, the PAR needs to be modified.

Suggested Remedy

These requirements ~~are consistent~~ shall comply with the PAR...

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Improvement in the text since the PAR requirements are mandatory.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **160**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 1   **Line** 3   **Fig/Table#**   **Section** 1.1

The sentence beginning with "This document...." is not clear in defining the scope. It confuses the Standard with the System.

Suggested Remedy

Replace this sentence with "This document provides/defines the specification of physical and medium access control layers of an air interface for interoperable mobile broadband wireless access (MBWA) systems, operating in licentsed bands below 3.5 GHz, optimized for IP-data transport."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

maintain as is

Reason for Recommendation

The suggested remedy is incorrect. This document provides the requirements of the 802.20 MAC/PHY and not the specification of the physical and medium access control layers....

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **101**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 5   **Line** 12   **Fig/Table#**   **Section** 1.2

This document does not specify detailed requirements (whatever those are).

Suggested Remedy

Change "detailed" to "functional".

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **102**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 5   **Line** 15   **Fig/Table#**   **Section** 1.2

Grammar and clarify what "layer" system is being used.

Suggested Remedy

change "layer" to "ISO/OSI layers"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **101**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 5   **Line** 12   **Fig/Table#**   **Section** 1.2

This document does not specify detailed requirements (whatever those are).

Suggested Remedy

Change "detailed" to "functional".

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

more accurate

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 102   **Comment by:**   Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 5   **Line** 15   **Fig/Table#**   **Section** 1.2

Grammar and clarify what "layer" system is being used.

Suggested Remedy

change "layer" to "ISO/OSI layers"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

accurate and probably useful addition

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 71   **Comment by:**

Comment   **Type** Technical, Binding   **Page** ?   **Line** 6   **Fig/Table#**   **Section** 1.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Naquib, Sutivong, Tomcik

Reject the comment...

Reason for Recommendation

Table 1-1 is included for information only. See exanation in first paragraph of section 1.3. (specifically lines 22-23 of page 5).
We suggest keeping the requirement for spectral efficiency high, however so as to achieve the best possible standard.
Spectral effficiency of 1 b/s/hz/sector can be achieved with "existing" technologies today.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 71   **Comment by:** Hari   Ganti

Comment **Type** Technical, Binding   **Page** Tech   **Line** 6   **Fig/Table#**   **Section** 1.3

1.   Spectral Efficiency (page 6 - Table 1.1 and page 12 - Table 4.1): Table 1.1 states that the system should have sustained spectral efficiency of 1 b/s/Hz/cell whereas Table 4.1 states that the downlink spectral efficiency should be 2.0 b/s/Hz/sector at 3 kmph and 1.5 b/s/Hz/sector at 120 kmph. As for the uplink, Table 4.1 lowers these numbers to 1.0 and 0.75 b/s/Hz/sector respectively. These numbers have little meaning in the absence of the channel conditions under which the system is intended to achieve them. Even the specification of the speed of the mobile terminal does not fully characterize the channel conditions. (Additional parameters such as the number of multipaths, their relative strengths and delays, specular components, etc. would be needed for a complete specification of the channel conditions.)

Suggested Remedy

Keep the desired minimum spectral efficiency figure of 1 b/s/Hz/sector; however, specify the conditions under which this spectral efficiency is to be attained.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 162   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 1   **Line** 20   **Fig/Table#**   **Section** 1.3

Typo "bases"

Suggested Remedy

replace with "basis"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 71   **Comment by:** Hari   Ganti

Comment   **Type** Technical, Binding   **Page** Tech   **Line** 6   **Fig/Table#**   **Section** 1.3

1.   Spectral Efficiency (page 6 - Table 1.1 and page 12 - Table 4.1): Table 1.1 states that the system should have sustained spectral efficiency of 1 b/s/Hz/cell whereas Table 4.1 states that the downlink spectral efficiency should be 2.0 b/s/Hz/sector at 3 kmph and 1.5 b/s/Hz/sector at 120 kmph. As for the uplink, Table 4.1 lowers these numbers to 1.0 and 0.75 b/s/Hz/sector respectively. These numbers have little meaning in the absence of the channel conditions under which the system is intended to achieve them. Even the specification of the speed of the mobile terminal does not fully characterize the channel conditions. (Additional parameters such as the number of multipaths, their relative strengths and delays, specular components, etc. would be needed for a complete specification of the channel conditions.)

Suggested Remedy

Keep the desired minimum spectral efficiency figure of 1 b/s/Hz/sector; however, specify the conditions under which this spectral efficiency is to be attained.

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
Consistent with the PAR

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 162   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 1   **Line** 20   **Fig/Table#**   **Section** 1.3

Typo "bases"

Suggested Remedy
replace with "basis"

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
editorial correction

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   106   Comment by:

Comment   Type Technical, Binding   **Page** 7   **Line** 7   **Fig/Table#**   **Section** 2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik

Remove "IP-based" from the first sentence.

Reason for Recommendation

Agreed that this paragraph should be informative. Suggest removing explicit reference to IP-based, since other types of traffic, such as "ethernet" or a native voice service could be carried over the future technology.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   164   Comment by:

Comment   Type Technical, Binding   **Page** 7   **Line** 8   **Fig/Table#**   **Section** 2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik

We need to standardize on a term. Should decide which one.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **167**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 8   **Line** 10   **Fig/Table#**   **Section** 2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

Reason for Recommendation
We should keep more specific text. We think " shall support Voice over IP." is preferable.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **105**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 7   **Line** 5   **Fig/Table#**   **Section** 2

Sentence should not be normative; not testable at a minimum.

Suggested Remedy
Delete "should" on line 5

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

The sentence should then be " The IEEE 802.20 standard forms the basis for ...."

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 106   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 7   **Line** 7   **Fig/Table#**   **Section** 2

Entire paragraph should be informative, not normative. These are marketing statements and are untestable at a minimum. Also, statements like "shall be designed to provide best-in-class" would require a pedantic definition of what technologies define "class."

Claims that 802.20 is better than "other systems targeted for wide-area mobile operation" are un-meetable and unnecessarily inflammatory.

Suggested Remedy

The 802.20-based air-interface (AI) ~~shall be~~ is optimized for high-speed IP-based wireless data services. The 802.20 based AI ~~shall~~ support~~s~~ compliant Mobile Terminal (MT) devices for mobile users~~, and shall enable improved performance relative to other systems targeted for wide-area mobile operation~~. The AI ~~shall be~~ is designed to provide best-in-class performance attributes such as peak and sustained data rates and corresponding spectral efficiencies, capacity, latency, overall network complexity and quality-of-service management. Applications that require the user device to assume the role of a server, in a server-client model, ~~may~~ can be supported as well.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **164**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 7   **Line** 8   **Fig/Table#**   **Section** 2

Multiple names for "MT" A generic global comment.

Suggested Remedy

Replace "Mobile Terminal (MT)," "user device," "mobile device," "wireless MT," "mobile wide-area stations," and "CPE" with "**Mobile Station**"

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Use common terminolgy across document

Reason for Recommendation

i do not care what term we ue as long as we use it consistently

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **165**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 7   **Line** 8   **Fig/Table#**   **Section** 2

The sentence beginning with "The 802.20...)" is not clear.

Suggested Remedy

Replace with "The 802.20 AI shall support various vehicular mobility classes up to 250 km/h in a MAN environment and target spectral efficiencies, sustained data rates and number of active users that are significantly higher than achieved by the existing mobile systems."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **166**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 7   **Line** 12   **Fig/Table#**   **Section** 2

Best in class "overall network complexity" -- the requirement is not clear.

Suggested Remedy

Please clarify what exactly is the requirement.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

There is no explanation of the problem

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **167**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 8   **Line** 10   **Fig/Table#**   **Section** 2

"air interface support to enable" not clear

Suggested Remedy

Replace it with "enablers to support"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **105**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 7   **Line** 5   **Fig/Table#**   **Section** 2

Sentence should not be normative; not testable at a minimum.

Suggested Remedy

Delete "should" on line 5

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree with rational

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **106**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 7   **Line** 7   **Fig/Table#**   **Section** 2

Entire paragraph should be informative, not normative. These are marketing statements and are untestable at a minimum. Also, statements like "shall be designed to provide best-in-class" would require a pedantic definition of what technologies define "class."

Claims that 802.20 is better than "other systems targeted for wide-area mobile operation" are un-meetable and unnecessarily inflammatory.

Suggested Remedy

The 802.20-based air-interface (AI) ~~shall be~~ is optimized for high-speed IP-based wireless data services. The 802.20 based AI ~~shall~~ supports compliant Mobile Terminal (MT) devices for mobile users~~, and shall enable improved performance relative to other systems targeted for wide-area mobile operation~~. The AI ~~shall be~~ is designed to provide best-in-class performance attributes such as peak and sustained data rates and corresponding spectral efficiencies, capacity, latency, overall network complexity and quality-of-service management. Applications that require the user device to assume the role of a server, in a server-client model, ~~may~~ can be supported as well.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

maintain current text

Reason for Recommendation

This statement is to provide the objectives or "high level" requirements of the 802.20 air interface, consistent with the scope and purpose presented in the PAR. The remainder of the document provides the functional (i.e. testable) requirements that should be consistent with this overarching statements. The proposed revision would be appropriate in the introduction of the 802.20 specification, but not in document establishing the requirements for what is yet to be developed.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   **164**   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 7   **Line** 8   **Fig/Table#**   **Section** 2

Multiple names for "MT" A generic global comment.

Suggested Remedy

Replace "Mobile Terminal (MT)," "user device," "mobile device," "wireless MT," "mobile wide-area stations," and "CPE" with "**Mobile Station**"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Improves consistency

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   **165**   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 7   **Line** 8   **Fig/Table#**   **Section** 2

The sentence beginning with "The 802.20...)" is not clear.

Suggested Remedy

Replace with "The 802.20 AI shall support various vehicular mobility classes up to 250 km/h in a MAN environment and target spectral efficiencies, sustained data rates and number of active users that are significantly higher than achieved by the existing mobile systems."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

maintain current text which is informative.

Reason for Recommendation

The proposed text is from the PAR and already appears in the prior section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 166   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 7   **Line** 12   **Fig/Table#**   **Section** 2

Best in class "overall network complexity" -- the requirement is not clear.

Suggested Remedy

Please clarify what exactly is the requirement.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

No remedy proposed.   It is not clear what needs to be clarified in the current text.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 167   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 8   **Line** 10   **Fig/Table#**   **Section** 2

"air interface support to enable" not clear

Suggested Remedy

Replace it with "enablers to support"

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Joanne Wilson

Replace the text in question with, "The MBWA 802.20 air interface shall support the provision of VoIP applications."

Reason for Recommendation

Clearer than either the existing text or that proposed in the comment

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **110**   **Comment by:**

Comment **Type** Technical, Non-binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **114**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Naguib, Sutivong, Tomcik
Add a reference to 3GPP2's BCMCS Stage 1 document here as follows: "802.20 Broadcast/Multicast support shall meet all
requirements as captured in http://www.3gpp2.com/Public_html/specs/S.R0030-A_v1.0_012004.pdf . "

Reason for Recommendation
Support for Broadcast/Multicast Services has been well-explored in 3GPP2. This document contains high-level
requirements agreed by a consensus of industry participants.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 110   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Define "broadcast and multicast services".

Suggested Remedy

Broadcast Service - the ability to transmit a packet of information (e.g., an IP broadcast datagram) to all mobile terminals within an 802.20 system or a portion of an 802.20 system. Note that a particular mobile terminal may choose to receive or ignore individual information packets that are delivered via the broadcast service.

Multicast Service - the ability to transmit a packet of information (e.g., an IP multicast datagram) to a subset of all mobile terminals within an 802.20 system or a portion of an 802.20 system. The multicast target for a multicast information packet is identified by a multicast address. Each mobile terminal can choose to receive and deliver multicast information packets based on the desired multicast address(es).

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 111   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Multicast authorization and security requirements need to be specified.

Suggested Remedy

Add "The 802.20 system shall support the ability to restrict the delivery of multicast information to mobile terminals that are authorized to receive the multicast information. The 802.20 system shall support the ability to preclude mobile terminals from receiving multicast information for which the mobile terminals are not authorized to receive."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

I believe instead of precluding from "receiving" it is probably precluding from "decoding". Promiscuous terminals can recive any address but may not be able to decode.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **112**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

BCMC must support IETF IP broadcast and multicast traffic efficiently.

Suggested Remedy

Add "The 802.20 system shall support the delivery of multicast traffic that is addressed using IPv4 and IPv6 broadcast and multicast addressing. "

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **113**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

802.20 systems should work effectively with broadcast/multicast backbone networks.

Suggested Remedy

Add "The 802.20 system shall support interoperation with external networks that utilize IETF-specified broadcast/multicast routing protocols for both IPv4 and IPv6 (e.g., IGMP)."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 114   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Wireless broadcast/multicast services need the ability to turn particular streams of information in specific cells or sectors on a dynamic basis based on the presence of mobile terminals that desire and are authorized to receive the specific streams of information. Air interface support for these capabilities is essential.

Suggested Remedy

Add "The 802.20 system shall provide the ability to efficiently identify when broadcast or multicast streams of information need to be transmitted from particular cells or sectors (i.e., when there are authorized mobile terminals present that are attempting to receive those information streams). The 802.20 system shall provide the ability to disable the transmission of broadcast or multicast streams of information in particular dells or sectors when those information streams are not needed (e.g., when there are no authorized mobile terminals present that are attempting to receive those information streams)."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

OK except "dells" should be "cells"

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 115   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Broadcast/multicast service must be billable. While this is most likely an upper layer issue for the most part, MAC layer support is likely to be needed in order to support billing and accounting in an efficient manner.

Suggested Remedy

Add "The 802.20 system shall provide the ability to support the efficient gathering of accounting information consisting of which mobile terminals are receiving which broadcast/multicast information streams and when the terminals start and terminate the monitoring activities."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **226**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 8   **Line** 13   **Fig/Table#**   **Section** 2.2

The requirement as previously written allows broadcast via unicast. 802.20 Air Interface systems should support a more efficient broadcast mechanism. The addition of a spectral efficiency number seems to be an easy way to preclude broadcast by unicast.

Suggested Remedy

Change to read: "IEEE 802.20-based systems shall support broadcast and multicast services using mechanisms that make efficient use of system resources. The minimum spectral efficiency provided by an 802.20 system while providing broadcast shall be (TBD).

Proposed Resolution   **Recommendation:**   **Recommendation by**

#1: Change to read: "IEEE 802.20-based systems shall support broadcast and multicast services using mechanisms that make efficient use of spectrum and system resources. "
#2: Change to read: "IEEE 802.20-based systems shall support broadcast and multicast services, and should use mechanisms that make efficient use of spectrum and system resources. "

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Ad hoc - lead by Mark Klerer. Following are the notes:

ISSUES
Group's Action Items

Comment # 110   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Define "broadcast and multicast services".

Suggested Remedy

Broadcast Service - the ability to transmit a packet of information (e.g., an IP broadcast datagram) to all mobile terminals within an 802.20 system or a portion of an 802.20 system. Note that a particular mobile terminal may choose to receive or ignore individual information packets that are delivered via the broadcast service.

Multicast Service - the ability to transmit a packet of information (e.g., an IP multicast datagram) to a subset of all mobile terminals within an 802.20 system or a portion of an 802.20 system. The multicast target for a multicast information packet is identified by a multicast address. Each mobile terminal can choose to receive and deliver multicast information packets based on the desired multicast address(es).

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Use definitions from a referenced industry source. Add adopted definitions to the Appendix A - Definition of Terms and Concepts.

Reason for Recommendation

Definitions should be consistent with industry use and appropriately placed in the document

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **111**   **Comment by:** **Doug**   **Knisely**

Comment   **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Multicast authorization and security requirements need to be specified.

Suggested Remedy

Add "The 802.20 system shall support the ability to restrict the delivery of multicast information to mobile terminals that are authorized to receive the multicast information. The 802.20 system shall support the ability to preclude mobile terminals from receiving multicast information for which the mobile terminals are not authorized to receive."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

More detail than required for this document. If we go down this path then we risk partially defining the feature at a lower level or defining it in a manner that unduly limits flexibility in how the feature is implemented.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **112**   **Comment by:** **Doug**   **Knisely**

Comment   **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

BCMC must support IETF IP broadcast and multicast traffic efficiently.

Suggested Remedy

Add "The 802.20 system shall support the delivery of multicast traffic that is addressed using IPv4 and IPv6 broadcast and multicast addressing. "

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

maintain current text

Reason for Recommendation

This provides more detail than what is needed in this document and we run the risk of paritally defining the feature, defining it in a detailed but internally inconsistent manner, or unnecessarily limiting flexibility in how the feature is supported.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 113   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

802.20 systems should work effectively with broadcast/multicast backbone networks.

Suggested Remedy

Add "The 802.20 system shall support interoperation with external networks that utilize IETF-specified broadcast/multicast routing protocols for both IPv4 and IPv6 (e.g., IGMP)."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

This proposed requirement is more detailed than necessary. We should let proponents propose how they would support this requirement and which protocols they support.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 114   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Wireless broadcast/multicast services need the ability to turn particular streams of information in specific cells or sectors on a dynamic basis based on the presence of mobile terminals that desire and are authorized to receive the specific streams of information. Air interface support for these capabilities is essential.

Suggested Remedy

Add "The 802.20 system shall provide the ability to efficiently identify when broadcast or multicast streams of information need to be transmitted from particular cells or sectors (i.e., when there are authorized mobile terminals present that are attempting to receive those information streams). The 802.20 system shall provide the ability to disable the transmission of broadcast or multicast streams of information in particular dells or sectors when those information streams are not needed (e.g., when there are no authorized mobile terminals present that are attempting to receive those information streams)."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

maintain current text

Reason for Recommendation

This is more detailed than needed for this section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 115   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

Broadcast/multicast service must be billable. While this is most likely an upper layer issue for the most part, MAC layer support is likely to be needed in order to support billing and accounting in an efficient manner.

Suggested Remedy

Add "The 802.20 system shall provide the ability to support the efficient gathering of accounting information consisting of which mobile terminals are receiving which broadcast/multicast information streams and when the terminals start and terminate the monitoring activities."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

This is more detailed than what is needed in this section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **226**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 8   **Line** 13   **Fig/Table#**   **Section** 2.2

The requirement as previously written allows broadcast via unicast. 802.20 Air Interface systems should support a more efficient broadcast mechanism. The addition of a spectral efficiency number seems to be an easy way to preclude broadcast by unicast.

Suggested Remedy

Change to read: "IEEE 802.20-based systems shall support broadcast and multicast services using mechanisms that make efficient use of system resources. The minimum spectral efficiency provided by an 802.20 system while providing broadcast shall be (TBD).

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

maintain current text

Reason for Recommendation

No need to limit the how proponents propose to support this feature. Also, there are too many arbitrary assumptions required to get to a spectral efficiency goal specifically for the broadcast service.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Ad hoc - lead by Mark Klerer. Following are the notes:

ISSUES
Group's Action Items

Comment # **113**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 8   **Line** 14   **Fig/Table#**   **Section** 2.2

802.20 systems should work effectively with broadcast/multicast backbone networks.

Suggested Remedy

Add "The 802.20 system shall support interoperation with external networks that utilize IETF-specified broadcast/multicast routing protocols for both IPv4 and IPv6 (e.g., IGMP)."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **118**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 9   **Line** 7   **Fig/Table#**   **Section** 3.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Anna Tee

The 802.20 AI shall support mobility up to 250 km/h.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **22**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 8   **Line** 17   **Fig/Table#**   **Section** 3.1

Inadequate "must" in lines 17, 18

Suggested Remedy

Change "must" in lines 17, 18 to "shall"

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Change "must" to "are".
This is descriptive text, if the system meets the requirements what it is/was designed to do is not relevant. The "shall" in the
second sentence is ok .

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   116   **Comment by:**   Doug   Knisely

Comment   **Type**   Technical, Non-binding   **Page** 9   **Line** 4   **Fig/Table#**   **Section** 3.1

Not testable; not a requirement.

Suggested Remedy

"The AI ~~shall~~ support<u>s</u>..."

Proposed Resolution   **Recommendation:**   **Accepted**   **Recommendation by**   Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   117   **Comment by:**   Doug   Knisely

Comment   **Type**   Technical, Non-binding   **Page** 9   **Line** 6   **Fig/Table#**   **Section** 3.1

Need to support non-bursty traffic as well. Bursty case is clearly covered by rest of sentence.

Suggested Remedy

Delete "bursty ".

Proposed Resolution   **Recommendation:**   **Accepted**   **Recommendation by**   Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **118**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 9   **Line** 7   **Fig/Table#**   **Section** 3.1

Not defined; untestable.

Suggested Remedy

Delete "The 802.20 AI shall support high-speed mobility."

Alternatively, define speed requirements for mobility clearly.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **168**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 8   **Line** 19   **Fig/Table#**   **Section** 3.1

"support non-line of sight...." ambiguous

Suggested Remedy

Replace it with "support non-line of sight outdoor and indoor coverage areas."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 22   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 8   **Line** 17   **Fig/Table#**   **Section** 3.1

Inadequate "must" in lines 17, 18

Suggested Remedy

Change "must" in lines 17, 18 to "shall"

Proposed Resolution   **Recommendation: Accepted-Modified**   **Recommendation by** Joanne Wilson

Change to, "The 802.20 systems ~~must be~~ shall support the ~~designed to~~ of networks that provide ubiquitous mobile
broadband wireless access in a cellular architecture (e.g. macro/micro/Pico cells). The 802.20 system ~~must~~ shall support
non-line of sight outdoor to indoor scenarios and indoor coverage.

Reason for Recommendation

In the Overview of this document it states that, "For the purpose of this document, an "802.20 system" constitutes an 802.20
MAC and PHY implementation in which at least one Mobile station communicates with a base station via a radio air
interface, and the interfaces to external networks, for the purpose of transporting IP packets through the MAC and PHY
protocol layers. " So, this requirement is actually that the 802.20 system can be deployed as a network that provides mobile
broadband wireless access.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 116   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 9   **Line** 4   **Fig/Table#**   **Section** 3.1

Not testable; not a requirement.

Suggested Remedy

"The AI ~~shall~~ supports..."

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Joanne Wilson

maintain as is

Reason for Recommendation

though this is not a testable performance requirement, it is an observable requirement on the design of the 802.20 air
interface

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   117   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 9   **Line** 6   **Fig/Table#**   **Section** 3.1

Need to support non-bursty traffic as well. Bursty case is clearly covered by rest of sentence.

Suggested Remedy

Delete "bursty ".

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree that bursty and non-bursty traffic needs to be supported

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   118   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 9   **Line** 7   **Fig/Table#**   **Section** 3.1

Not defined; untestable.

Suggested Remedy

Delete "The 802.20 AI shall support high-speed mobility."

Alternatively, define speed requirements for mobility clearly.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Already covered in the PAR anyway.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 168   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 8   **Line** 19   **Fig/Table#**   **Section** 3.1

"support non-line of sight...." ambiguous

Suggested Remedy

Replace it with "support non-line of sight outdoor and indoor coverage areas."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The proposed text could be interpreted as the support of pico cells that could be deployed indoors to provide indoor
coverage. The requirement is to be able to provide seamless coverage outdoors, moving from outdoors to indoors and
indoors from the same macro-cell that is deployed outdoors. I believe the current text uses accepted industry terminology.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 122   **Comment by:**

Comment **Type** Technical, Non-binding   **Page** 9   **Line** 16   **Fig/Table#**   **Section** 3.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik

"Partitioning" is used here to stress that the border between MAC and PHY are well defined. However the way it is written
gives the impression that this is the name of a particular model. Maybe we should suggest a rewording for the sentence that
was stress the border between MAC and PHY

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 24   **Comment by:** Dan   Gal

Comment **Type** Technical, Non-binding   **Page** 9   **Line** 13   **Fig/Table#**   **Section** 3.1.1

text is: "in conjunction with other 802 standards...". It is too broad to and vague to invoke "other 802 standards"

Suggested Remedy

Add "applicable" after "other". The changed text would be: "in conjunction with other applicable 802 standards..."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 66   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 10   **Line** 1   **Fig/Table#**   **Section** 3.1.1

Reflect the proposal for common MAC in contribution C802.20-04-46.

Suggested Remedy

Insert the following text in line 1, before "Figure 2...."
"If more than one PHY technology is adopted for the 802.20 standard, the MAC layer shall be designed such that it consists of two parts: a common part and a PHY-specific part. To provide the best possible performance, the PHY-specific part of the MAC may be optimized for the specific characteristics of a particular PHY. "

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Individual optimization of each proposal is allowed. Sub-layering may be done at the option of the proponent. There should be no a priory requirement for commonality.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 122   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 9   **Line** 16   **Fig/Table#**   **Section** 3.1.1

what is a "partitioning model?"

Suggested Remedy

Delete "partitioning"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 123   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 9   **Line** 18   **Fig/Table#**   **Section** 3.1.1

Informative and not testable.

Suggested Remedy

The 802.20 standard ~~shall also~~ address~~es~~ the needs of logical link control and how and when the 802.2 LLC functionality is used.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **124**　　　　　**Comment by:**　Doug　　　　　Knisely

Comment　**Type**　Technical, Non-binding　　　**Page** 10　　　**Line** 2　　　**Fig/Table#**　　　**Section** 3.1.1

1. Not a requirements; not testable.

2. We don't clarify (and the figure doesn't clarify much either, FWIW).

Suggested Remedy
change "shall clarify" to "specify"

Proposed Resolution　　　　**Recommendation:** **Accepted-Modified**　　　**Recommendation by**　Klerer
change to "shall specify". It is a meta-requirement on the specification to be produced.

Reason for Recommendation

Resolution of Group　　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **24**　　　　　**Comment by:**　Dan　　　　　Gal

Comment　**Type**　Technical, Non-binding　　　**Page** 9　　　**Line** 13　　　**Fig/Table#**　　　**Section** 3.1.1
text is: "in conjunction with other 802 standards...". It is too broad to and vague to invoke "other 802 standards"

Suggested Remedy
Add "applicable" after "other". The changed text would be: "in conjunction with other applicable 802 standards..."

Proposed Resolution　　　　**Recommendation:** **Accepted**　　　　　**Recommendation by**　Joanne Wilson

Reason for Recommendation
agree

Resolution of Group　　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **66**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 10   **Line** 1   **Fig/Table#**   **Section** 3.1.1

Reflect the proposal for common MAC in contribution C802.20-04-46.

Suggested Remedy

Insert the following text in line 1, before "Figure 2...."
"If more than one PHY technology is adopted for the 802.20 standard, the MAC layer shall be designed such that it consists of two parts: a common part and a PHY-specific part. To provide the best possible performance, the PHY-specific part of the MAC may be optimized for the specific characteristics of a particular PHY. "

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

The working group has not adopted a policy of developing a common MAC that supports multiple PHYs. No one has demonstrated that this provides any performance benefits and it undermines the ability to ensure interoperability between different 802.20 network implementations. Such an approach may be acceptable for fixed wireless access systems, but it undermines the ability of mobile terminal devices to roam between different 802.20 compliant mobile systems.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **122**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 9   **Line** 16   **Fig/Table#**   **Section** 3.1.1

what is a "partitioning model?"

Suggested Remedy
Delete "partitioning"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
It doesn't matter. Obviously, a "partitioning model" divides (or partitions) the functionality to various layers. But, either wording is okay.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **123** **Comment by:** Doug Knisely

Comment **Type** Technical, Non-binding **Page** 9 **Line** 18 **Fig/Table#** **Section** 3.1.1

Informative and not testable.

Suggested Remedy

The 802.20 standard ~~shall also~~ addresses the needs of logical link control and how and when the 802.2 LLC functionality is used.

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

maintain current text

Reason for Recommendation

Though this is not a testable performance requirement, it is a requirement on the structure of the design and it is observable.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **124** **Comment by:** Doug Knisely

Comment **Type** Technical, Non-binding **Page** 10 **Line** 2 **Fig/Table#** **Section** 3.1.1

1. Not a requirements; not testable.

2. We don't clarify (and the figure doesn't clarify much either, FWIW).

Suggested Remedy

change "shall clarify" to "specify"

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Joanne Wilson

change to "will specify"

Reason for Recommendation

should be written in future tense to be consistent with the rest of the document

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   1   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** T

This section and numbers has been reviewed and voted by the working group. Suggest not to touch the text at this time!

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   2   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

This text has been reviewed and voted by the working group. Suggest not to change the text at this time.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   11   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik,

This is a duplicate. See comment 1 submitted by Todd Chauvin. Same discussion.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   75   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik,

Another duplicate...

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   91   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#** 4-1   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

Table 4-1 contains values that have been debated and approved by the working group. For the technology to be significantly better than available, it is necessary to let the previous stand.
 Do not change the text, since it has been discussed and voted by the WG.

Reason for Recommendation

Text has been debated and approved by the WG.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   127   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 21   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Naguib, Sutivong, Tomcik,

Evaluation criteria could be used to define graceful degradation. Add a reference to Evaluation Criteria Document for further definition.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 266   Comment by:

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

The section and text have been reviewed and voted by the working gorup. Suggest not to change the text at this time.

Reason for Recommendation

Text has been debated, and approved by the WG.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 276   Comment by:

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **1**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee

Cell size is constrained as stated in section 3.1, i.e., Macro, micro and pico-cells. To ensure the proposals are not only designed for very small cells, the "Range" performance which can be computed in the link budget , can be used as a performance metric as discussed in the earlier evaluation criteria CG meetings. Spectral efficiency requirement has already been reduced to a lower value for 120 km in SRD Ver. 13.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **11**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Anna Tee

See proposed resolution for comment #1

Reason for Recommendation

See reasons for reply to comment #1

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **12**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Anna Tee

See proposed resolution for comment #2

Reason for Recommendation
See reasons for comment #2

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **1**   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

See my comment on this section taht recommends we stay with the PAR value of 1 bits/sec/Hz/sector

Reason for Recommendation
See my original comment

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   2   **Comment by:**   Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   11   **Comment by:**   John   Chen

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

See reply comment 1

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 12   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 75   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Klerer

See reply to initial comment.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **76**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **127**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 11   **Line** 21   **Fig/Table#**   **Section** 4.1.1

Not testable.

Suggested Remedy

Delete "The spectral efficiency at higher speeds than those shown should degrade gracefully."

Alternatively define graceful degradation (but I don't think this is necessary or readily doable).

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

It is acceptable to have "soft" requirments that are not directly testable but intuitive.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 169   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 11   **Line** 21   **Fig/Table#**   **Section** 4.1.1

"should" implies a required feature which is not true.

Suggested Remedy

Replace "should" with "may"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

I believe it is a "required" feature

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 266   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

I prefer my own proposal

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **267**   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **276**   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **277** **Comment by:** Michael Youssefmir

Comment **Type** Technical, Binding **Page** 11 **Line** 5 **Fig/Table#** **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **1** **Comment by:** Todd Chauvin

Comment **Type** Technical, Binding **Page** 11 **Line** 5 **Fig/Table#** **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

agree with comment

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 2　　　　　　　　　**Comment by:** Todd　　　　　　Chauvin

Comment　　**Type** Technical, Binding　　　　**Page** 11　　**Line** 5　　**Fig/Table#**　　**Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution　　　**Recommendation: Accepted**　　　　　**Recommendation by** Joanne Wilson, MIke Youssefmir

Reason for Recommendation

Resolution of Group　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 11　　　　　　　　　**Comment by:** John　　　　　　Chen

Comment　　**Type** Technical, Binding　　　　**Page** 11　　**Line** 5　　**Fig/Table#**　　**Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution　　　**Recommendation: Accepted-Duplicate**　　　　　**Recommendation by** Joanne Wilson, MIke Youssefmir

Reason for Recommendation

Resolution of Group　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 12   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 75   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 76 **Comment by:** Marc Goldburg

Comment **Type** Technical, Binding **Page** 11 **Line** 5 **Fig/Table#** **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

agree with commenter

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 91 **Comment by:** Mark Klerer

Comment **Type** Technical, Binding **Page** 11 **Line** 5 **Fig/Table#** 4-1 **Section** 4.1.1

Table 4.1 specifies a downlink spectral efficiency of 2.0 b/s/Hz/sector at 3 kmph and 1.5 b/s/Hz/sector at 120 kmph and uplink spectral efficiencies of 1.0 and 0.75 b/s/Hz/sector respectively. It is the intent to specify spectral efficiencies that are achievable in actual deployment in the timeframe of the PARs effecftivenes. For full mobility and small form-factor portable devices I do not believe that these targets are realistic. Operators are making commitments to deploy systems in the timeframe of the 802.20 PAR that have performance that is significantly lower than the 1 b/s/Hz/sector specified in the PAR.

In light of the deployment evidence, there have been no convincing arguments that prove that systems meeting the PAR targets are not needed. Furthermore the process of developing the specification will assure that submitters provide their best possible designs in order to gain WG acceptance of their proposal.

Suggested Remedy

Make Table 4-1 consistent with the PAR and specify a downlink spectral efficiency of 1 b/s/Hz/sector .

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Joanne Wilson

Reason for Recommendation

agree with the comments

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   127   **Comment by:**   Doug   Knisely

Comment   **Type**   Technical, Binding   **Page** 11   **Line** 21   **Fig/Table#**   **Section** 4.1.1

Not testable.

Suggested Remedy

Delete "The spectral efficiency at higher speeds than those shown should degrade gracefully."

Alternatively define graceful degradation (but I don't think this is necessary or readily doable).

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

By deleting this text it could be interpreted that the spectral efficiency will remain constant at higher speeds. Obviously, this is not the case and should not be implied. I don't think its necessary to define "degrade gracefully."   We can see how the various proposals will perform through the evaluation process and should therefore be able to predict how the ultimate 802.20 standard will perform. In any case, the spectral efficiency is likely to degrade in some manner at higher speeds.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   169   **Comment by:**   Eshwar   Pittampalli

Comment   **Type**   Technical, Binding   **Page** 11   **Line** 21   **Fig/Table#**   **Section** 4.1.1

"should" implies a required feature which is not true.

Suggested Remedy

Replace "should" with "may"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

Should actually implies are desired but non-mandatory feature. In this case, "may" is better because this described allowed though certainly not desired performance.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **266**   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Mike Youssefmir

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **267**   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Mike Youssefmir

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 276   **Comment by:** Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

the spectral efficiency requirement is ill-defined and overly stringent

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 277   **Comment by:** Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

 The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **1**   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **2**   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

 The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Uplink and Downlink characteristic and requirements are different to keep different spectral efficiency

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **11**　　　　　**Comment by:** John　　　　Chen

Comment　**Type** Technical, Binding　　　**Page** 11　**Line** 5　**Fig/Table#**　　**Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution　　**Recommendation:** **Accepted-Duplicate**　　**Recommendation by** Lalit Kotecha

#1 supercedes this comment

Reason for Recommendation

Resolution of Group　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **12**　　　　　**Comment by:** John　　　　Chen

Comment　**Type** Technical, Binding　　　**Page** 11　**Line** 5　**Fig/Table#**　　**Section** 4.1.1

 The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution　　**Recommendation:** **Rejected-Duplicate**　　**Recommendation by** Lalit kotecha

Comment #2

Reason for Recommendation

Resolution of Group　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 75   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz/sector as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #1

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 76   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

 The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #2

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **127**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 11   **Line** 21   **Fig/Table#**   **Section** 4.1.1

Not testable.

Suggested Remedy

Delete "The spectral efficiency at higher speeds than those shown should degrade gracefully."

Alternatively define graceful degradation (but I don't think this is necessary or readily doable).

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **266**   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #1

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **267**   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #2

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **276**   **Comment by:** Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

This requirement specifies stringent spectral efficiencies without explicitly clarifying the conditions under which it should be achieved. For example, because cell size is not constrained by the requirements, the spectral efficiencies could be achieved with very small cells. Or, for example, operation at 120km/hr is very different depending on the environment - certainly we are not interested in operation at 120km/hr in an urban setting, yet the requirement could be interpreted that it is applicable under all channel conditions. The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Specify 2 bits/sec/Hz as the spectral efficiency and allow the evaluation criteria to determine the conditions under which this is achieved.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #1

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 277   **Comment by:**   Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 11   **Line** 5   **Fig/Table#**   **Section** 4.1.1

The separation of downlink versus uplink spectral efficiency unnecessarily complicates the requirement - a single spectral efficiency will allow proposals to sensibly make the split between uplink and downlink.

Suggested Remedy

Remove the distinction between uplink and downlink.

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #2

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 51   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 16   **Line** 15   **Fig/Table#**   **Section** 4.1.10

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naquib, Tomcik, Sutivong,

Would like to see the previous definition and review before commiting on this comment.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **51**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 16   **Line** 15   **Fig/Table#**   **Section** 4.1.10

At some earlier version of the SRD, there was an agreed upon text that defined "Covergae Enhancing Technologies". That text needs to be restored to provide the necessary clarification.

Suggested Remedy

Restore the definition and put it either in this section (in line 15) or in the Terminology (Appendix A) with a reference in line 15, such as "see definition in Appendix A, Terminology"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Given that we have a new editor - Dan should locate the defintion and supply it to the editor.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **51**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 16   **Line** 15   **Fig/Table#**   **Section** 4.1.10

At some earlier version of the SRD, there was an agreed upon text that defined "Covergae Enhancing Technologies". That text needs to be restored to provide the necessary clarification.

Suggested Remedy

Restore the definition and put it either in this section (in line 15) or in the Terminology (Appendix A) with a reference in line 15, such as "see definition in Appendix A, Terminology"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

This text was developed to address a proposal made at the September 2003 Interim 802.20 meeting. I reviewed the previous versions of the 802.20 requirements document and could not find a further definition of "coverage enhancing technologies." I believe the text is self explanatory and intended to provide the proponents with the flexibility in how they support this requirement .

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 52   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 16   **Line** 23   **Fig/Table#**   **Section** 4.1.11

Not clear what is meant by "partial solution". Perhaps rephrasing of the sentence would improve clarity.

Suggested Remedy

Proposed modified text: "The security provisions of IEEE 802.20 should be part of an end-to-end solution that includes highre protocol layers..." etc.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

We need to discuss what is paretial about this solution, I am not sure Dan's interpretation is correct.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 52   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 16   **Line** 23   **Fig/Table#**   **Section** 4.1.11

Not clear what is meant by "partial solution". Perhaps rephrasing of the sentence would improve clarity.

Suggested Remedy

Proposed modified text: "The security provisions of IEEE 802.20 should be part of an end-to-end solution that includes highre protocol layers..." etc.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

This text is informative because it refers to the end-to-end security architecture that is beyond the scope of the 802.20 project and of this document. As such, it is inappropriate to say that this "should be part of ...". Thus, the current text is preferrable.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **53**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 16   **Line** 27   **Fig/Table#**   **Section** 4.1.11.1

The scope of this requirement needs to be refined. As worded, may suggest that the entire access control protocol must be encrypted.

Suggested Remedy

Proposed rewording: "The AI's secure access control shall use cryptographic methods.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

The suggested paraphrase could be interpreted to imply that ther is also a non-secure access control.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **53**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 16   **Line** 27   **Fig/Table#**   **Section** 4.1.11.1

The scope of this requirement needs to be refined. As worded, may suggest that the entire access control protocol must be encrypted.

Suggested Remedy

Use reply to comment #87

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Reason for Recommendation

improves clarity

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   **142**   **Comment by:**   Doug   Knisely

Comment   **Type**   Technical, Non-binding   **Page** 16   **Line** 27   **Fig/Table#**   **Section** 4.1.11.1
Terminology

Suggested Remedy
"Access control" => "Access authentication"

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by**   Joanne Wilson
Replace the text with, "Access control shall include authentication using a cryptographic method."

Reason for Recommendation
Agree with the spirit of the comment, but believe the above is a more complete statement of the requirement.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   **54**   **Comment by:**   Dan   Gal

Comment   **Type**   Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2
The sub-section heading does not reflect the Integrity part of the text.

Suggested Remedy
Change the heading of 4.1.1.2 to: "Privacy and Message Integrity"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 55   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2

Language is not that of a requirement, especially the usage of "will" instead of "shall/should".

Suggested Remedy

Change to: "The AI shall provide provide privacy and message integrity protection for both signalling messages and user data traffic. Appropriate methods shall be employed to protect the individual user's identity and messages from be altered, duplicated or otherwise compromised. Indication to both the sender and recipient of the altered message/data should be given by the system.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

I believe we need to allow for legal intercept. So the notification to the sender/recipient may not always be possible.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 143   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2

Text should be a normative requirement.

Suggested Remedy

A method that will provide message integrity across the air interface to protect user data traffic, ~~as well as~~ and signaling messages from unauthorized modification shall be provided~~will be specified~~.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Agreed to in principle.

Reason for Recommendation

Harmonize with other comments

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 144   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 1   **Fig/Table#**   **Section** 4.1.11.2

Text should be a normative requirement.

Suggested Remedy

Encryption across the air interface to protect user data traffic, ~~as well as~~ and signaling messages, from unauthorized disclosure shall be provided ~~will be incorporated~~.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 147   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 2   **Fig/Table#**   **Section** 4.1.11.2

Need to clarify that system can operate with any combination of integrity, encryption, neither, or both.

Suggested Remedy

Add after line 2:

"The 802.20 standard shall permit the data traffic and signaling information on a per-user basis to be protected by:
- message integrity and encryption,
- protected by message integrity but not encryption,
- protected by encryption but not message integrity, or
- unprotected by either message integrity or encryption."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

This should only apply to data traffic. The treatment of signalling information is a network operator issue more than a user issue.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **55**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik

Agreed.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **54**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2

The sub-section heading does not reflect the Integrity part of the text.

Suggested Remedy

Change the heading of 4.1.1.2 to: "Privacy and Message Integrity"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

There should be consistency between the header and the contents of the section

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 55   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2

Language is not that of a requirement, especially the usage of "will" instead of "shall/should".

Suggested Remedy

Change to: "The AI shall provide provide privacy and message integrity protection for both signalling messages and user data traffic. Appropriate methods shall be employed to protect the individual user's identity and messages from be altered, duplicated or otherwise compromised. Indication to both the sender and recipient of the altered message/data should be given by the system.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Use reply in record #80 to comment #212

Reason for Recommendation

The second part of the proposed remedy establishes requirements on higher layers that are outside of the scope of the 802.20 standard.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 143   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 16   **Line** 29   **Fig/Table#**   **Section** 4.1.11.2

Text should be a normative requirement.

Suggested Remedy

A method that will provide message integrity across the air interface to protect user data traffic, ~~as well as~~ <u>and</u> signaling messages from unauthorized modification <u>shall be provided</u>~~will be specified~~.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Use reply in record #80 to comment #212

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **144**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 1   **Fig/Table#**   **Section** 4.1.11.2

Text should be a normative requirement.

Suggested Remedy

Encryption across the air interface to protect user data traffic, ~~as well as~~ and signaling messages, from unauthorized disclosure shall be provided~~will be incorporated~~.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Revise sentence to read, "The 802.20 standard shall support encryption across the air interface to protect user data traffic, as well as signaling messages, from unauthorized disclosure ."

Reason for Recommendation

improved clarity

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 147   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 2   **Fig/Table#**   **Section** 4.1.11.2

Need to clarify that system can operate with any combination of integrity, encryption, neither, or both.

Suggested Remedy

Add after line 2:

"The 802.20 standard shall permit the data traffic and signaling information on a per-user basis to be protected by:
- message integrity and encryption,
- protected by message integrity but not encryption,
- protected by encryption but not message integrity, or
- unprotected by either message integrity or encryption."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

No explanation given as to the benefit of providing these various options.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 145   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 4   **Fig/Table#**   **Section** 4.1.11.3

Text should be a normative requirement. Also strengthen to include other MT identifying parameters.

Suggested Remedy

The system will shall provide appropriate MAC and PHY capabilities to prevent the unauthorized disclosure of the mobile terminal identifier, mobile terminal hardware identifier (e.g., electronic serial number), and end-user identity.

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Klerer

Reason for Recommendation

See reply to other comments on this section

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 145   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 4   **Fig/Table#**   **Section** 4.1.11.3

Text should be a normative requirement. Also strengthen to include other MT identifying parameters.

Suggested Remedy

The system will shall provide appropriate MAC and PHY capabilities to prevent the unauthorized disclosure of the mobile terminal identifier, mobile terminal hardware identifier (e.g., electronic serial number), and end-user identity.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

It's not clear why the current requirement is inadeaquate and why lower level requirements are not implied by the existing text. Also unclear as to what are the trade offs associated with this requirement. More explanation is needed.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 146   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 8   **Fig/Table#**   **Section** 4.1.11.4

In a wireless system, protection against DoS is not always possible, but should be a design goal whenever practical.

Suggested Remedy

It shall be possible to provide protection against Denial of Service (DOS) attacks whenever possible.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **146** **Comment by:** Doug Knisely

Comment **Type** Technical, Binding **Page** 17 **Line** 8 **Fig/Table#** **Section** 4.1.11.4

In a wireless system, protection against DoS is not always possible, but should be a design goal whenever practical.

Suggested Remedy

It shall be possible to provide protection against Denial of Service (DOS) attacks whenever possible.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Joanne Wilson

Reason for Recommendation

Its probably impossible to protect against unforeseeable future DoS attacks.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **186** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 17 **Line** 10 **Fig/Table#** **Section** 4.1.11.5

"..on a fair and non-discriminatory..." is not consistent with ANSI IPR (for example) and other public Standards IPR policies

Suggested Remedy

Replace it with "reasonable and non-discriminatory (RAND).."

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **187**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 17   **Line** 14   **Fig/Table#**   **Section** 4.1.11.5

"...currently known attacks.." current attacks were unknown to past analysis

Suggested Remedy
Delete "currently"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **186**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 17   **Line** 10   **Fig/Table#**   **Section** 4.1.11.5

"..on a fair and non-discriminatory..." is not consistent with ANSI IPR (for example) and other public Standards IPR policies

Suggested Remedy
Replace it with "reasonable and non-discriminatory (RAND).."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
okay

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **187**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 17   **Line** 14   **Fig/Table#**   **Section** 4.1.11.5

"...currently known attacks.." current attacks were unknown to past analysis

Suggested Remedy

Delete "currently"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

editorial and the change doesn't impact the meaning of the sentence

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **128**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 12   **Line** 5   **Fig/Table#**   **Section** 4.1.2

Not a requirement; immediately obvious and adds no value.

Suggested Remedy

Delete "The individual 802.20 technology proposals may optimize their MAC and PHY designs for specific bandwidth and Duplexing schemes."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

This is an important meta-requirement which has been the subject of extensive discussion and is not immediately obvious as there have been other proposals that require common MAC/PHY across duplexing schemes.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 128 Comment by: Doug Knisely

Comment **Type** Technical, Binding **Page** 12 **Line** 5 **Fig/Table#** **Section** 4.1.2

Not a requirement; immediately obvious and adds no value.

Suggested Remedy

Delete "The individual 802.20 technology proposals may optimize their MAC and PHY designs for specific bandwidth and Duplexing schemes."

Proposed Resolution **Recommendation: Rejected** **Recommendation by** Joanne Wilson

Reason for Recommendation

Text is informative and useful.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 170 Comment by:

Comment **Type** Technical, Binding **Page** 12 **Line** 11 **Fig/Table#** **Section** 4.1.3

Suggested Remedy

Proposed Resolution **Recommendation: Accepted-Clarified** **Recommendation by** Naguib, Sutivong, Tomcik

Add Clarification to these terms.

Reason for Recommendation

various levels of "coupling" are not defined in this document. They should be defined, or a reference given.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **170**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 12   **Line** 11   **Fig/Table#**   **Section** 4.1.3

"The AI shall support..... (TDD)." is ambiguous.

Suggested Remedy

Replace it with "The AI shall support closely coupled/loosely coupled / mutually decoupled FDD and TDD modes."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

I prefer the comment of Dan Gal to fix this.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **170**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 12   **Line** 11   **Fig/Table#**   **Section** 4.1.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Naquib, Sutivong, Tomcik

The proposed terms "closed coupled/ loosely coupled/ mutually coupled" are not defined. Please clarify.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **170**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 12   **Line** 11   **Fig/Table#**   **Section** 4.1.3
"The AI shall support..... (TDD)." is ambiguous.

Suggested Remedy
Replace it with "The AI shall support closely coupled/loosely coupled / mutually decoupled FDD and TDD modes."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation
The newly proposed text is thoroughly ambiguous.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **31**   **Comment by:**

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik
Disagree, this is not implied in line 21/page 11

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 129   **Comment by:**

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

Suggested Remedy

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

If we delete that sentence, we need to make it clear somehow that the 802.20 system is not required to maintain the same data rate at different speeds. The fact that data rates degrade gracefully from ped speeds to high speeds need to be stressed out. Otherwise, it might be wrongly implied that system need to maintain same data rate across different speeds

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 31   **Comment by:** Dan   Gal

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

The sentence "As an example, ..." is redundant. Has the same meaning as line 21 in page 11.

Suggested Remedy

Delete the entire sentence that spans lines 17, 18:   " As an example...".

Proposed Resolution   **Recommendation: Accepted-Modified**   **Recommendation by** Klerer

Will depend on what happens to the text on page 11. If the sentence on page 11 stays then deleting the example is ok

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **129** **Comment by:** Doug Knisely

Comment **Type** Technical, Non-binding **Page** 12 **Line** 17 **Fig/Table#** **Section** 4.1.4

Not an example as advertised. Not relevant to the requirement, thus adding no value.

Suggested Remedy

Delete "As an example, data rates gracefully degrade from pedestrian speeds to high speed mobility."

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **171** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 12 **Line** 17 **Fig/Table#** **Section** 4.1.4

"As an example,...mobility." is ambiguous.

Suggested Remedy

replace it with "Data rates may gracefully degrade from pedestrian speeds to higher speed mobility."

Proposed Resolution **Recommendation:** **Superceded** **Recommendation by** Klerer

Reason for Recommendation

Prefer other proposed solutions

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 31   **Comment by:** Dan   Gal

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

The sentence "As an example, ..." is redundant. Has the same meaning as line 21 in page 11.

Suggested Remedy

Delete the entire sentence that spans lines 17, 18:   " As an example...".

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

no need to be redundant

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 129   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

Not an example as advertised. Not relevant to the requirement, thus adding no value.

Suggested Remedy

Delete "As an example, data rates gracefully degrade from pedestrian speeds to high speed mobility."

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

same as reply in record #101 to comment # 31

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **171**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

"As an example,...mobility." is ambiguous.

Suggested Remedy

replace it with "Data rates may gracefully degrade from pedestrian speed to higher speed mobility."

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by**

delete sentence,

Reason for Recommendation

see reply in record #101 to comment #31

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **129**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 17   **Fig/Table#**   **Section** 4.1.4

Not an example as advertised. Not relevant to the requirement, thus adding no value.

Suggested Remedy

Delete "As an example, data rates gracefully degrade from pedestrian speeds to high speed mobility."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 33   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 12   **Line** 20   **Fig/Table#**   **Section** 4.1.5

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 32   **Comment by:** Dan   Gal

Comment   **Type** Technical, Non-binding   **Page** 12   **Line** 20   **Fig/Table#**   **Section** 4.1.5

The text of section 4.1.5 is not specific enough

Suggested Remedy

append to the end of the sentence: " requirements of section 4.1.1".
so that the sentence should read: "...consistent with the spectral efficiency requirements of section 4.1.1."

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 33   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 12   **Line** 20   **Fig/Table#**   **Section** 4.1.5

Need to clarify what "consistent with spectral efficiency" means.

Suggested Remedy

Add the following sentence: "Thus, the aggregate data rate per sector shall be calculated by multiplying the spectral efficiency entry from Table 4-1 by the specified channel bandwidth. "

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

This suggestion may be acceptable once we have a good understanding of how the term "channel bandwidth" is used. Does it or does it not include guard bands ?

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 172   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5

"Average used data.................greater" is not in excess of existing technologies.

Suggested Remedy

Replace it with "Average user data in a loaded system shall be in excess of 2 Mbps downlink and 1 Mbps uplink."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

We need to maintain some sense of reality in numbers we throw about; certainly these numbers make no sense for a mobile system with a 1.25 MHz channel.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **173**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 13   **Line** 7   **Fig/Table#** 4-2   **Section** 4.1.5

Table 4-2 ambiguous.

Suggested Remedy

Replace it with Phase 1 numbers changed to >3.0 Mbps (for 1.25 MHz DL), >1.5 Mbps(for 1.25 MHz UL),, >12 Mbps(for 5 MHz DL),, >6 Mbps (for 5 MHz UL) respectivey and delete Phase 2 columns

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

See my comments

Reason for Recommendation

I prefer option 2

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **174**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 13   **Line** 11   **Fig/Table#**   **Section** 4.1.5

Option 2 is not desired.

Suggested Remedy

Delete Option 2

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

I prefer option 2 to option 1

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **172**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

The average user data rate depends on number of users and channel conditions. As such, this requirement is incomplete and needs further clarification.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **32**   **Comment by:** Dan   Gal

Comment **Type** Technical, Non-binding   **Page** 12   **Line** 20   **Fig/Table#**   **Section** 4.1.5

The text of section 4.1.5 is not specific enough

Suggested Remedy

append to the end of the sentence: " requirements of section 4.1.1".
so that the sentence should read: "...consistent with the spectral efficiency requirements of section 4.1.1."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

appropriate completion of the sentence.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 33   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 12   **Line** 20   **Fig/Table#**   **Section** 4.1.5

Need to clarify what "consistent with spectral efficiency" means.

Suggested Remedy

Add the following sentence: "Thus, the aggregate data rate per sector shall be calculated by multiplying the spectral efficiency entry from Table 4-1 by the specified channel bandwidth. "

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The current text is sufficient for a the purposes of the requirements document. The remainder should be addressed in the evaluation criteria document. Also, I believe that the aggregate data rate being specified in this section is to be quoted for a specified block size and not on a per channel basis, thereby taking into account the requirement to meet the out of band emission limits.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 172   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5

"Average used data.................greater" is not in excess of existing technologies.

Suggested Remedy

Replace it with "Average user data in a loaded system shall be in excess of 2 Mbps downlink and 1 Mbps uplink."

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

The current requirement is sufficiently ambitious for a loaded system at 90% of the cell coverage area. The statement that existing technologies meet this requirement is unsupportable and there is no assurance that the proposed requirements can be met by any currently available technology.   It's also impossible to develop a standard based on currently unavailable technology.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **173**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 13   **Line** 7   **Fig/Table#** 4-2   **Section** 4.1.5

Table 4-2 ambiguous.

Suggested Remedy

Replace it with Phase 1 numbers changed to >3.0 Mbps (for 1.25 MHz DL), >1.5 Mbps(for 1.25 MHz UL),, >12 Mbps(for 5 MHz DL),, >6 Mbps (for 5 MHz UL) respectivey and delete Phase 2 columns

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Since 802.20 is not establishing requirements on the channel bandwidth, it should not express requirements for the data rates based on channel bandwidths.   Hence, these requirements are ambigous in that its not clear what bandwidth is being referenced.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **174**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 13   **Line** 11   **Fig/Table#**   **Section** 4.1.5

Option 2 is not desired.

Suggested Remedy
Delete Option 2

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**

Reason for Recommendation

there is no reason given in the comment about why option 2 is not desired. Hence, there is no basis for accepting this comment.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   288   Comment by:

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik

Change values to be consistent with 2 b/s/Hz downlink and 1 b/s/Hz Uplink, Spectral Efficiencies, as adopted by the WG

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   3   Comment by:

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee

Please see Comment #220.

Reason for Recommendation

The peak user data rate mainly reflects the maximum capability that the system can support. The 802.20 standard requirement should be consistent with its other section, i.e., 1) Section 1.3 PAR summary, where it said that 802.20 should be significantly better than existing mobile cellular standards; 2) data rate requirements of the applications as listed in section 2.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **13** **Comment by:**

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Rejected-Duplicate** **Recommendation by** Anna Tee

Please see Comment #220

Reason for Recommendation

See reasons proposed for comment #3.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **77** **Comment by:**

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Rejected-Duplicate** **Recommendation by** Anna Tee

See reply to comment #3

Reason for Recommendation

See reply to comment #3

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 130   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by** Anna Tee

Specify an alternative fairness criteria, e.g., the one used in the evaluation criteria methodology or any other appropriate ones.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 3   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   4   **Comment by:**   Todd   Chauvin

Comment   **Type**   Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Accept with modification as suggested in my comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   5   **Comment by:**   Todd   Chauvin

Comment   **Type**   Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

As in comment 4

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 13   **Comment by:** John Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 14   **Comment by:** John Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 15   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1
The concept of two phases is ill-defined

Suggested Remedy
Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 35   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 13   **Line** 18   **Fig/Table#**   **Section** 4.1.5.1
Current options have internal inconsistencies. Need to "harmonize" with section 4.1.1 (Spectral Efficiency).

Suggested Remedy
option 3:
1. delete the table.
2. Alternate text for this section:
"The user peak data rate is the maximum attainable data rate, under best channel conditions, mobility, system loading and
service parameters such as QoS. For a given link (DL/UL) and a given channel bandwidth, it is calculated by multiplying the
appropriate spectral efficiency entry of Table 4-1 by the specified channel bandwidth and factored by 1.2. As an example,
the peak user data rate for a pedestrian user of a 5 MHz downlink channel, would be 12 Mbs (2.0*5*1.2 = 12 Mbs)."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer
The multilpier of 1.2 needs explanation, otherwise it appears to be purely arbitrary. Also the text is ambiguous does "best"
modify channel conditions, mobility, system laoding or only channel conditions?

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 77   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 78   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **79**   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 85   **Comment by:** Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 14   **Line** 6   **Fig/Table#**   **Section** 4.1.5.1

Option 1 "Peak Per User Data Rates" is a very important parameter for definiton of the system performance for TDMA and CDMA architecture even if there is no or less chance for one user get this defined peak user data rate.
Howerer, for FDMA system, this definition is not system performance, but this is only performance for one user.
they are able to provides all sub channels to one user, for make appearant large peak user data rate.
But, for FDMA system, it is no meaning.
Current description makes a limitation of system architecture in system requrement phase, (it must be executed in call for proposal and evaluation phase) although it is not neccessary to define a performance of very few situation

Suggested Remedy

#1:Change option 1 Line 2-3 to "System Archetecture"data rate and Amodified to "These peak data rate targets are independent of channel conditions, traffic and loading."
(Delete "and system architecture"

"2:Insert after Option 1 Line4 with the follwing words
 "If system has some sub channels for users, user data rate is defined sum of user data rates in one sub channel."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

i prefer option 2

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **130**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5.1

Average user data rate is not defined and depends on the number of users. At best, it would be equal to the total system capacity divided by the number of users in the system; at worst, it is contradictory to the spectral efficiency requirements and would be unachievable for any representative number of users. If this statement was meant to convey a fairness requirements, it does just the opposite.

Suggested Remedy

Delete "Average user data rates in a loaded system shall be in excess of 512Kbps downlink and 128Kbps uplink. This shall be true for 90% of the cell coverage or greater."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **131**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 13   **Line** 7   **Fig/Table#** 4-3   **Section** 4.1.5.1

Multiple phases are a bad idea at this stage (early in requirements). The requirements should focus on the real market requirements driven by carrier needs and competitive realities (i.e., other competing technologies). If after evaluating all technology submissions it is necessary to adopt a phased approach, the requirements can be revised IFF there is a compelling reason that the requirements cannot be met.

Phase 1 requirements are below the capabilities of published, implemented standards and are not nearly aggressive enough for the 802.20 market window.

Suggested Remedy

Delete Phase 1 columns. Delete Phase 2 headings. I.e., Phase 2 requirements as shown should be the requirements for 802.20.

Delete Option 2.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

See my comments

Reason for Recommendation

Disagree that the current Phase 2 requirements are realistic

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **156**   **Comment by:** Masaaki   Yuza

Comment   **Type** Technical, Binding   **Page** 13   **Line** 2   **Fig/Table#** 4-3   **Section** 4.1.5.1

"Peak Per User Data Rates" is a very important parameter for define the system performance for TDMA and CDMA architecture.
It is not define system performance for FDMA system, it's define only performance for one user.
It is able to all sub channels provides to one user, for make appearant large peak user data rate.
But, What is it meaning for FDMA system?
It is not neccessary define a performance of very few situation.

Suggested Remedy

#1:Line 2-3 is modified to "These peak data rate targets are independent of channel conditions, traffic and loading."
#2:Incert following line to after Line4 "If system has some sub channels for users, user data rate is defined sum of user data rates in one sub channel"

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

See reply on initial comment

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **220**   **Comment by:** Anna   Tee

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#** 4-2   **Section** 4.1.5.1

Based on the standards and products time frame, the technology would probably be available at least two years later. It would be necessary for this technology to support maximum user data rates that are higher than the capability of the current technology, which is supporting similar applications of a relatively older generation.

As a reference, 1xEV-DV Release D supports peak data rates of 3.08 Mbps and 1.5 Mbps for the DL and RL respectively in an 1.25 MHz bandwidth. Scaling these to 5 MHz channel bandwidth results in: 12.32 Mbps and 6 Mbps respectively.

For further information on bandwidth requirements for video streams: 6-32 Mbps for high definition MPEG-2 movies, up to 19.6 Mbps for hi-def MPEG-2 sports; DVD with standard definition: maximum requirement of 9 Mbps.

Suggested Remedy

Scaling the above peak data rates in the reference case by approximately 1.6 times results in the following proposed values:

"Under an ideal channel and loading conditions, the AI shall support peak user data rates in excess of the following:
1.25 MHz channel bandwidth - DL: 5 Mbps; UL: 2.5 Mbps
5 MHz bandwidth - DL: 20 Mbps; UL: 10 Mpbs"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation
The multipliers are artificial.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **259**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

(C802.20-04-44) text in Section 4.1.5.1 represents a consensus of a number of Individuals. It was included previously in V12, but seems to have been removed in V13.

Suggested Remedy

Adopt the text in Section 4.1.5.1 of C802.20-04-44, with the modification of deleting the word "channel" from the table.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

I prefer option 2

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **268**   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 269   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 270   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **278**   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **279**   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 280 **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 287 **Comment by:** Jim   Ragsdale

Comment **Type** Technical, Binding   **Page** 13   **Line** 1   **Fig/Table#**   **Section** 4.1.5.1

Separate Peak and Average data rates

Suggested Remedy

 The 802.20 system shall support non-line of sight, outdoor to indoor scenarios and indor coverage.
Change overall heading to 4.1.6 User Data rates. Add new subheading 4.1.6.1 Peak User Data rates

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 288   **Comment by:** Jim   Ragsdale

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5.1

Separate Peak and Average data rates. Too much span between peak and average rates

Suggested Remedy

Move to new subsection 4.1.6.2 Average User Data rates and change text to: System average user data rates shall be in excess of 1.5 Mbps downlink and 500 Kbps uplink.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 3   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

The requirements on the DL and UL peak user data rates as stated in option 2 are too weak and should not be accepted. Current systems such as WCDMA and 1xEV-DO provide significantly higher peak user data rates and are much more in line with what's proposed in option 1.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 13 Comment by:

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Rejected-Duplicate** **Recommendation by** Naguib, Sutivong, Tomcik

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 77 Comment by:

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Rejected-Duplicate** **Recommendation by** Naguib, Sutivong, Tomcik

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 130 Comment by:

Comment **Type** Technical, Binding **Page** 13 **Line** 5 **Fig/Table#** **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Naguib, Sutivong, Tomcik
Agreed.

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 220   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#** 4-2   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik

Agreed. 802.20-based systems should be at least on par with other existing systems out there.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 268   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 278   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 3   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

option 2 is more reasonable and realistic

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 4   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

see reply in record #111 to comment #3

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **5** **Comment by:** Todd Chauvin

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Joanne Wilson

Reason for Recommendation

see reply in record #111 to comment #3

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **13** **Comment by:** John Chen

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 14   **Comment by:**   John   Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 15   **Comment by:**   John   Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **35**   **Comment by:** **Dan**   **Gal**

Comment **Type** Technical, Binding   **Page** 13   **Line** 18   **Fig/Table#**   **Section** 4.1.5.1

Current options have internal inconsistencies. Need to "harmonize" with section 4.1.1 (Spectral Efficiency).

Suggested Remedy

option 3:
1. delete the table.
2. Alternate text for this section:
"The user peak data rate is the maximum attainable data rate, under best channel conditions, mobility, system loading and service parameters such as QoS. For a given link (DL/UL) and a given channel bandwidth, it is calculated by multiplying the appropriate spectral efficiency entry of Table 4-1 by the specified channel bandwidth and factored by 1.2. As an example, the peak user data rate for a pedestrian user of a 5 MHz downlink channel, would be 12 Mbs (2.0*5*1.2 = 12 Mbs)."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Tbe per user peak data rate is dependent on the specific air interface design and is not merely a calculation of the spectral efficiency requirement in the table times the channel bandwidth.   Also, the example provided assumes that the user has access to the full 5 MHz block.   The peak data rate for the 802.20 systems should not be required to give a single user access to all of the spectrum in a licensed block of spectrum. Given that the block assignments include OOB limits, it is unlikely that the full 5 MHz in a block is available to the system at large, let alone a single user. This example demonstrates that the targets are unachievable as specified in this section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **77**   **Comment by:** **Marc**   **Goldburg**

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy
Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **78**   **Comment by:** **Marc**   **Goldburg**

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy
Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **79**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1
The concept of two phases is ill-defined

Suggested Remedy
Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 85   **Comment by:** Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 14   **Line** 6   **Fig/Table#**   **Section** 4.1.5.1

Option 1 "Peak Per User Data Rates" is a very important parameter for definiton of the system performance for TDMA and CDMA architecture even if there is no or less chance for one user get this defined peak user data rate.
Howerer, for FDMA system, this definition is not system performance, but this is only performance for one user.
they are able to provides all sub channels to one user, for make appearant large peak user data rate.
But, for FDMA system, it is no meaning.
Current description makes a limitation of system architecture in system requrement phase, (it must be executed in call for proposal and evaluation phase) although it is not neccessary to define a performance of very few situation

Suggested Remedy

#1:Change option 1 Line 2-3 to "System Archetecture"data rate and Amodified to "These peak data rate targets are independent of channel conditions, traffic and loading."
(Delete "and system architecture"

"2:Insert after Option 1 Line4 with the follwing words
 "If system has some sub channels for users, user data rate is defined sum of user data rates in one sub channel."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
If option 1 is selected then it should be modified per this comment. My preference is for option 2.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **92**   **Comment by:** Mark   Klerer

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

This section specifies two options. Option 1 makes reference to a Phase 1 and Phase 2. This concept is not defined, and is therefore, not meaningful.

Suggested Remedy

Select option 2 and delete text dealing with average rates.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

most preferred option of all.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **130**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5.1

Average user data rate is not defined and depends on the number of users. At best, it would be equal to the total system capacity divided by the number of users in the system; at worst, it is contradictory to the spectral efficiency requirements and would be unachievable for any representative number of users. If this statement was meant to convey a fairness requirements, it does just the opposite.

Suggested Remedy

Delete "Average user data rates in a loaded system shall be in excess of 512Kbps downlink and 128Kbps uplink. This shall be true for 90% of the cell coverage or greater."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson, Mike Youssefmir

see reply in record #122 to comment #92

Reason for Recommendation

consequential to previous reply

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 131   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 13   **Line** 7   **Fig/Table#** 4-3   **Section** 4.1.5.1

Multiple phases are a bad idea at this stage (early in requirements). The requirements should focus on the real market requirements driven by carrier needs and competitive realities (i.e., other competing technologies). If after evaluating all technology submissions it is necessary to adopt a phased approach, the requirements can be revised IFF there is a compelling reason that the requirements cannot be met.

Phase 1 requirements are below the capabilities of published, implemented standards and are not nearly aggressive enough for the 802.20 market window.

Suggested Remedy

Delete Phase 1 columns. Delete Phase 2 headings. I.e., Phase 2 requirements as shown should be the requirements for 802.20.

Delete Option 2.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Preference is for option 2.   Agree that the concept of phases should be deleted, but the "bandwidth" dependency is ill defined in option 1, particularly since proposals may be submitted using any channel bandwidth.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **156**   **Comment by:** Masaaki   Yuza

Comment   **Type** Technical, Binding   **Page** 13   **Line** 2   **Fig/Table#** 4-3   **Section** 4.1.5.1

"Peak Per User Data Rates" is a very important parameter for define the system performance for TDMA and CDMA architecture.
It is not define system performance for FDMA system, it's define only performance for one user.
It is able to all sub channels provides to one user, for make appearant large peak user data rate.
But, What is it meaning for FDMA system?
It is not neccessary define a performance of very few situation.

Suggested Remedy

#1:Line 2-3 is modified to "These peak data rate targets are independent of channel conditions, traffic and loading."
#2:Incert following line to after Line4 "If system has some sub channels for users, user data rate is defined sum of user data rates in one sub channel"

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Should delete "and system architecture" in both lines 3 and 13, since the same text appears in both options.

Reason for Recommendation

Should not define performance requirements for only a subset of the system architectures that may be proposed for the 802.20 air interface.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 205   **Comment by:** shigeru   kimura

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#** 4-3   **Section** 4.1.5.1

It is better to specify the system peak data rates instead of peak user data rates.
The reason why the large peak data rates is little hope and confusing for user.
Important things are system data rates and average user data rates.
The peak user data rates should be defined by each system for user if necessary.

Suggested Remedy

Option 1 modification
The AI shall support peak system data rates in excess of the values shown in table 4-3. These peak data rate targets are
independent of channel conditions, traffic loading, and system architecture.

Average user data rates in a loaded system shall be in excess of 512Kbps downlink and 128Kbps uplink. This shall be true
for 90% of the cell coverage or greater.

change the section discription
User Data Rates - Downlink & Uplink -> Peak system data rates and average user data rates -Downlink & Uplink

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Section and Option 1 modification

4.1.5.1 Peak system data rates and average user data rates -Downlink & Uplink

The AI shall support peak system data rates in excess of the values shown in table 4-3. These peak data rate targets are
independent of channel conditions, traffic loading, and system architecture.

Reason for Recommendation

It is better to specify the system peak data rates instead of peak user data rates.
The reason why the large peak data rates is little hope and confusing for user.
Important things are system data rates and average user data rates.
The peak user data rates should be defined by each system for user if necessary.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **220**   **Comment by:** Anna   Tee

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#** 4-2   **Section** 4.1.5.1

Based on the standards and products time frame, the technology would probably be available at least two years later. It would be necessary for this technology to support maximum user data rates that are higher than the capability of the current technology, which is supporting similar applications of a relatively older generation.

As a reference, 1xEV-DV Release D supports peak data rates of 3.08 Mbps and 1.5 Mbps for the DL and RL respectively in an 1.25 MHz bandwidth. Scaling these to 5 MHz channel bandwidth results in: 12.32 Mbps and 6 Mbps respectively.

For further information on bandwidth requirements for video streams: 6-32 Mbps for high definition MPEG-2 movies, up to 19.6 Mbps for hi-def MPEG-2 sports; DVD with standard definition: maximum requirement of 9 Mbps.

Suggested Remedy

Scaling the above peak data rates in the reference case by approximately 1.6 times results in the following proposed values:

"Under an ideal channel and loading conditions, the AI shall support peak user data rates in excess of the following:
1.25 MHz channel bandwidth - DL: 5 Mbps; UL: 2.5 Mbps
5 MHz bandwidth - DL: 20 Mbps; UL: 10 Mpbs"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The standard can only be based on the technology available at the time the standard is developed. Its impossible to develop a standard that can be assured to work well using a projection of what future technology will be able to deliver. Additionally, the is no technical basis for scaling up this requirement beyond its already unachieveable level.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **259** **Comment by:** Ayman, Arak, Jim Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

(C802.20-04-44) text in Section 4.1.5.1 represents a consensus of a number of Individuals. It was included previously in V12, but seems to have been removed in V13.

Suggested Remedy

Adopt the text in Section 4.1.5.1 of C802.20-04-44, with the modification of deleting the word "channel" from the table.

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

Reason for Recommendation

The comment doesn't describe a problem with the current text. There is no technical basis presented for the proposed remedy to the unspecified problem.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **268** **Comment by:** Joanne Wilson

Comment **Type** Technical, Binding **Page** 12 **Line** 22 **Fig/Table#** **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **269**   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **270**   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 278   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 279   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **280**   **Comment by:** Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **287**   **Comment by:** Jim   Ragsdale

Comment   **Type** Technical, Binding   **Page** 13   **Line** 1   **Fig/Table#**   **Section** 4.1.5.1

Separate Peak and Average data rates

Suggested Remedy

The 802.20 system shall support non-line of sight, outdoor to indoor scenarios and indor coverage.
Change overall heading to 4.1.6 User Data rates. Add new subheading 4.1.6.1 Peak User Data rates

Proposed Resolution   **Recommendation:**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **288**   **Comment by:** Jim   Ragsdale

Comment   **Type** Technical, Binding   **Page** 13   **Line** 5   **Fig/Table#**   **Section** 4.1.5.1

Separate Peak and Average data rates. Too much span between peak and average rates

Suggested Remedy

Move to new subsection 4.1.6.2 Average User Data rates and change text to: System average user data rates shall be in excess of 1.5 Mbps downlink and 500 Kbps uplink.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Agree that there is too large a span between peak and average rates. However, there is no justification given for increasing the system average user data rates to the level presented.   Obviously, it doesn't matter whether these requirements appear in the same or different sections.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **13**   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Comment #3

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 14   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Comment #4

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 15   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **77**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

Option 1 peak rates result in a large user data rate peak to average ratio of the order of 10:1 and will rarely be seen in practice (see C802-20-04-33r1). We should therefore not artificially limit proposals to large peak data rates whose sole purpose is specs-manship and will rarely be seen in practice.

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Comment #3

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **78**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of bandwidth must be clarified given that we are not requiring specific channel bandwidths

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Comment #4

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **79**   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#**   **Section** 4.1.5.1

The concept of two phases is ill-defined

Suggested Remedy

Remove option 1 and adopt option 2

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Comment #5

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 220   **Comment by:** Anna   Tee

Comment **Type** Technical, Binding   **Page** 12   **Line** 22   **Fig/Table#** 4-2   **Section** 4.1.5.1

Based on the standards and products time frame, the technology would probably be available at least two years later. It would be necessary for this technology to support maximum user data rates that are higher than the capability of the current technology, which is supporting similar applications of a relatively older generation.

As a reference, 1xEV-DV Release D supports peak data rates of 3.08 Mbps and 1.5 Mbps for the DL and RL respectively in an 1.25 MHz bandwidth. Scaling these to 5 MHz channel bandwidth results in: 12.32 Mbps and 6 Mbps respectively.

For further information on bandwidth requirements for video streams: 6-32 Mbps for high definition MPEG-2 movies, up to 19.6 Mbps for hi-def MPEG-2 sports; DVD with standard definition: maximum requirement of 9 Mbps.

Suggested Remedy

Scaling the above peak data rates in the reference case by approximately 1.6 times results in the following proposed values:

"Under an ideal channel and loading conditions, the AI shall support peak user data rates in excess of the following:
1.25 MHz channel bandwidth - DL: 5 Mbps; UL: 2.5 Mbps
5 MHz bandwidth - DL: 20 Mbps; UL: 10 Mpbs"

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Lalit Kotecha

Option 2 in sec 4.1.5.1 specified data rate very close to specified in this comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 133   **Comment by:**

Comment   **Type** Technical, Non-binding   **Page** 13   **Line** 29   **Fig/Table#**   **Section** 4.1.6

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik

use option 2 in joint contribution

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 36   **Comment by:** Dan   Gal

Comment   **Type** Technical, Non-binding   **Page** 13   **Line** 24   **Fig/Table#**   **Section** 4.1.6

Potentially confusing text .

Suggested Remedy

Change "...available with a delay of less than 25 ms."
to: "...available within less than 25 ms."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

The text change is ok if the value is changed in accordance with my comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 37 **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 14 **Line** 2 **Fig/Table#** **Section** 4.1.6

The phrase "scales linearly with system bandwidth" is inadequate. The scaling factor needs to be specified.

Suggested Remedy

Add a sentence (on line 3): "The scaling factor to be assumed for the technology evaluation purposes is 0.9. Thus, for a 5 MHz channel, the number of supported simultaneous sessions would be greater than 100*(5/1.25)*0.9 = 360".

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Klerer

It would be ok to clarify that "linearly" means a factor of 1. A factor not equal to one requires explanation.

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 72 **Comment by:** Hari Ganti

Comment **Type** Technical, Binding **Page** Tech **Line** 13 **Fig/Table#** **Section** 4.1.6

There are hardly any applications that require bearer access time as low as 25 ms. Consequently, setting the access time requirement to be 25 ms is likely to be perceived as too restrictive.

Suggested Remedy

Define an active user as one who can get access to a bearer channel within 100 ms.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **133**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 13   **Line** 29   **Fig/Table#**   **Section** 4.1.6

Confusing, unnecessary sentence.

Suggested Remedy

Delete "This requirement shall be met even if the sessions are all on different terminals."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

This sentence was requested by a service provider to avoid the possibility of this requirement only being met if all sessions were on one terminal

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **135**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 14   **Line** 5   **Fig/Table#**   **Section** 4.1.6

Unnecessary informative sentence creates more problems that it solves (e.g., what is "control capacity?").

Suggested Remedy

Delete "Note: Depending on traffic mix within a cell the control capacity may not be the limiting system parameter."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

It is important to realize that the theoretical capacity indicated by the number of sessions that can be controlled may not be achievable e.g., if users require high throughput relative to the channel capacity.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **175**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 13   **Line** 22   **Fig/Table#**   **Section** 4.1.6
"potentially only" -- redundant

Suggested Remedy
Delete "potentially only"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **176**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 13   **Line** 26   **Fig/Table#**   **Section** 4.1.6
Sentences "Note that...VOIP." and "This requirement....terminals" are not cooperative.

Suggested Remedy
Repalce with "Certain applications shall be given preferential treatment w.r.t. delay in order to work and this requirement shall be met even if the sessions are all on different terminals."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation
I do not understand the comment

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **177**　　　　　**Comment by:** Eshwar　　　　Pittampalli

Comment **Type** Technical, Binding　　　**Page** 14　　**Line** 5　　**Fig/Table#**　　**Section** 4.1.6

"control capacity" is not clear.

Suggested Remedy

Define "control capacity"

Proposed Resolution　　　**Recommendation:** **Rejected**　　　**Recommendation by** Klerer

Reason for Recommendation

The first sentence speaks about being able to "control"more than 100 s imultaneous active sessions"; it should be obvious that control capacity refers back to that.

Resolution of Group　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **227**　　　　　**Comment by:** Ayman, Arak, Jim　　Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding　　　**Page** 13　　**Line** 23　　**Fig/Table#**　　**Section** 4.1.6

It is expected that system access times will be a probabalistic quantity.

Suggested Remedy

Change to read as follows: "...bearer channel available with a delay of less than 25 ms with a probability of at least 0.9.

Proposed Resolution　　　**Recommendation:** **Accepted-Modified**　　**Recommendation by** Klerer

Probability is OK but number should be as proposed in my comment.

Reason for Recommendation

Resolution of Group　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 228 **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 14   **Line** 2   **Fig/Table#**   **Section** 4.1.6

This parameter is understood to be a scalable quantity, however linearity may not be the appropriate choice.

Suggested Remedy

Change to read as follows: "...should scale with system bandwidth if the same application mixes are assumed."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

I can live with the vagueness.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 37   **Comment by:**

Comment **Type** Technical, Binding   **Page** 14   **Line** 2   **Fig/Table#**   **Section** 4.1.6

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

Why is 0.9 chosen? Please clarify.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 72   **Comment by:**

Comment   **Type** Technical, Binding   **Page** ?   **Line** 13   **Fig/Table#**   **Section** 4.1.6

Suggested Remedy

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik

The requirement on number of simultaneous active users is not clearly stated. For instance, are all 100 users supposed to be able to get a bearer channel within the specified time limit under all channel conditions and loading? Due to the random nature of the wireless channel, at best this requirement should be probabilistic in nature. Furthermore, rationales on number of users as well as access latency should be provided.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 177   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 5   **Fig/Table#**   **Section** 4.1.6

Suggested Remedy

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik

Agreed.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   36   **Comment by:**   Dan   Gal

Comment   **Type** Technical, Non-binding   **Page** 13   **Line** 24   **Fig/Table#**   **Section** 4.1.6

Potentially confusing text .

Suggested Remedy

Change "...available with a delay of less than 25 ms."
to: "...available within less than 25 ms."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Though an editorial change, this is commonly referred to as a delay requirement, so the current text is actually lends itself to less confusion than the proposed remedy.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   37   **Comment by:**   Dan   Gal

Comment   **Type** Technical, Binding   **Page** 14   **Line** 2   **Fig/Table#**   **Section** 4.1.6

The phrase "scales linearly with system bandwidth" is inadequate. The scaling factor needs to be specified.

Suggested Remedy

Add a sentence (on line 3): "The scaling factor to be assumed for the technology evaluation purposes is 0.9. Thus, for a 5 MHz channel, the number of supported simultaneous sessions would be greater than 100*(5/1.25)*0.9 = 360".

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

disagree.   We should be able to evaluate proposals that may scale differently with system bandwidth. If a scaling factor is needed, that should be determined and presented as part of the evaluation criteria and not in the requirements document.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 72   **Comment by:** Hari   Ganti

Comment   **Type** Technical, Binding   **Page** Tech   **Line** 13   **Fig/Table#**   **Section** 4.1.6

There are hardly any applications that require bearer access time as low as 25 ms. Consequently, setting the access time requirement to be 25 ms is likely to be perceived as too restrictive.

Suggested Remedy

Define an active user as one who can get access to a bearer channel within 100 ms.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 93   **Comment by:** Mark   Klerer

Comment   **Type** Technical, Binding   **Page** 13   **Line** 20   **Fig/Table#**   **Section** 4.1.6

The constraints on the time in which a channel needs to be available are to tight. For the 1.25 Mhz channel bandwidth either the number of users could be decreased or the time to have full use of the channel can be increased.

Suggested Remedy

Change text to read: "In this state the user should have a radio bearer channel available with a delay of less than 100ms."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

see reply in record #139 to comment #72.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **133**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 13   **Line** 29   **Fig/Table#**   **Section** 4.1.6
Confusing, unnecessary sentence.

Suggested Remedy
Delete "This requirement shall be met even if the sessions are all on different terminals."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **135**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Non-binding   **Page** 14   **Line** 5   **Fig/Table#**   **Section** 4.1.6
Unnecessary informative sentence creates more problems that it solves (e.g., what is "control capacity?").

Suggested Remedy
Delete "Note: Depending on traffic mix within a cell the control capacity may not be the limiting system parameter."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
agree.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   175   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 13   **Line** 22   **Fig/Table#**   **Section** 4.1.6

"potentially only" -- redundant

Suggested Remedy

Delete "potentially only"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

"potentially only minimal delay" is explained by the parenthetical statement that follows. I interpret this to mean that a user in an active session can have more than a "minimal delay" depending on there QoS level and that of other users.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   176   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 13   **Line** 26   **Fig/Table#**   **Section** 4.1.6

Sentences "Note that...VOIP." and "This requirement....terminals" are not cooperative.

Suggested Remedy

Repalce with "Certain applications shall be given preferential treatment w.r.t. delay in order to work and this requirement shall be met even if the sessions are all on different terminals."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Repalce with "Support for certain applications (e.g. VoIP) requires that they be given preferential treatment with respect to delay and such requirements shall be met even if the sessions are all on different terminals."

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 177   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 14   **Line** 5   **Fig/Table#**   **Section** 4.1.6
"control capacity" is not clear.

Suggested Remedy
Define "control capacity"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation
See reply in record #143 to comment #135 which was to delete this sentence.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 227   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 13   **Line** 23   **Fig/Table#**   **Section** 4.1.6
It is expected that system access times will be a probabalistic quantity.

Suggested Remedy
Change to read as follows: "...bearer channel available with a delay of less than 25 ms with a probability of at least 0.9.

Proposed Resolution   **Recommendation:**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 228 **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding **Page** 14 **Line** 2 **Fig/Table#** **Section** 4.1.6

This parameter is understood to be a scalable quantity, however linearity may not be the appropriate choice.

Suggested Remedy

Change to read as follows: "...should scale with system bandwidth if the same application mixes are assumed."

Proposed Resolution **Recommendation: Accepted** **Recommendation by** Joanne Wilson

Reason for Recommendation

improvement in the text and removes some ambiguity

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 72 **Comment by:** Hari   Ganti

Comment **Type** Technical, Binding **Page** Tech **Line** 13 **Fig/Table#** **Section** 4.1.6

There are hardly any applications that require bearer access time as low as 25 ms. Consequently, setting the access time requirement to be 25 ms is likely to be perceived as too restrictive.

Suggested Remedy

Define an active user as one who can get access to a bearer channel within 100 ms.

Proposed Resolution **Recommendation: Accepted** **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 93   **Comment by:** Mark   Klerer

Comment   **Type** Technical, Binding   **Page** 13   **Line** 20   **Fig/Table#**   **Section** 4.1.6

The constraints on the time in which a channel needs to be available are to tight. For the 1.25 Mhz channel bandwidth either the number of users could be decreased or the time to have full use of the channel can be increased.

Suggested Remedy

Change text to read: "In this state the user should have a radio bearer channel available with a delay of less than 100ms."

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Lalit Kotecha

Comment #72

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 133   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 13   **Line** 29   **Fig/Table#**   **Section** 4.1.6

Confusing, unnecessary sentence.

Suggested Remedy

Delete "This requirement shall be met even if the sessions are all on different terminals."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   135   **Comment by:**   Doug   Knisely

Comment   **Type** Technical, Non-binding   **Page** 14   **Line** 5   **Fig/Table#**   **Section** 4.1.6

Unnecessary informative sentence creates more problems that it solves (e.g., what is "control capacity?").

Suggested Remedy

Delete "Note: Depending on traffic mix within a cell the control capacity may not be the limiting system parameter."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   73   **Comment by:**

Comment   **Type** Technical, Binding   **Page** ?   **Line** 15   **Fig/Table#**   **Section** 4.1.7

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee

Please refer to C802.20-04-55 for the proposed resolution.

Reason for Recommendation

Option 3 refers to an expired IETF draft for latency and error rate requirements. The IETF draft does not have clear requirements on latency and error rates, and it is mainly focus on requirements for the IP network. 802.20 standard's focus is mainly the wireless access network.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 136   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 9   **Fig/Table#**   **Section** 4.1.7

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Anna Tee
Adopt the suggested remedy with typo fixed: "individual"

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 73   **Comment by:** Hari   Ganti

Comment   **Type** Technical, Binding   **Page** Tech   **Line** 15   **Fig/Table#**   **Section** 4.1.7

Suggested Remedy
Support option 3 as far as latency requirements are concerned.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **86**   **Comment by:** Kazuhiro   Murakami

Comment **Type** Technical, Binding   **Page** 15   **Line** 16   **Fig/Table#**   **Section** 4.1.7

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy
Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

this is a duplicate comment see reply to initial comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **137**   **Comment by:** **Doug**   **Knisely**

Comment   **Type** **Technical, Binding**   **Page** **14**   **Line** **9**   **Fig/Table#**   **Section** **4.1.7**

Need to distinguish intra-user vs. inter-user QoS requirements.

Suggested Remedy

Add:

"The 802.20 system shall provide the MAC and PHY capabilities to satisfy link-level QoS requirements by resolving system resource demand conflicts between all mobile terminals while still satisfying the negotiated QoS commitments for each individual terminal.   A given user may be using several applications with differing QoS requirements at the same time (e.g., web browing while also participating in a video conferencing activity with separate audio and video streams of information). The 802.20 system shall provide the MAC and PHY capabilities to distinguish various packet flows from the same mobile terminal or user and provide differentiated QoS delivery to satisfy the QoS requirement for each packet flow.   The 802.20 system shall provide the ability to negotiate the traffic flow templates that define the various packet flows within a user's IP traffic and to associate those packet flows with the QoS requirements for each flow (i.e., QoS parameters such as delay, bit rate, error rate, and jitter)."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** **Klerer**

Needs additional clarification.

Reason for Recommendation

It should be possible to have a single QoS class that applies to   an aggregate flow that may actually be multiple applications. In other cases there are multiple streams each with its own QoS class. Tying QoS to a stream should work whether it is from one user or more.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   178   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 14   **Line** 13   **Fig/Table#**   **Section** 4.1.7

"satisfy user QoS..." incomplete

Suggested Remedy

Replace it with "satisfy both intra and inter user QoS..."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

I can go either way

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   136   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 9   **Fig/Table#**   **Section** 4.1.7

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik

Agreed.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **73**   **Comment by:** Hari   Ganti

Comment   **Type** Technical, Binding   **Page** Tech   **Line** 15   **Fig/Table#**   **Section** 4.1.7

Suggested Remedy

Support option 3 as far as latency requirements are concerned.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

propose to delete section 4.1.7.1 as opposed to adopting any of the options

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **86**   **Comment by:** Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 15   **Line** 16   **Fig/Table#**   **Section** 4.1.7

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS
profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our
PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface
will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current
requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic
under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency
requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Agree to either delete the section or to use the text in record #152 in reply to comment #136

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **136**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 14   **Line** 9   **Fig/Table#**   **Section** 4.1.7

Clarify requirements w.r.t. link layer vs. end-to-end QoS and clarify what was intended by "Policy-based QoS architecture," which is not defined.

Suggested Remedy

The ~~AI~~802.20 standard shall support the means to enable link-level~~end-to-end~~ QoS between the base station and the mobile terminal. The link-level QoS structure shall provide sufficient capabilities to conform to an end-to-end QoS architecture, e.g., as negotiated by upper layer protocols such as RSVP. ~~within the scope of the AI and~~ The 802.20 standard shall support the ability to enforce QoS authorizations for each user and to support various policies determined by the system operator to resolve air interface resource contention issues between users based on the individula users' QoS authorization and QoS requests~~a Policy-based QoS architecture~~.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree with the comment.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **137**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 14   **Line** 9   **Fig/Table#**   **Section** 4.1.7

Need to distinguish intra-user vs. inter-user QoS requirements.

Suggested Remedy

Add:

"The 802.20 system shall provide the MAC and PHY capabilities to satisfy link-level QoS requirements by resolving system resource demand conflicts between all mobile terminals while still satisfying the negotiated QoS commitments for each individual terminal.   A given user may be using several applications with differing QoS requirements at the same time (e.g., web browing while also participating in a video conferencing activity with separate audio and video streams of information). The 802.20 system shall provide the MAC and PHY capabilities to distinguish various packet flows from the same mobile terminal or user and provide differentiated QoS delivery to satisfy the QoS requirement for each packet flow.   The 802.20 system shall provide the ability to negotiate the traffic flow templates that define the various packet flows within a user's IP traffic and to associate those packet flows with the QoS requirements for each flow (i.e., QoS parameters such as delay, bit rate, error rate, and jitter)."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson, Mike Youssefmir

"The 802.20 ~~system shall provide the~~ MAC and PHY <u>shall</u> <u>provide</u> <u>the</u> capabilities to satisfy link-level QoS requirements by resolving system resource demand conflicts between all mobile terminals while still satisfying the negotiated QoS commitments for each individual terminal.   A given user may be using several applications with differing QoS requirements at the same time (e.g., web browing while also participating in a video conferencing activity with separate audio and video streams of information). The 802.20 ~~system shall provide the~~ MAC and PHY <u>shall</u> <u>provide</u> <u>the</u> capabilities to distinguish various packet flows from the same mobile terminal or user and provide differentiated QoS delivery to satisfy the QoS

Reason for Recommendation

Agree with text, except that negotiation of templates is a higher layer responsibility and not part of the MAC and PHY.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **178**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 14   **Line** 13   **Fig/Table#**   **Section** 4.1.7

"satisfy user QoS..." incomplete

Suggested Remedy

Replace it with "satisfy both intra and inter user QoS..."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson, Mike Youssefmir

See reply in record #153 to comment #137 for preferred remedy

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **6**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Anna Tee

Please refer to contribution C802.20-04-55 for the proposed resolution.

Reason for Recommendation

Please refer to Comment #216 & C802.20-04-55 for the reasons why error rate and latency requirements are necessary for 802.20, as in many other wireless standards.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **16**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Anna Tee

See reply to comment #6

Reason for Recommendation

See reply to comment #6

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **80**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Anna Tee

See reply to comment #6

Reason for Recommendation

See reply to comment #6

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   94   Comment by:

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee
Please refer to C802.20-04-55 for the proposed resolution.

Reason for Recommendation
Please refer to Comment #216 & C802.20-04-55 for the reasons why error rate and latency requirements are necessary for 802.20, as in many other wireless standards.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   179   Comment by:

Comment   **Type** Technical, Binding   **Page** 14   **Line** 22   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Anna Tee
The text for Option 1 was proposed in January's meeting in the contribution: C802.20-04-18r1. The referenced documents are listed as follows:

3.   RFC 2475, "An Architecture for Differentiated Services"
4.   RFC 2598, "An Expedited Forwarding PHB"
5.   RFC 2597, "Assured Forwarding PHB Group"

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **271**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Anna Tee
See reply to comment #6

Reason for Recommendation
See reply to comment #6

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **281**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Anna Tee
See reply to comment #6

Reason for Recommendation
See reply to comment #6

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 6   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Klerer

Either this option or the one specified in my comments will work for me.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **16** **Comment by:** John Chen

Comment **Type** Technical, Binding **Page** 14 **Line** 16 **Fig/Table#** **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **39** **Comment by:** Dan Gal

Comment **Type** Technical, Non-binding **Page** 14 **Line** 19 **Fig/Table#** **Section** 4.1.7.1

add an important attribute of traffic classes - data rate.

Suggested Remedy

insert "bit rate," after ".. traffic classes with different"

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Klerer

I believe bit rate, though an inportant service attribute, is not a QoS attribute as used here. It is an attribute of the data stream and the data streams attribute are subject to the QoS attributes. It could get quite unwieldy to use diff-serv to indicate bit rate.

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **44**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 14   **Line** 38   **Fig/Table#**   **Section** 4.1.7.1

text such as in line 38 - "it may be useful to consider" is not recommended for use in a requirements document as it is quite useless.

Suggested Remedy
Delete option 2.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

One option needs to b e picked rather than only eliminating one.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **45**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 15   **Line** 4   **Fig/Table#**   **Section** 4.1.7.1

In Option 3, line 4, missing "data rate,"

Suggested Remedy
insert "data rate," after "...with different"

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Klerer

See reply to comment 39

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 47   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 15   **Line** 27   **Fig/Table#**   **Section** 4.1.7.1

In Option 4, line 27, missing "data rate,"

Suggested Remedy

insert "data rate," after "...with different"

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Klerer

See reply to comment 39

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 49   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 15   **Line** 30   **Fig/Table#**   **Section** 4.1.7.1

1. All the entries of the table under Option 4 should be specified for the Air Interface portion of the system.
2. Need to distinguish between Realtime (RT) and non-Relatime (NRT) traffic types and specify corresponding maximum tolerable Latency figures.

Suggested Remedy

Harmonize with the appropriate 802.20 contributions on this topic.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

I do not support option 4. Also detailed remedy is not specified.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **80**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

See comment to initial comment in this section

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #	**138**			Comment by:	**Doug**		**Knisely**		

Comment   **Type** Technical, Binding   **Page** 14   **Line** 19   **Fig/Table#**   **Section** 4.1.7.1

Clarify traffic classes...

Suggested Remedy

The system shall support an arbitrary set ~~variety~~ of traffic classes that are defined by the system operator in terms of classic QoS attributes (e.g., data rate, latency, packet error rate, and delay variation). ~~with different latency and packet error rates performance~~, in order to meet the end-user QoS requirements for the various applications, for example, as recommended by ITU [2]. The 802.20 standard shall support the ability to negotiate the traffic class associated with each packet flow, for each user, and for each mobile terminal. The 802.20 standard shall permit the set of traffic classes to be defined by the system operator in terms of classic QoS attributes (along with the range of values that :
- data rate (1 bps to maximum data rate supported by the MAC/PHY),
- latency (delivery delay) (10 ms to 10 seconds),
- packet error rate (after all corrections provided by the MAC/PHY layers) (10E-8 to 10E-1), and
- delay variation (jitter) (10 ms to 10 seconds).

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Requires further discussion

Reason for Recommendation

We need to get to a realistic set of QoS classes that can realistcally be supported. Data rate from 1bps to system capacity does not seem to be something that can easily be supported with a realistic number of streams.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **139**　　　　　**Comment by:** **Doug**　　　　　**Knisely**

Comment　**Type** Technical, Binding　　　　**Page** 14　**Line** 21　**Fig/Table#**　　**Section** 4.1.7.1

Text replaced with previous comment (proposing more extensible and flexible QoS traffic classes).

Suggested Remedy

Delete "Based on the classification of traffic in accordance with the QoS architecture as described in Section 4.4.1 [3,4,5,6], appropriate latency and packet error rate performance targets can be associated with each class.

To support the Expedited Forwarding traffic class, the latency should be as low as possible while the corresponding packet error rate should be low enough to support real-time conversational audio/video applications, and near zero for error intolerant, delay sensitive data applications such as Telnet, interactive games.

For the Best Effort traffic class, the packet error rate performance should comply with the requirement as stated in IEEE Std. 802 -2001 [7], quoted as follows:

"The probability that a MAC Service Data Unit (MSDU) is not delivered correctly at an MSAP due to the operation of the Physical layer and the MAC protocol, SHALL be less than $8 \times 10-8$ per octet of MSDU length."]"

Proposed Resolution　　　**Recommendation:** **Rejected**　　　　**Recommendation by** Klerer

Reason for Recommendation

Prefer the solution in my commen ts

Resolution of Group　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **180** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 14 **Line** 25 **Fig/Table#** **Section** 4.1.7.1

"To support....." the requirement has no teeth.

Suggested Remedy

Quantitative requirement is required (instead of qualitative).

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Klerer

Reason for Recommendation

I prefer option 3

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **181** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 14 **Line** 37 **Fig/Table#** **Section** 4.1.7.1

Option 2 provides description for only Best Effort data leaving Expedited Forwarding and Assured Forwarding traffic classes

Suggested Remedy

Include Expedited Forwarding traffic class description

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Klerer

Reason for Recommendation

I prefer option 3

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **182** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 15 **Line** 11 **Fig/Table#** **Section** 4.1.7.1

"low delay, low data loss rate,..." does not provide quantitative measures for delay and data loss rate.

Suggested Remedy
Define requirements for delay and data rate loss.

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Klerer

Reason for Recommendation
Consistent with RFC

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **183** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 15 **Line** 19 **Fig/Table#** **Section** 4.1.7.1

"..moderate delay, moderate data loss rate,.." ambiguous

Suggested Remedy
Define "moderate"

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Klerer

Reason for Recommendation
See previous reply comment

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 216   **Comment by:** Anna   Tee

Comment **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

As described in the PAR, the 802.20 standard is designed to support various types of applications. In order to support these applications that could have very different requirements in error rate and latency tolerance optimally, it is important to specify the corresponding minimum requirements for different classes of traffic as targets for the specification of optimal PHY and MAC standards.

Similar requirements have been specified for other similar standards such as IEEE 802.16.3, IEEE Std. 802-2001 and 3GPP. Please refer to Contribution C802.20-04/55 for further information.

Suggested Remedy

As proposed in Contribution C802.20-04/55.

Proposed Resolution   **Recommendation:**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 229   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 15   **Line** 1   **Fig/Table#**   **Section** 4.1.7.1

DiffServ may work with interfacing to 3GPP networks, but the 3GPP2 approach is different. The 3GPP2 network sets the QoS for the Mobile based on call type and type of service the user has paid for. The network tells the RAN what it needs to deliver. Option 4 seems to be the closest to this, with ranges specified for different traffic classes. However, we need to fill in Section XXX.

Suggested Remedy

Define draft text for Section XXX. Define the "TBR" values of Option 4. Then add Text to Reflect 3GPP2 Approach to Qos to Section XXX.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Needs further idscussion

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **45**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 15   **Line** 4   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **47**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 15   **Line** 27   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 80   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

Removal of section can only futher confusion in defining QoS requirements and in evaluating the performance of QoS for various proposals. Need to have requirements to be able to specify different packet flows and different sets of attributes for different types of traffic.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 138   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 14   **Line** 19   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **182** **Comment by:**

Comment **Type** Technical, Binding **Page** 15 **Line** 11 **Fig/Table#** **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **183** **Comment by:**

Comment **Type** Technical, Binding **Page** 15 **Line** 19 **Fig/Table#** **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Naguib, Sutivong, Tomcik,
Agreed, the word "moderate" is vague

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 281   **Comment by:**

Comment **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

Suggested Remedy

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

Removal of section can only futher confusion in defining QoS requirements and in evaluating the performance of QoS for various proposals. Need to have requirements to be able to have specify different packet flows different sets of attributes for different types of traffic.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 6   **Comment by:** Todd   Chauvin

Comment **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy
Remove this section.

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation
agree with comments

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 16   **Comment by:**   John   Chen

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy
Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by**   Joanne Wilson, Mike Youssefmir

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 39   **Comment by:**   Dan   Gal

Comment   **Type** Technical, Non-binding   **Page** 14   **Line** 19   **Fig/Table#**   **Section** 4.1.7.1

add an important attribute of traffic classes - data rate.

Suggested Remedy
insert "bit rate," after ".. traffic classes with different"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson, Mike Youssefmir

Propose to delete the section, per reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   44   **Comment by:**   Dan   Gal

Comment   **Type** Technical, Binding   **Page** 14   **Line** 38   **Fig/Table#**   **Section** 4.1.7.1

text such as in line 38 - "it may be useful to consider" is not recommended for use in a requirements document as it is quite useless.

Suggested Remedy
Delete option 2.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson, Mike Youssefmir

Reason for Recommendation
Our preference is to delete this entire section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   45   **Comment by:**   Dan   Gal

Comment   **Type** Technical, Binding   **Page** 15   **Line** 4   **Fig/Table#**   **Section** 4.1.7.1

In Option 3, line 4, missing "data rate,"

Suggested Remedy
insert "data rate," after "...with different"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson

Reason for Recommendation
disagree that "data rate" is missing in this text

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **47** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 15 **Line** 27 **Fig/Table#** **Section** 4.1.7.1

In Option 4, line 27, missing "data rate,"

Suggested Remedy

insert "data rate," after "...with different"

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

Reason for Recommendation

Disagree that "data rate" is missing in this sentence

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **49** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 15 **Line** 30 **Fig/Table#** **Section** 4.1.7.1

1. All the entries of the table under Option 4 should be specified for the Air Interface portion of the system.
2. Need to distinguish between Realtime (RT) and non-Relatime (NRT) traffic types and specify corresponding maximum tolerable Latency figures.

Suggested Remedy

Harmonize with the appropriate 802.20 contributions on this topic.

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson, Mike Youssefmir

Propose to delete the section, per reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 80   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Same as reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 94   **Comment by:** Mark   Klerer

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

4 Options are specified. All but option 3 impose trade-off burdens in design that cannot be justified as hard limit in a mobile environment.

Suggested Remedy

Delete this section or retain option 3.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Propose to delete the section, per reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 138   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 14   **Line** 19   **Fig/Table#**   **Section** 4.1.7.1

Clarify traffic classes...

Suggested Remedy

The system shall support an arbitrary set ~~variety~~ of traffic classes that are defined by the system operator in terms of classic QoS attributes (e.g., data rate, latency, packet error rate, and delay variation). ~~with different latency and packet error rates performance~~, in order to meet the end-user QoS requirements for the various applications, for example, as recommended by ITU [2]. The 802.20 standard shall support the ability to negotiate the traffic class associated with each packet flow, for each user, and for each mobile terminal. The 802.20 standard shall permit the set of traffic classes to be defined by the system operator in terms of classic QoS attributes (along with the range of values that :
- data rate (1 bps to maximum data rate supported by the MAC/PHY),
- latency (delivery delay) (10 ms to 10 seconds),
- packet error rate (after all corrections provided by the MAC/PHY layers) (10E-8 to 10E-1), and
- delay variation (jitter) (10 ms to 10 seconds).

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

This is not a requirement on the air interface, but is instead a requirement on the scheduler which is part of the implementation and is not within the scope of the standard.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **139** **Comment by:** Doug Knisely

Comment **Type** Technical, Binding **Page** 14 **Line** 21 **Fig/Table#** **Section** 4.1.7.1

Text replaced with previous comment (proposing more extensible and flexible QoS traffic classes).

Suggested Remedy

Delete "Based on the classification of traffic in accordance with the QoS architecture as described in Section 4.4.1 [3,4,5,6], appropriate latency and packet error rate performance targets can be associated with each class.

To support the Expedited Forwarding traffic class, the latency should be as low as possible while the corresponding packet error rate should be low enough to support real-time conversational audio/video applications, and near zero for error intolerant, delay sensitive data applications such as Telnet, interactive games.

For the Best Effort traffic class, the packet error rate performance should comply with the requirement as stated in IEEE Std. 802 -2001 [7], quoted as follows:

"The probability that a MAC Service Data Unit (MSDU) is not delivered correctly at an MSAP due to the operation of the Physical layer and the MAC protocol, SHALL be less than 8 x 10-8 per octet of MSDU length."]"

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

consequential, since accepting this comment required accepting comment #138 in record #169.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   179   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 14   **Line** 22   **Fig/Table#**   **Section** 4.1.7.1

..in Section 4.4.1 "[3,4,5,6]..." not clear.

Suggested Remedy

Need more explanation.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson, Mike Youssefmir

Reason for Recommendation

No remedy proposed for a non-specified problem

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   180   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 14   **Line** 25   **Fig/Table#**   **Section** 4.1.7.1

"To support....." the requirement has no teeth.

Suggested Remedy

Quantitative requirement is required (instead of qualitative).

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson, Mike Youssefmir

Reason for Recommendation

No remedy proposed for a non-specified problem

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **181** **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding **Page** 14 **Line** 37 **Fig/Table#** **Section** 4.1.7.1

Option 2 provides description for only Best Effort data leaving Expedited Forwarding and Assured Forwarding traffic classes

Suggested Remedy

Include Expedited Forwarding traffic class description

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson, Mike Youssefmir

Propose to delete the section, per reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **182** **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding **Page** 15 **Line** 11 **Fig/Table#** **Section** 4.1.7.1

"low delay, low data loss rate,..." does not provide quantitative measures for delay and data loss rate.

Suggested Remedy

Define requirements for delay and data rate loss.

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson, Mike Youssefmir

Propose to delete the section, per reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **183**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 15   **Line** 19   **Fig/Table#**   **Section** 4.1.7.1

"..moderate delay, moderate data loss rate,.." ambiguous

Suggested Remedy

Define "moderate"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Propose to delete the section, per reply in record 155 to comment #6

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **216**   **Comment by:** Anna   Tee

Comment **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

As described in the PAR, the 802.20 standard is designed to support various types of applications. In order to support these applications that could have very different requirements in error rate and latency tolerance optimally, it is important to specify the corresponding minimum requirements for different classes of traffic as targets for the specification of optimal PHY and MAC standards.

Similar requirements have been specified for other similar standards such as IEEE 802.16.3, IEEE Std. 802-2001 and 3GPP. Please refer to Contribution C802.20-04/55 for further information.

Suggested Remedy

As proposed in Contribution C802.20-04/55.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation

Contribution C802.20-04/55 was incomplete with many TBRs. Plus, we still don't believe that this requirements document should be setting packet loss and latency requirements, particularly without a justification for doing so or an analysis of the impact and tradeoffs.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 229   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 15   **Line** 1   **Fig/Table#**   **Section** 4.1.7.1

DiffServ may work with interfacing to 3GPP networks, but the 3GPP2 approach is different. The 3GPP2 network sets the QoS for the Mobile based on call type and type of service the user has paid for. The network tells the RAN what it needs to deliver. Option 4 seems to be the closest to this, with ranges specified for different traffic classes. However, we need to fill in Section XXX.

Suggested Remedy

Define draft text for Section XXX. Define the "TBR" values of Option 4. Then add Text to Reflect 3GPP2 Approach to Qos to Section XXX.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Reason for Recommendation
Remedy does not propose solution only that values are needed.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 271   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy
Delete this section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** MIke Youssefmir

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   281   **Comment by:**   Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   16   **Comment by:**   John   Chen

Comment   **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **39**   **Comment by:** Dan   Gal

Comment **Type** Technical, Non-binding   **Page** 14   **Line** 19   **Fig/Table#**   **Section** 4.1.7.1

add an important attribute of traffic classes - data rate.

Suggested Remedy

insert "bit rate," after ".. traffic classes with different"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **80**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 14   **Line** 16   **Fig/Table#**   **Section** 4.1.7.1

The QoS requirements in the document today eg. DiffServ, flexible ARQ schemes, etc., can be used to create QoS profiles that meet the needs of the applications several years from now when .20 is first implemented. Furthermore, our PAR specifically says that we are designing a system optimized for IP-data transport. That means the 802.20 air interface will handle applications over TCP and UDP that in turn require low error rates and low latency. In addition the current requirements document requires a MAC layer RTT of <10ms, ensuring the air interface can support low latency traffic under appropriate RF conditions. We recommend that the group not adopt specific packet error rate and latency requirements that would be arbitrary and only restrict possible service definitions in specific deployments.

Suggested Remedy

Remove this section.

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 50   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 16   **Line** 6   **Fig/Table#**   **Section** 4.1.8

The term "Interconnectivity at the PHY/MAC" is not clear.

Suggested Remedy

Proposed change of the entire sentence in line 6: "The AI shall support advanced antenna techniques, at the Base Station and/or Mobile Station, so as to achieve higher effective data rates, ..." etc.

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 184   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 16   **Line** 6   **Fig/Table#**   **Section** 4.1.8

"Interconnectivity at the PHY/MAC.." ambiguous

Suggested Remedy

Define what is "Interconnectivity at the PHY/MAC?"

Proposed Resolution   **Recommendation: Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **50** **Comment by:**

Comment **Type** Technical, Binding **Page** 16 **Line** 6 **Fig/Table#** **Section** 4.1.8

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **50** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 16 **Line** 6 **Fig/Table#** **Section** 4.1.8
The term "Interconnectivity at the PHY/MAC" is not clear.

Suggested Remedy
Proposed change of the entire sentence in line 6: "The AI shall support advanced antenna techniques, at the Base Station and/or Mobile Station, so as to achieve higher effective data rates, ..." etc.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Joanne Wilson

Reason for Recommendation
Improvement in the text.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 184   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 16   **Line** 6   **Fig/Table#**   **Section** 4.1.8

"Interconnectivity at the PHY/MAC.." ambiguous

Suggested Remedy

Define what is "Interconnectivity at the PHY/MAC?"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Propose to accept the wording in record #180 reply to comment #50

Reason for Recommendation

no text remedy proposed -- only a question for consideration

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 230   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 16   **Line** 8   **Fig/Table#**   **Section** 4.1.8

Remove reference to the "MIMO" Example. The text in C802.20-04-44 is all that needs to be said.

Suggested Remedy

Adopt the C802.20-04-44 Text for this Section

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

delete the sentence "As an example, MIMO."

Reason for Recommendation

see reply in record 181 to comment #140

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **185** **Comment by:**

Comment **Type** Technical, Binding **Page** 16 **Line** 10 **Fig/Table#** **Section** 4.1.9

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Anna Tee

Replace text for the section with: "The base station should provide antenna diversity, but the standard shall neither require nor preclude the use of antenna diversity at the mobile stations."

Reason for Recommendation
Clarified text

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **185** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 16 **Line** 10 **Fig/Table#** **Section** 4.1.9

The two parts of the sentence - starting at line 10 - may appear to be contradicting each other.

Suggested Remedy
Replace the word "should" with "may"

Proposed Resolution **Recommendation:** **Superceded** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **185**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 16   **Line** 10   **Fig/Table#**   **Section** 4.1.9

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **185**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 16   **Line** 10   **Fig/Table#**   **Section** 4.1.9

The two parts of the sentence - starting at line 10 - may appear to be contradicting each other.

Suggested Remedy

Replace the word "should" with "may"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The two parts of the sentence are not contradictory. The statement is intended to be a recommendation, but not a mandatory requirement.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 56   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 17   **Line** 16   **Fig/Table#**   **Section** 4.2

This section is lacking in RF requirements. It is suggested that all RF requirements be placed in section 4.2.1 and its new sub-section as proposed below.

Suggested Remedy

1. Change the heading of 4.2.1 to: "RF Requirements"
2. Insert new subsection 4.2.1.1 - "General"
3. Insert new subsection 4.2.1.2 - "Radio Transmitter"
4. Insert new subsection 4.2.1.3 - "Radio Receiver"

Proposed text for section 4.2.1.1 - General

"The RF part of the IEEE 802.20 physical layer shall be specified in a manner and level of detail consistent with similar public wireless land mobile communication service standards. Minimum performance specification shall be defined in the standard, such that equipment certification tests could be developed and be used to verify that multi-vendor compliant equipment would interoperate as well as meet applicable regulatory rules and coexistence requirements. Band-classes should be defined for specific global and local frequency bands of intetrest. These band-classes should define the channelization of the band along with specific RF characteristics such as transmitter maximum power, receiver sensitivity,

Proposed Resolution   **Recommendation:** **Accepted-Clarified**   **Recommendation by** Klerer

This is a meta-requirment on what each proposal needs to supply in the way of documentation, but I can live with that.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **56** **Comment by:**

Comment **Type** Technical, Binding **Page** 17 **Line** 16 **Fig/Table#** **Section** 4.2

Suggested Remedy

Proposed Resolution **Recommendation:** **Recommendation by** Naguib, Sutivong, Tomcik,

While we are open to adding RF requirements to this section, this specific proposal requires more detailed review and discussion. To move forward, we will provide any additional inputs at the July plenary.

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **56**   **Comment by:** **Dan**   **Gal**

Comment **Type** Technical, Binding   **Page** 17   **Line** 16   **Fig/Table#**   **Section** 4.2

This section is lacking in RF requirements. It is suggested that all RF requirements be placed in section 4.2.1 and its new sub-section as proposed below.

Suggested Remedy

1. Change the heading of 4.2.1 to: "RF Requirements"
2. Insert new subsection 4.2.1.1 - "General"
3. Insert new subsection 4.2.1.2 - "Radio Transmitter"
4. Insert new subsection 4.2.1.3 - "Radio Receiver"

Proposed text for section 4.2.1.1 - General

"The RF part of the IEEE 802.20 physical layer shall be specified in a manner and level of detail consistent with similar public wireless land mobile communication service standards. Minimum performance specification shall be defined in the standard, such that equipment certification tests could be developed and be used to verify that multi-vendor compliant equipment would interoperate as well as meet applicable regulatory rules and coexistence requirements. Band-classes should be defined for specific global and local frequency bands of intetrest. These band-classes should define the channelization of the band along with specific RF characteristics such as transmitter maximum power, receiver sensitivity,

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

RF requirements should not be included in this document because of their dependency on the specific bands of operation, which are not addressed in this document. Additionally, since no text is proposed this comment is incomplete, creating instead of remedying a problem in the document.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 56   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 17   **Line** 16   **Fig/Table#**   **Section** 4.2

This section is lacking in RF requirements. It is suggested that all RF requirements be placed in section 4.2.1 and its new sub-section as proposed below.

Suggested Remedy

1. Change the heading of 4.2.1 to: "RF Requirements"
2. Insert new subsection 4.2.1.1 - "General"
3. Insert new subsection 4.2.1.2 - "Radio Transmitter"
4. Insert new subsection 4.2.1.3 - "Radio Receiver"

Proposed text for section 4.2.1.1 - General

"The RF part of the IEEE 802.20 physical layer shall be specified in a manner and level of detail consistent with similar public wireless land mobile communication service standards. Minimum performance specification shall be defined in the standard, such that equipment certification tests could be developed and be used to verify that multi-vendor compliant equipment would interoperate as well as meet applicable regulatory rules and coexistence requirements. Band-classes should be defined for specific global and local frequency bands of intetrest. These band-classes should define the channelization of the band along with specific RF characteristics such as transmitter maximum power, receiver sensitivity,

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **188**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 17   **Line** 17   **Fig/Table#**   **Section** 4.2.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik,

Relevant references or information need to be provided to specify the blocking and selectivity requirements for 802.20 subscriber terminals

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **188**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 17   **Line** 17   **Fig/Table#**   **Section** 4.2.1

"..with best commercial practices.." ambiguous

Suggested Remedy

Provide reference(s) for "best commercial practices"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

specific references are not needed, particularly since "best commercial practices" may improve over time.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **233**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 17   **Line** 17   **Fig/Table#**   **Section** 4.2.1

As written, the requirement seems to be an equipment requirement and an implementation issue. Not an air interface requirement. Contribution C802.20-04-44 has consensus text from a number of individuals. It can serve as a good starting point for this section.

Suggested Remedy

Adopt 4.2.1 from C802.20-04.44

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The proposed text is inappropriate for a requirements document, which is not a equipment specification. Additionally, much of the material is of a tutorial (text book) nature which is also inappropriate for a requirements document.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **57**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 17   **Line** 28   **Fig/Table#**   **Section** 4.2.2

Inadequate detail of Power Control requirements. Need more specific requirements.

Suggested Remedy

Add the following text in line 28:
" Both base station and mobile station should employ transmit power control mechanisms and exchange control and monitoring information required to achieve optimal performance while keeping the environmental noise floor as low as possible on the one hand and helping the MS preserve its battery power. The number of transmit Power levels as well as the associated control messaging should be optimized for cost effectiveness and performance. Mobile stations' operating states should include sleep-mode and in general should minimize their idle communications to the minimum. "

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 150   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 24   **Fig/Table#**   **Section** 4.2.2

Terms are not defined, nor are they requirements for a system that meets the 802.20 requirements. They may be techniques used by particular proposals, but the real requirements are already described elsewhere.

Suggested Remedy

Link adaptation shall be used by the AI for increasing spectral efficiency, data rate, and cell coverage reliability. ~~The AI shall support adaptive bandwidth allocation, and adaptive power allocation.~~ The system will have adaptive modulation and coding in both the uplink and the downlink

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 189   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 17   **Line** 25   **Fig/Table#**   **Section** 4.2.2

"..adaptive bandwidth allocation.." not clear

Suggested Remedy

Explain what is "adaptive bandwidth allocation" ?

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 190   **Comment by:**   Eshwar   Pittampalli

Comment   **Type**   Technical, Binding   **Page** 17   **Line** 25   **Fig/Table#**   **Section** 4.2.2

Sentences starting on lines 25 and 26 are contradicting each other.

Suggested Remedy

Replace the word "will" on line 26 with "shall"

Proposed Resolution   **Recommendation: Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 234   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type**   Technical, Binding   **Page** 17   **Line** 19   **Fig/Table#**   **Section** 4.2.2

This section doesn't belong in this document. Either delete or make it informative. We have approved spectral efficiencies, data rates, etc.   The requirements document should not dictate what tools to use to achieve these.

Suggested Remedy

Delete Section or remove requirements and preserve as in informative section.

Proposed Resolution   **Recommendation: Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 150　　　　**Comment by:**

Comment　**Type** Technical, Binding　　　　**Page** 17　　**Line** 24　　**Fig/Table#**　　**Section** 4.2.2

Suggested Remedy

Proposed Resolution　　　　**Recommendation:**　　　　　　　　**Recommendation by** Naguib, Sutivong, Tomcik,

Use of the word "will" is not appropriate. Suggest the following remedy; Comment 190 has the same proposed resolution

Link adaptation may be used by the AI for increasing spectral efficiency, data rate, and cell coverage reliability. The 802.20 AI may use adaptive modulation and coding schemes in both the uplink and the downlink.

Reason for Recommendation

Resolution of Group　　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 189　　　　**Comment by:**

Comment　**Type** Technical, Binding　　　　**Page** 17　　**Line** 25　　**Fig/Table#**　　**Section** 4.2.2

Suggested Remedy

Proposed Resolution　　　　**Recommendation:**　　　　　　　　**Recommendation by** Naguib, Sutivong, Tomcik,

This section should be worded to be informative rather than specifying requirements

Reason for Recommendation

Resolution of Group　　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **190**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 25   **Fig/Table#**   **Section** 4.2.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **57**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 17   **Line** 28   **Fig/Table#**   **Section** 4.2.2

Inadequate detail of Power Control requirements. Need more specific requirements.

Suggested Remedy

Add the following text in line 28:
" Both base station and mobile station should employ transmit power control mechanisms and exchange control and monitoring information required to achieve optimal performance while keeping the environmental noise floor as low as possible on the one hand and helping the MS preserve its battery power. The number of transmit Power levels as well as the associated control messaging should be optimized for cost effectiveness and performance. Mobile stations' operating states should include sleep-mode and in general should minimize their idle communications to the minimum. "

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
text seems acceptable.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **150**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 17   **Line** 24   **Fig/Table#**   **Section** 4.2.2

Terms are not defined, nor are they requirements for a system that meets the 802.20 requirements. They may be techniques used by particular proposals, but the real requirements are already described elsewhere.

Suggested Remedy

Link adaptation shall be used by the AI for increasing spectral efficiency, data rate, and cell coverage reliability. ~~The AI shall support adaptive bandwidth allocation, and adaptive power allocation.~~ The system will have adaptive modulation and coding in both the uplink and the downlink

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Link adaptation shall be used by the AI for increasing spectral efficiency, data rate, and cell coverage reliability. ~~The AI shall support adaptive bandwidth allocation, and adaptive power allocation.~~ The system ~~will have~~ <u>shall</u> <u>include</u> adaptive modulation and coding in both the uplink and the downlink

Reason for Recommendation

agree that adaptive bandwidth allocation and adaptive power allocation are design techniques, not performance requirements. Also changed the subsequent paragraph to be normative instead of informative.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **189**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 17   **Line** 25   **Fig/Table#**   **Section** 4.2.2

"..adaptive bandwidth allocation.." not clear

Suggested Remedy

Explain what is "adaptive bandwidth allocation" ?

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

delete sentence

Reason for Recommendation

see reply in record #194 to comment #150

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 190   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 17   **Line** 25   **Fig/Table#**   **Section** 4.2.2

Sentences starting on lines 25 and 26 are contradicting each other.

Suggested Remedy

Replace the word "will" on line 26 with "shall"

Proposed Resolution   **Recommendation: Accepted-Modified**   **Recommendation by** Joanne Wilson

see reply in record #194 to comment #150

Reason for Recommendation

see reply in record #194 to comment #150

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 234   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 17   **Line** 19   **Fig/Table#**   **Section** 4.2.2

This section doesn't belong in this document. Either delete or make it informative. We have approved spectral efficiencies, data rates, etc.   The requirements document should not dictate what tools to use to achieve these.

Suggested Remedy

Delete Section or remove requirements and preserve as in informative section.

Proposed Resolution   **Recommendation:**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **57**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 17   **Line** 28   **Fig/Table#**   **Section** 4.2.2

Inadequate detail of Power Control requirements. Need more specific requirements.

Suggested Remedy

Add the following text in line 28:
" Both base station and mobile station should employ transmit power control mechanisms and exchange control and monitoring information required to achieve optimal performance while keeping the environmental noise floor as low as possible on the one hand and helping the MS preserve its battery power. The number of transmit Power levels as well as the associated control messaging should be optimized for cost effectiveness and performance. Mobile stations' operating states should include sleep-mode and in general should minimize their idle communications to the minimum. "

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Lalit Kotecha

" Both base station and mobile station should employ transmit power control mechanisms and exchange control and monitoring information required to achieve optimal performance while keeping the environmental noise floor as low as possible on the one hand and helping the MS preserve its battery power. The number of transmit Power levels as well as the associated control messaging should be optimized for cost effectiveness and performance. ~~Mobile stations' operating states should include sleep-mode and in general should minimize their idle communications to the minimum.~~ "

Reason for Recommendation

Strikeout part of the text needs to be covered in addressing power save requirement in a separate section in requirements document. This helps separating "power control" and "power save" requirements

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 289   Comment by:

Comment   **Type** Technical, Binding   **Page** 18   **Line** 12   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik
Adopt Option 2.

Reason for Recommendation
Option 2 is preferable to the recommenders; while 5microsecond delay spread is the minimum that a proposal should be able to handle, proposers should plan that actual delay spreads in a mobile environment can be much larger.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 59   Comment by:

Comment   **Type** Technical, Binding   **Page** 17   **Line** 16   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Anna Tee
Adopt Option 3.

Reason for Recommendation
With the other requirements defined in the individual sections of the SRD, it should be sufficiently clear that the system - including base stations' and mobile terminals' performance should meet all those requirements. This section is supposed to specify the type of channel environments under which the system needs to operate.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **95**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee

Adopt option 3 as is.

Reason for Recommendation
The last sentence is a requirement to ensure that an active call will not be dropped when the user walks into a building from the outdoor, and vice versa.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **7**   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

See modification in my comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 17   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 58   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line**   **Fig/Table#**   **Section** 4.2.3

Option 1: Page 18, line 4 - the "(TBR)" needs to be defined or else discard option-1 entirely.

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Discard option 1.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 59   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 17   **Line** 16   **Fig/Table#**   **Section** 4.2.3

All current three options need improvement. Add Option 4.

Suggested Remedy

Proposed Option 4:
"Mobile stations shall perform well (quantitative requirements should be specified in the 802.20 standard) under all mobility modes; from pedestrian to 250 Km/hr vehicular speed (as defined in the 802.20 PAR). Key performance attributes that affect the user experience such as data rates, fading, loss of session, call disruption, inability to get service altogether should be kept to an unnoticeable degradation level. This requirement should apply to both outdoor, indoor and outdoor (BS) to indoor (MS) operations at delay spreads of 5 micro-seconds or greater."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

I still prefer option 3

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 74   **Comment by:** Hari   Ganti

Comment   **Type** Technical, Binding   **Page** Tech   **Line** 18   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Support Option 2 for "Performance under Mobility and Delay Spread."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **81** **Comment by:** Marc Goldburg

Comment **Type** Technical, Binding **Page** 17 **Line** 29 **Fig/Table#** **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **87** **Comment by:** Kazuhiro Murakami

Comment **Type** Technical, Binding **Page** 19 **Line** 8 **Fig/Table#** **Section** 4.2.3

"Option 3 is simple, straightforward, and well defined."

Suggested Remedy

Adopt Option 3

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

See reply on initial comment

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **191**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 1   **Fig/Table#**   **Section** 4.2.3

"The system is expected to work in dense...." Not clear .. And also has some redunadant information

Suggested Remedy

Replace with "The system shall work in urban, suburban and rural areas..."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Use option 3

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **193**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 18   **Fig/Table#**   **Section** 4.2.3

"The system shall NOT..." Negative comment.

Suggested Remedy

Replace with "The system shall support both indoor and outdoor scenarios."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

see my comment on this section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 194   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 18   **Line** 3   **Fig/Table#** 4   **Section** 4.2.3

"The system shall support 95%....." not clear

Suggested Remedy

Replace with "The system shall support at least 95%..."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

see my comment on this section

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 235   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 18   **Line** 8   **Fig/Table#**   **Section** 4.2.3

5 Microseconds seems to be a reasonable minimum requirement. Option 2 seems to be reasonable for the section.

Suggested Remedy

Adopt Option 2 with a minor modification as follows: ...system shall work...

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Prefer option 3 but can live with option 2

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **272** **Comment by:** Joanne Wilson

Comment **Type** Technical, Binding **Page** 17 **Line** 29 **Fig/Table#** **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **282** **Comment by:** Michael Youssefmir

Comment **Type** Technical, Binding **Page** 17 **Line** 29 **Fig/Table#** **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 289   **Comment by:** Jim   Ragsdale

Comment   **Type** Technical, Binding   **Page** 18   **Line** 12   **Fig/Table#**   **Section** 4.2.3

System must work under the various environments of a Macro/Micro/pico cellular system.

Suggested Remedy

Pick option 3

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 7   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

The requirement for minimum delay spread needs to be specified

Reason for Recommendation

Option 2 is preferable. Some sort of minimum requirement for delay spread should be specified.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **17**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik,

Duplicate with Comment 7

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **74**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** ?   **Line** 18   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Rao YallaprNaguib, Sutivong,

Modify the first part of line 8 (for Option 2) as follows:

"The system shall work in dense...."

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 81   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

The requirement for minimum delay spread needs to be specified

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 87   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 8   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

The requirement for minimum delay spread needs specification

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **95** **Comment by:**

Comment **Type** Technical, Binding **Page** 17 **Line** 29 **Fig/Table#** **Section** 4.2.3

Suggested Remedy

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Naguib, Sutivong, Tomcik,

The requirement for minimum delay spread needs to be specified

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **191** **Comment by:**

Comment **Type** Technical, Binding **Page** 18 **Line** 1 **Fig/Table#** **Section** 4.2.3

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **193** **Comment by:**

Comment **Type** Technical, Binding **Page** 18 **Line** 18 **Fig/Table#** **Section** 4.2.3

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Naguib, Sutivong, Tomcik,

Agreed

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 194   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 18   **Line** 3   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 272   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

The requirement for minimum delay spread needs to be specified. Option 2 does this well.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 282   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

The requirement for minimum delay spread needs to be specified

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **7**   **Comment by:** Todd   Chauvin

Comment **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **17**   **Comment by:** John   Chen

Comment **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **58** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 18 **Line** **Fig/Table#** **Section** 4.2.3

Option 1: Page 18, line 4 - the "(TBR)" needs to be defined or else discard option-1 entirely.

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **59** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 17 **Line** 16 **Fig/Table#** **Section** 4.2.3

All current three options need improvement. Add Option 4.

Suggested Remedy

Proposed Option 4:
"Mobile stations shall perform well (quantitative requirements should be specified in the 802.20 standard) under all mobility modes; from pedestrian to 250 Km/hr vehicular speed (as defined in the 802.20 PAR). Key performance attributes that affect the user experience such as data rates, fading, loss of session, call disruption, inability to get service altogether should be kept to an unnoticeable degradation level. This requirement should apply to both outdoor, indoor and outdoor (BS) to indoor (MS) operations at delay spreads of 5 micro-seconds or greater."

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

Reason for Recommendation

performance of the mobile stations is also dependent on the quality of the implementation of the standard and on network design and deployment factors. Much of the text is informative and would need further detail to be unambigous.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **74**   **Comment by:** Hari   Ganti

Comment **Type** Technical, Binding   **Page** Tech   **Line** 18   **Fig/Table#**   **Section** 4.2.3

Suggested Remedy
Support Option 2 for "Performance under Mobility and Delay Spread."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson
See reply in record #206 to comment #95

Reason for Recommendation
See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **81**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy
Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson
See reply in record #206 to comment #95

Reason for Recommendation
See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 87   **Comment by:** Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 19   **Line** 8   **Fig/Table#**   **Section** 4.2.3

"Option 3 is simple, straightforward, and well defined."

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 95   **Comment by:** Mark   Klerer

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Three options are specified. I prefer option 3 with the last sentence deleted.

The last sentence states " The system shall NOT be designed for indoor only and outdoor only scenarios." If the system meets the requirements it does not matter what it was designed for.

Suggested Remedy

The text should read: "The system shall work in dense urban, suburban, rural outdoor-indoor, pedestrian and vehicular environments and the relevant channel models shall be applicable. "

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Agree.   If the first requirement is met, the second one is irrelevant

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 191   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 18   **Line** 1   **Fig/Table#**   **Section** 4.2.3

"The system is expected to work in dense...." Not clear .. And also has some redunadant information

Suggested Remedy

Replace with "The system shall work in urban, suburban and rural areas..."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 192   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 18   **Line** 2   **Fig/Table#**   **Section** 4.2.3

"...relevant channel models..." association of environments with channel models is missing

Suggested Remedy

Specify association of environments with the appropriate channel models.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **193** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 18 **Line** 18 **Fig/Table#** **Section** 4.2.3

"The system shall NOT..." Negative comment.

Suggested Remedy

Replace with "The system shall support both indoor and outdoor scenarios."

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **194** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 18 **Line** 3 **Fig/Table#** 4 **Section** 4.2.3

"The system shall support 95%....." not clear

Suggested Remedy

Replace with "The system shall support at least 95%..."

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

See reply to record 201 to comment #58

Reason for Recommendation

See reply to record 201 to comment #58

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **195** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 18 **Line** 15 **Fig/Table#** **Section** 4.2.3

Same as comment 35

Suggested Remedy

Same as comment 35

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

Reason for Recommendation

Comment 35 is not related to section 4.2.3

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **235** **Comment by:** Ayman, Arak, Jim Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding **Page** 18 **Line** 8 **Fig/Table#** **Section** 4.2.3

5 Microseconds seems to be a reasonable minimum requirement. Option 2 seems to be reasonable for the section.

Suggested Remedy

Adopt Option 2 with a minor modification as follows: ...system shall work...

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 272   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 282   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 289   **Comment by:** Jim   Ragsdale

Comment   **Type** Technical, Binding   **Page** 18   **Line** 12   **Fig/Table#**   **Section** 4.2.3

System must work under the various environments of a Macro/Micro/pico cellular system.

Suggested Remedy

Pick option 3

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #206 to comment #95

Reason for Recommendation

See reply in record #206 to comment #95

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 17   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy

Adopt Option 3

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **58**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line**   **Fig/Table#**   **Section** 4.2.3

Option 1: Page 18, line 4 - the "(TBR)" needs to be defined or else discard option-1 entirely.

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **59**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 17   **Line** 16   **Fig/Table#**   **Section** 4.2.3

All current three options need improvement. Add Option 4.

Suggested Remedy

Proposed Option 4:
"Mobile stations shall perform well (quantitative requirements should be specified in the 802.20 standard) under all mobility modes; from pedestrian to 250 Km/hr vehicular speed (as defined in the 802.20 PAR). Key performance attributes that affect the user experience such as data rates, fading, loss of session, call disruption, inability to get service altogether should be kept to an unnoticeable degradation level. This requirement should apply to both outdoor, indoor and outdoor (BS) to indoor (MS) operations at delay spreads of 5 micro-seconds or greater."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Lalit Kotecha

"Mobile stations**/Base Stations** shall perform well (quantitative requirements should be specified in the 802.20 standard) under all mobility modes; from pedestrian to 250 Km/hr vehicular speed (as defined in the 802.20 PAR). Key performance attributes that affect the user experience such as data rates, fading, loss of session, call disruption, inability to get service altogether should be kept to an unnoticeable degradation level. This requirement should apply to both outdoor, indoor and outdoor (BS) to indoor (MS) operations at delay spreads of 5 micro-seconds or greater."

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **81**   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 17   **Line** 29   **Fig/Table#**   **Section** 4.2.3

Option 3 is simple, straightforward, and well defined.

Suggested Remedy
Adopt Option 3

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha
Comment #7

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **60**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line**   **Fig/Table#**   **Section** 4.2.4

Add a clarification on implementation

Suggested Remedy
Add on line 19: "Implementations may support either mode (FDD or TDD) or both."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **196** **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 18   **Fig/Table#**   **Section** 4.2.4

"The 802.20 standard shall support..." This sentence is not clear in terms of whether the standard should have any coupling between FDD and TDD. Are they mutually exclusive? If there is any coupling, is it close coupling or loose coupling?

Suggested Remedy
Clarification is needed.

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **60**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 18   **Line**   **Fig/Table#**   **Section** 4.2.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naguib, Sutivong, Tomcik,

Section 4.1.3 already specifies the AI requirements on FDD and TDD frequency arrangements. Remove Section 4.2.4

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **196**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 18   **Line** 18   **Fig/Table#**   **Section** 4.2.4

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by** Naguib, Sutivong, Tomcik,

Section 4.1.3 already specifies the AI requirements on FDD and TDD frequency arrangements. Remove Section 4.2.4

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **60**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 18   **Line**   **Fig/Table#**   **Section** 4.2.4

Add a clarification on implementation

Suggested Remedy

Add on line 19: "Implementations may support either mode (FDD or TDD) or both."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

We can not establish requirements on the implementations of the standard. This is outside of the scope of this document and of 802.20 WG.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **196**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 18   **Line** 18   **Fig/Table#**   **Section** 4.2.4

"The 802.20 standard shall support..." This sentence is not clear in terms of whether the standard should have any coupling between FDD and TDD. Are they mutually exclusive? If there is any coupling, is it close coupling or loose coupling?

Suggested Remedy
Clarification is needed.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation
The text is clear. The standard shall have both a TDD and an FDD mode. That's the only requirement established in this section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **236**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 18   **Line** 17   **Fig/Table#**   **Section** 4.2.4

This is stated elsewhere (Section 4.1.3). It is a duplicated requirement.

Suggested Remedy
Delete Section.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation
They are consistent. The requirement appropriately appears as both a functional requirement and as a PHY/RF requirement.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **60**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 18   **Line**   **Fig/Table#**   **Section** 4.2.4

Add a clarification on implementation

Suggested Remedy

Add on line 19: "Implementations may support either mode (FDD or TDD) or both."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

This requirement needs to be separately defined for BS as well as MS. e.g. BS will support FDD or TDD as mandatory mode and optionally may support operating at FDD and TDD mode at the same time. Similar requirements for MS is required.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **236**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 18   **Line** 17   **Fig/Table#**   **Section** 4.2.4

This is stated elsewhere (Section 4.1.3). It is a duplicated requirement.

Suggested Remedy

Delete Section.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **151**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 18   **Line** 21   **Fig/Table#**   **Section** 4.2.5

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **151**   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 18   **Line** 21   **Fig/Table#**   **Section** 4.2.5

"Synchronization" between MT and BS is not defined. It does not seem to be required; a technology proposal that meets all other requirements but does not synchronize between MT and BS would be acceptable.

Second sentence is a "non-requirement." We don't need to specify all the possible non-requirements.

Suggested Remedy
Delete all text in 4.2.5.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson, Mike Youssefmir
delete section 4.2.5

Reason for Recommendation
agree

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **152**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 18   **Line** 24   **Fig/Table#**   **Section** 4.2.6

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee

See Comment # 224 for the alternative text.

Reason for Recommendation

This section implies some near real-time measurement on the physical link which are essential for link adaptation or handoff pruposes. The section should be kept with modifications to the text as proposed in comment # 224 .

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **61**   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6

The term "network" is inappropriate here.

Suggested Remedy

Change "network" to "Base Station"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **62** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 18 **Line** 25 **Fig/Table#** **Section** 4.2.6

The sentence "The Physical layer provides..." is vague and not using proper engineering terms.

Suggested Remedy

Chaneg the entire sentence as follows" The physical layer measurements shall include, but not limited to: signal strength and signal quality (C/I) measurements and reporting to the opposite side of the air link, measure neigboring cells' signals and monitor their broadcast channels (if applicable), measure and report error rates, measure and report access delays and call interruption, measure and report effective throughput (good-put), provide any other measurement needed for handoff support , maintenance and quality of service monitoring. Measurements results may need to be sent out at prescribed (in the 802.20 standard) a frequency as well as stored internally for offline processing. "

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Klerer

Use the following text:

The physical layer measurements shall include the measurement of such parameters as are important and relevant to the particular RF technology employed. Such measurments and associated reports may include: signal strength and signal quality (C/I) measurements and reporting to the opposite side of the air link, measures of neigboring cells' signal strength and monitoring of their broadcast channels (if applicable), measures and reports of error rates, measures and reports of

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **197** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 18 **Line** 25 **Fig/Table#** **Section** 4.2.6

"The physical layer provides ...., etc." Not clear

Suggested Remedy

Specify what metrics are being measured.

Proposed Resolution **Recommendation:** **Superceded** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **61**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **62**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik,

We suggest modifying the last sentence as follows:

....sent out at prescribed ( ) periodicities as well as.......

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **61**   **Comment by:** **Dan**   **Gal**

Comment **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6

The term "network" is inappropriate here.

Suggested Remedy

Change "network" to "Base Station"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree that base station is the appropriate entity

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **62**   **Comment by:** **Dan**   **Gal**

Comment **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6

The sentence "The Physical layer provides..." is vague and not using proper engineering terms.

Suggested Remedy

Chaneg the entire sentence as follows" The physical layer measurements shall include, but not limited to: signal strength and signal quality (C/I) measurements and reporting to the opposite side of the air link, measure neigboring cells' signals and monitor their broadcast channels (if applicable), measure and report error rates, measure and report access delays and call interruption, measure and report effective throughput (good-put), provide any other measurement needed for handoff support , maintenance and quality of service monitoring. Measurements results may need to be sent out at prescribed (in the 802.20 standard) a frequency as well as stored internally for offline processing. "

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, MIke Youssefmir

delete section 4.2.6

Reason for Recommendation

Should not provide an exhaustive list of the measurements to be taken. This is subsumed by the OA&M requirements.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **152**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 18   **Line** 24   **Fig/Table#**   **Section** 4.2.6

No idea what this section is trying to say.

MIB-like parameters are defined elsewhere. The only thing unique here is "intra-frequency, inter-frequency, ...".

Perhaps something about operational service metrics is desired, but not described by this non-testable requirement.

Suggested Remedy
Delete all text (and possibly the section heading, too).

Alternatively, rewrite to clarify intent.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson, Mike Youssefmir
As per reply to record 223 (comment #62)) we propose to delete section 4.2.6

Reason for Recommendation
agree with comnent

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **197**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6
"The physical layer provides ...., etc." Not clear

Suggested Remedy
Specify what metrics are being measured.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson
see reply in record #223 to comment #62

Reason for Recommendation
see reply in record #223 to comment #62

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **237**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 18   **Line** 24   **Fig/Table#**   **Section** 4.2.6

As written these seem to be vague equipment requirements, not requirements on the air interface PHY or MAC. The text suggested below adds an air interface requirement so that Base Stations can extract measurement or status information from mobiles.

Suggested Remedy

Change to read: "The 802.20 air interface shall provide features for the Base Station to request Status and Measurement Information from mobile stations, and a "Status Response" for mobile stations to transmit measurements and status to the infrastructure."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson, Mike Youssefmir

per previous comments, propose to delete section 4.2.6

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **61**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 25   **Fig/Table#**   **Section** 4.2.6

The term "network" is inappropriate here.

Suggested Remedy

Change "network" to "Base Station"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **62** **Comment by:** Dan Gal

Comment **Type** Technical, Binding **Page** 18 **Line** 25 **Fig/Table#** **Section** 4.2.6

The sentence "The Physical layer provides..." is vague and not using proper engineering terms.

Suggested Remedy

Chaneg the entire sentence as follows" The physical layer measurements shall include, but not limited to: signal strength and signal quality (C/I) measurements and reporting to the opposite side of the air link, measure neigboring cells' signals and monitor their broadcast channels (if applicable), measure and report error rates, measure and report access delays and call interruption, measure and report effective throughput (good-put), provide any other measurement needed for handoff support , maintenance and quality of service monitoring. Measurements results may need to be sent out at prescribed (in the 802.20 standard) a frequency as well as stored internally for offline processing. "

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **65** **Comment by:**

Comment **Type** Technical, Binding **Page** 18 **Line** 35 **Fig/Table#** **Section** 4.3

Suggested Remedy

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Anna Tee

The standard should provide a scalable solution to accomodate deployment in various channel bandwidths.

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **63**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 30   **Fig/Table#**   **Section** 4.3

Redundancy in line 30 - "The AI shall be designed ..."

Suggested Remedy

Delete the sentence.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **64**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

Need to state that some channel BWs should be mandatory and others optional.

Suggested Remedy

Add a new sentence before "Channel bandwidths..." in line 33: The 802.20 standard shall specify which channel bandwidths
would be mandatory and which would be optional".

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **65**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 35   **Fig/Table#**   **Section** 4.3

Need to clarify/change the sentence "The design shall be..."

Suggested Remedy

Change the sentence as follows:
" The 802.20 standard should be kept up to date with future advancements in radio technology and availability of spectrum that would be suitable for deployment of wider channel bandwidths."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

The meaning of the cuurent sentence is a design constraint. The proposed paraphrase is a requirment on updating of the standard.; this is a totaly different semantic.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **198**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

"cellular" word conveys only partial information.

Suggested Remedy

Replace it with "wireless"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

We do mean "cellular"

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **199** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 18 **Line** 35 **Fig/Table#** **Section** 4.3

"readily extensible to wider channels..." -- this is an open-ended requirement for channel bandwidth.

Suggested Remedy

Specify maximum channel bandwidth.

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Klerer

Reason for Recommendation

The max channel bandwidth would be equal to the max block size.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **239** **Comment by:** Ayman, Arak, Jim Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding **Page** 18 **Line** 35 **Fig/Table#** **Section** 4.3

This sentence may be useful to retain. Scalability is useful, but let's not demand linearity or any other specific functional relationship.

Suggested Remedy

Reword as follows: The air interface design shall scale to wider channel bandwidths than those mentioned here, as they become available.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **63**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 18   **Line** 30   **Fig/Table#**   **Section** 4.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **64**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Naquib, Sutivong, Tomcik,
Section 4.1.2 has already dealt with this aspect sufficiently and has been voted for approval by the working group.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **198**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naquib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 63   **Comment by:** Dan   Gal

Comment   Type Technical, Binding   **Page** 18   **Line** 30   **Fig/Table#**   **Section** 4.3

Redundancy in line 30 - "The AI shall be designed ..."

Suggested Remedy

Delete the sentence.

Proposed Resolution   Recommendation: Accepted-Modified   Recommendation by Joanne Wilson

Replace the first two sentences in section 4.3 with the following sentence, "The 802.20 AI standard shall support system implementation in TDD or FDD licensed spectrum below 3.5 GHz and allocated to the Mobile Service. "

Reason for Recommendation

eliminates redundancy and improves clarity

Resolution of Group   Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 64   **Comment by:** Dan   Gal

Comment   Type Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

Need to state that some channel BWs should be mandatory and others optional.

Suggested Remedy

Add a new sentence before "Channel bandwidths..." in line 33: The 802.20 standard shall specify which channel bandwidths would be mandatory and which would be optional".

Proposed Resolution   Recommendation: Rejected   Recommendation by Joanne Wilson, Mike Youssefmr

Reason for Recommendation

Obviously, the 802.20 standard will specifiy its channel bandwidth.   It's not clear how the standard could specify an optional channel bandwidth. The 802.20 working group is not establishing a requirement on what that channel bandwidth has to be so that proposals can make use of the channel bandwidth that is most appropriate for their design.

Resolution of Group   Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 65   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 18   **Line** 35   **Fig/Table#**   **Section** 4.3

Need to clarify/change the sentence "The design shall be..."

Suggested Remedy

Change the sentence as follows:
" The 802.20 standard should be kept up to date with future advancements in radio technology and availability of spectrum that would be suitable for deployment of wider channel bandwidths."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

I don't believe this is what is intended by the sentence, which was not related to future revisions of the standard. The sentence in question is related to implementing the standard in larger block assignments as they become available. Could agree to delete the sentence.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 198   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

"cellular" word conveys only partial information.

Suggested Remedy

Replace it with "wireless"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

No, wireless could include unlicensed or fixed systems. Cellular implies licensed systems and are most likely to be mobile. Could agree to change "cellular" to "mobile", but not to merely "wireless".

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   199   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 18   **Line** 35   **Fig/Table#**   **Section** 4.3

"readily extensible to wider channels..." -- this is an open-ended requirement for channel bandwidth.

Suggested Remedy

Specify maximum channel bandwidth.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

The applicable block assignments establishes an upper limit on the channel bandwidths. Beyond that the WG has no justification for limiting proponent's design options.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   238   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 18   **Line** 29   **Fig/Table#**   **Section** 4.3

This could be consolidated with other material. Note that Lines 31-34 in the section puts requirements on regulators and service providers. Will they be compliant? Can we do anything about it?

Suggested Remedy

Consolidate the useful information.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The text is sets the overall parameters of the MBWA solution space. Additionally, this comment does not propose a specific remedy.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 239   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 18   **Line** 35   **Fig/Table#**   **Section** 4.3

This sentence may be useful to retain. Scalability is useful, but let's not demand linearity or any other specific functional relationship.

Suggested Remedy

Reword as follows: The air interface design shall scale to wider channel bandwidths than those mentioned here, as they become available.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

It not clear how a design scales to wider channel bandwidths. It makes sense that the design could be implemented in larger block assignments as they become available. Channel bandwidths are a design choice, hence all options are already available. The question is how much licensed spectrum will an operator have that will allow them to deploy wider channel bandwidths.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 63   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 30   **Fig/Table#**   **Section** 4.3

Redundancy in line 30 - "The AI shall be designed ..."

Suggested Remedy

Delete the sentence.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 64   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

Need to state that some channel BWs should be mandatory and others optional.

Suggested Remedy

Add a new sentence before "Channel bandwidths..." in line 33: The 802.20 standard shall specify which channel bandwidths would be mandatory and which would be optional".

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 65   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 18   **Line** 35   **Fig/Table#**   **Section** 4.3

Need to clarify/change the sentence "The design shall be..."

Suggested Remedy

Change the sentence as follows:
" The 802.20 standard should be kept up to date with future advancements in radio technology and availability of spectrum that would be suitable for deployment of wider channel bandwidths."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **198**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 33   **Fig/Table#**   **Section** 4.3

"cellular" word conveys only partial information.

Suggested Remedy
Replace it with "wireless"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **199**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 18   **Line** 35   **Fig/Table#**   **Section** 4.3

"readily extensible to wider channels..." -- this is an open-ended requirement for channel bandwidth.

Suggested Remedy
Specify maximum channel bandwidth.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Lalit Kotecha
Specify a list of channel BW to be supported

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 67   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 19   **Fig/Table#**   **Section** 4.4

Add a new subsection "4.4.2 - MAC Design and Performance Requirements"

Suggested Remedy

Initial text for this new sub-section:
" The 802.20 MAC design shall support both FDD and TDD modes. It will take into account the architectual requirements of
section 3.1.1 as well as the need for flexible, future proof design that would readily accommodate changes in the PHY layer
as well as in upper layer. To the extent that performance is not taxed significantly, the MAC should abstract general purpose
functionalities and keep the number of PHY-specific optimized functions to a minimum. Such functions would have a role
similar to that of device drivers in personal computer architectures."

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Klerer

See reply to previous comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 67   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 19   **Fig/Table#**   **Section** 4.4

Suggested Remedy

Proposed Resolution   **Recommendation: Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik,

Remove the last sentence of the proposed remedy.

" The 802.20 MAC design shall support both FDD and TDD modes. It will take into account the architectual requirements of
section 3.1.1 as well as the need for flexible, future proof design that would readily accommodate changes in the PHY layer
as well as in upper layer. To the extent that performance is not taxed significantly, the MAC should abstract general purpose
functionalities and keep the number of PHY-specific optimized functions to a minimum."

Reason for Recommendation

The last sentence of the "suggested remedy" may not entirely describe the intent of the remainder of the paragraph.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **67**   **Comment by:** **Dan**   **Gal**

Comment **Type** Technical, Binding   **Page** 19   **Line** 19   **Fig/Table#**   **Section** 4.4

Add a new subsection "4.4.2 - MAC Design and Performance Requirements"

Suggested Remedy

Initial text for this new sub-section:
" The 802.20 MAC design shall support both FDD and TDD modes. It will take into account the architectual requirements of section 3.1.1 as well as the need for flexible, future proof design that would readily accommodate changes in the PHY layer as well as in upper layer. To the extent that performance is not taxed significantly, the MAC should abstract general purpose functionalities and keep the number of PHY-specific optimized functions to a minimum. Such functions would have a role similar to that of device drivers in personal computer architectures."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

There should not be a requirement for a common MAC design to support both TDD and FDD modes as that would certainly sub-optimize the design and performance of one or both of those modes.   Frankly, this is a bad design requirement that can only diminish the performance of an 802.20 system.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 67   **Comment by:** Dan   Gal

Comment **Type** Technical, Binding   **Page** 19   **Line** 19   **Fig/Table#**   **Section** 4.4

Add a new subsection "4.4.2 - MAC Design and Performance Requirements"

Suggested Remedy

Initial text for this new sub-section:
" The 802.20 MAC design shall support both FDD and TDD modes. It will take into account the architectual requirements of section 3.1.1 as well as the need for flexible, future proof design that would readily accommodate changes in the PHY layer as well as in upper layer. To the extent that performance is not taxed significantly, the MAC should abstract general purpose functionalities and keep the number of PHY-specific optimized functions to a minimum. Such functions would have a role similar to that of device drivers in personal computer architectures."

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 240   **Comment by:**

Comment **Type** Technical, Binding   **Page** 19   **Line** 8   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Anna Tee

Keep the first sentence: "The 802.20 air interface shall support the IETF Differentiated Services (DS) Architecture to be compatible with other IP network standards including IP mobile standards. "

Reason for Recommendation

The first sentence has already implied the rest of the paragraph. In order to better support end-to-end QoS, it would be necessary to take into consideration the mechanism for QoS support at the IP network layer, as 802.20 is an IP-based wireless access link standard.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 68   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

inappropriate text "802.20 protocols..."

Suggested Remedy

change to:
"The 802.20 MAC design shall specify mechanisms ..." etc.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

There is nothing wrong with the present text.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 69   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

vague "...(QoS)" - need more specifity

Suggested Remedy

Add after "(QOS)":
"control and monitoring"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **70**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1
redundant second semtence (lines 4-6)

Suggested Remedy

suggest that we delete it or replace with the following:
"The MAC's QoS provisions shall allow flexible and reconfigurable implementations that would facilitate Service Providers'
applications which require provisioning of users' QoS capabilities. "

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 153   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

Most of this text is not MAC-text. Some should be moved to 4.1.7. Some should be changed. Some deleted.

Suggested Remedy

The 802.20 MAC layer~~protocols~~ shall provide mechanisms for the over-the-air delivery of user data that satisfies negotiated link-level ~~q~~Quality of ~~s~~Service (QOS). The 802.20 protocol standards shall define the interfaces and procedures that facilitate the configuration, negotiation, and enforcement of QoS policies, which operators may choose to implement.

Move the next 3 paragraphs to section 4.1.7:

"The 802.20 air interface shall support the IETF Differentiated Services (DS) Architecture to be compatible with other IP network standards including IP mobile standards. To this end, 802.20 shall support the standard DiffServ QoS model. Some of the forwarding behaviors that should be supported by 802.20 include: Expedited Forwarding (EF), Assured Forwarding (AF), and Best Effort (BE) DS per Hop Behaviors (PHBs) as defined by the RFC 2597 and RFC 2598. 802.20 shall also support configuration of the PHBs by a DS API that shall be based on a subset of the information model defined in RFC 3289.

Service and QoS Mapping

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

Need to sort out higher layer issues (e.g., the use of RSVP)from lower layer issues.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **200** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 19 **Line** 4 **Fig/Table#** **Section** 4.4.1

"802.20...mechanisms...)" not clear

Suggested Remedy

Specify what mechanisms are being referred to in this sentence.

Proposed Resolution **Recommendation:** **Superceded** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **201** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 19 **Line** 9 **Fig/Table#** **Section** 4.4.1

"...other IP network standards...." not complete

Suggested Remedy

Provide the references to other IP network standards and IP mobile standards.

Proposed Resolution **Recommendation:** **Superceded** **Recommendation by**

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **240**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 19   **Line** 8   **Fig/Table#**   **Section** 4.4.1

This paragraph goes into great detail on what IETF RFCs to use in equipment. This can vary depending on the customer's requirements, services offered, etc. We recommend deletion of the paragraph, or removal of requirements language to show intent with informative text.

Suggested Remedy
Delete the Paragraph or make informative.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

I cn live with this if it becomes a should or informative as request by the comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **242**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 19   **Line** 17   **Fig/Table#**   **Section** 4.4.1

This seems to place a requirement on the network and not the air interface PHY or MAC.

Suggested Remedy
Remove sentence starting with "A Qos based IP network..."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **68**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **69**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **70**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 153   **Comment by:**

Comment **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation
These changes improve clarity of the requirements.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 200   **Comment by:**

Comment **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 202   **Comment by:**

Comment **Type** Technical, Binding   **Page** 19   **Line** 16   **Fig/Table#**   **Section** 4.4.1

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Naguib, Sutivong, Tomcik,

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 68   **Comment by:** Dan Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

inappropriate text "802.20 protocols..."

Suggested Remedy

change to:
"The 802.20 MAC design shall specify mechanisms ..." etc.

Proposed Resolution   **Recommendation: Accepted-Modified**   **Recommendation by** Joanne Wilson

Delete the first sentence. Modify the second (now first) sentence to begin, "The 802.20 AI standard shall define he interfaces and procedures that facilitate the configuration and enforcement of quality of service (QoS) policies, which operators may choose to implement.

Reason for Recommendation

The first sentence is redundant with the second. The modification to the second (now first) sentence is editorial and eliminates ambiguity.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 69   **Comment by:** Dan Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

vague "...(QoS)" - need more specifity

Suggested Remedy

Add after "(QOS)":
"control and monitoring"

Proposed Resolution   **Recommendation: Rejected**   **Recommendation by** Joanne Wilson

see reply in record #237 to comment #68

Reason for Recommendation

see reply in record #237 to comment #68

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **70**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

redundant second semtence (lines 4-6)

Suggested Remedy

suggest that we delete it or replace with the following:
"The MAC's QoS provisions shall allow flexible and reconfigurable implementations that would facilitate Service Providers' applications which require provisioning of users' QoS capabilities. "

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

see reply in record #237 to comment #68 that removes redundancy with the first sentence.

Reason for Recommendation

see reply in record #237 to comment #68

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **153**　　　　　**Comment by:** Doug　　　　　Knisely

Comment **Type** Technical, Binding　　　　**Page** 19　　**Line** 4　　**Fig/Table#**　　**Section** 4.4.1

Most of this text is not MAC-text. Some should be moved to 4.1.7. Some should be changed. Some deleted.

Suggested Remedy

The 802.20 MAC layer~~protocols~~ shall provide mechanisms for the over-the-air delivery of user data that satisfies negotiated link-level ~~q~~Quality of ~~s~~Service (QOS). The 802.20 protocol standards shall define the interfaces and procedures that facilitate the configuration, negotiation, and enforcement of QoS policies, which operators may choose to implement.

Move the next 3 paragraphs to section 4.1.7:

"The 802.20 air interface shall support the IETF Differentiated Services (DS) Architecture to be compatible with other IP network standards including IP mobile standards. To this end, 802.20 shall support the standard DiffServ QoS model. Some of the forwarding behaviors that should be supported by 802.20 include: Expedited Forwarding (EF), Assured Forwarding (AF), and Best Effort (BE) DS per Hop Behaviors (PHBs) as defined by the RFC 2597 and RFC 2598. 802.20 shall also support configuration of the PHBs by a DS API that shall be based on a subset of the information model defined in RFC 3289.

Service and QoS Mapping

Proposed Resolution　　　　**Recommendation:** **Rejected**　　　　**Recommendation by** Joanne Wilson

see reply in record #237 to comment #68

Reason for Recommendation

see reply in record #237 to comment #68

Resolution of Group　　　　**Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 200   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

"802.20...mechanisms...)" not clear

Suggested Remedy

Specify what mechanisms are being referred to in this sentence.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

see reply in record #237 to comment #68

Reason for Recommendation

see reply in record #237 to comment #68

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 201   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 19   **Line** 9   **Fig/Table#**   **Section** 4.4.1

"...other IP network standards...." not complete

Suggested Remedy

Provide the references to other IP network standards and IP mobile standards.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

There appears to be a mis-reading of the text because it is clear that those references are not needed. The text says that the 802.20 AI standard shall "support the IETF Differentiated Services (DS) Architecture," which would result in being compatible with other IP network and IP mobile standards.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 202   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 19   **Line** 16   **Fig/Table#**   **Section** 4.4.1

"The classes of service..." Is not clear.

Suggested Remedy

Replace with " The 802.20 standard shall specify all the parameters needed to address diffferent classes of service and various QoS parameters."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

Replace with , "The 802.20 standard shall define a common set of parameters to address all classes of service and the QoS parameters for all services. "

Reason for Recommendation

editorial improvement that does not change the meaning of the original text.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 240   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 19   **Line** 8   **Fig/Table#**   **Section** 4.4.1

This paragraph goes into great detail on what IETF RFCs to use in equipment. This can vary depending on the customer's requirements, services offered, etc. We recommend deletion of the paragraph, or removal of requirements language to show intent with informative text.

Suggested Remedy

Delete the Paragraph or make informative.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The current text explains what needs to be supported on the air interface in order to support QoS. I would propose that the text should be made normative, instead of deleting it.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 241   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 16   **Fig/Table#**   **Section** 4.4.1

The word "may" has no special meaning in a requirements document (unlike a standard), and it appears that definition of parameters and ranges is underway in the other QoS sections.

Suggested Remedy

Change to read: ...services are translated into a common set of parameters and ranges.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

See reply in record #243 to comment #202

Reason for Recommendation

See reply in record #243 to comment #202

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 242   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 17   **Fig/Table#**   **Section** 4.4.1

This seems to place a requirement on the network and not the air interface PHY or MAC.

Suggested Remedy

Remove sentence starting with "A Qos based IP network..."

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

The text is both informative and useful.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **68**   **Comment by:** Dan   Gal

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

inappropriate text "802.20 protocols..."

Suggested Remedy

change to:
"The 802.20 MAC design shall specify mechanisms ..." etc.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

802.20 defines PHY/MAC only. QoS is an end-to-end issue to guarantee delay/jitter/bw for different services. QoS
Definitions/Requirements for for higher layer is out of scope

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **200**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 19   **Line** 4   **Fig/Table#**   **Section** 4.4.1

"802.20...mechanisms...)" not clear

Suggested Remedy

Specify what mechanisms are being referred to in this sentence.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **201**   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 19   **Line** 9   **Fig/Table#**   **Section** 4.4.1

"...other IP network standards...." not complete

Suggested Remedy

Provide the references to other IP network standards and IP mobile standards.

Proposed Resolution **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **240**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 19   **Line** 8   **Fig/Table#**   **Section** 4.4.1

This paragraph goes into great detail on what IETF RFCs to use in equipment. This can vary depending on the customer's requirements, services offered, etc. We recommend deletion of the paragraph, or removal of requirements language to show intent with informative text.

Suggested Remedy

Delete the Paragraph or make informative.

Proposed Resolution **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **242**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 19   **Line** 17   **Fig/Table#**   **Section** 4.4.1

This seems to place a requirement on the network and not the air interface PHY or MAC.

Suggested Remedy

Remove sentence starting with "A Qos based IP network..."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **154**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 19   **Line** 21   **Fig/Table#**   **Section** 4.5

This should be a normative requirement.

Suggested Remedy

The system shall~~must~~ support both IPv4 and IPv6.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **243**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 19   **Line** 21   **Fig/Table#**   **Section** 4.5

The word "must" has no meaning in a requirements document.   We also would like some clarification regarding the support for IPv4 and IPv6 to specify that there is no requirement for simultaneous support.

Suggested Remedy

Change to read: The system should support IPv4, IPv6, or both.

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **154**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 19   **Line** 21   **Fig/Table#**   **Section** 4.5

This should be a normative requirement.

Suggested Remedy

The system shall~~must~~ support both IPv4 and IPv6.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

The 802.20 standard ~~system shall~~must support both IPv4 and IPv6.

Reason for Recommendation

can not establish requirements on the implementation, only on the standard.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **243** **Comment by:** Ayman, Arak, Jim Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding **Page** 19 **Line** 21 **Fig/Table#** **Section** 4.5

The word "must" has no meaning in a requirements document. We also would like some clarification regarding the support for IPv4 and IPv6 to specify that there is no requirement for simultaneous support.

Suggested Remedy

Change to read: The system should support IPv4, IPv6, or both.

Proposed Resolution **Recommendation:** **Accepted-Modified** **Recommendation by** Joanne Wilson

see reply in record #247 to comment #154

Reason for Recommendation

see reply in record #247 to comment #154

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   204   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 26   **Fig/Table#**   **Section** 4.5.1

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by**

Same as a QC comment on the topic.   A possible definition is based on CDMA as follows: "Soft Handoff: A handoff occurring while the mobile station in transmitting and receiving on a Traffic Channel. This handoff is characterized by commencing communications with a new base station on the same frequency before terminating communications with the old base station." "Hard Handoff: A handoff characterized by a temporary disconnection of the Traffic Channel. Hard handoffs occur when the mobile station is transferred between disjoint "Active Sets", the frequency assignment changes, or the mobile station is directed from the Traffic Channel to another wireless system."

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   203   **Comment by:**   Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 19   **Line** 23   **Fig/Table#**   **Section** 4.5.1

"continuous" is not the right word

Suggested Remedy

Replace it with "contiguous"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

"contiguous" is definitley not the right word in this context.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 204   **Comment by:** Eshwar   Pittampalli

Comment **Type** Technical, Binding   **Page** 19   **Line** 26   **Fig/Table#**   **Section** 4.5.1

"soft or hard handoffs.." not clear

Suggested Remedy

Define "soft handoff" and "hard handoff"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

No proposal provided

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 244   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 19   **Line** 24   **Fig/Table#**   **Section** 4.5.1

This requirement as written places "may" requirements on the mobile station's movement! Recommended sentence places requirements on the AI. IP subnet mobility is at the network layer, hence is considered optional from an AI PHY and MAC perspective.

Suggested Remedy

Change the sentence starting on this line to state: Handoff techniques are required to support mobility between cells, systems, frequencies, and optionally between IP subnets.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **245** **Comment by:** Ayman, Arak, Jim Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding **Page** 19 **Line** 26 **Fig/Table#** **Section** 4.5.1

The "definition" of soft handoff given here is incorrect. Soft HO is a HO with the MS transmitting simultaneously to two BS on the RL, while two BS transmit simultaneously to the MS. Generic make before break handoff is NOT soft handoff. See IS-95 or cdma2000 for a formal definition.

Suggested Remedy
Delete sentence.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **204** **Comment by:** Eshwar Pittampalli

Comment **Type** Technical, Binding **Page** 19 **Line** 26 **Fig/Table#** **Section** 4.5.1
"soft or hard handoffs.." not clear

Suggested Remedy
Define "soft handoff" and "hard handoff"

Proposed Resolution **Recommendation:** **Rejected** **Recommendation by** Joanne Wlson
maintain current text

Reason for Recommendation
The current text states that, "handoffs can be classified as either soft or hard handoffs, depending on whether there is a momentary service disruption or not." This text is informative and sufficient because there are no further requirements in this document related to how such are carried out.

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **203**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 19   **Line** 23   **Fig/Table#**   **Section** 4.5.1

"continuous" is not the right word

Suggested Remedy

Replace it with "contiguous"

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Joanne Wilson

Reason for Recommendation

"continuous" is the correct word. This has to do with maintaining continous service (i.e. no dropped connections) as opposed to contigous coverage.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **244**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 19   **Line** 24   **Fig/Table#**   **Section** 4.5.1

This requirement as written places "may" requirements on the mobile station's movement! Recommended sentence places requirements on the AI. IP subnet mobility is at the network layer, hence is considered optional from an AI PHY and MAC perspective.

Suggested Remedy

Change the sentence starting on this line to state: Handoff techniques are required to support mobility between cells, systems, frequencies, and optionally between IP subnets.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

The 802.20 AI shall provide handoff methods ~~are required in MBWA systems~~ to facilitate providing continuous service for a population of moving Mobile Stations. The handoff methods shall enable mobile stations ~~may~~ to move connectivity ~~between~~ across cells, ~~between~~ across systems, ~~between~~ across frequencies, and at the higher layer ~~between~~ across IP Subnets. At the lowest layers, handoffs can be classified as either soft or hard handoffs, depending on whether there is a momentary service disruption or not.

Reason for Recommendation

Changed the text from being informative to normative and remove ambiguities.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 245   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 19   **Line** 26   **Fig/Table#**   **Section** 4.5.1

The "definition" of soft handoff given here is incorrect. Soft HO is a HO with the MS transmitting simultaneously to two BS on the RL, while two BS transmit simultaneously to the MS. Generic make before break handoff is NOT soft handoff. See IS-95 or cdma2000 for a formal definition.

Suggested Remedy
Delete sentence.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson

change "soft" to "make before break" and
change "hard" to "break before make"

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 203   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 19   **Line** 23   **Fig/Table#**   **Section** 4.5.1

"continuous" is not the right word

Suggested Remedy
Replace it with "contiguous"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **204**   **Comment by:** Eshwar   Pittampalli

Comment   **Type** Technical, Binding   **Page** 19   **Line** 26   **Fig/Table#**   **Section** 4.5.1
"soft or hard handoffs.." not clear

Suggested Remedy
Define "soft handoff" and "hard handoff"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **245**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 19   **Line** 26   **Fig/Table#**   **Section** 4.5.1

The "definition" of soft handoff given here is incorrect. Soft HO is a HO with the MS transmitting simultaneously to two BS on the RL, while two BS transmit simultaneously to the MS. Generic make before break handoff is NOT soft handoff. See IS-95 or cdma2000 for a formal definition.

Suggested Remedy
Delete sentence.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Lalit Kotecha
Soft handoff is not defined in this section. If comment suggests to define soft handoff needs to be done. It is not clear which sentnce to delete.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 247   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 19   **Line** 30   **Fig/Table#**   **Section** 4.5.1.1

Since there is a requirement for both IPv4 and IPv6, the Mobile IP support should cite both MobileIPv4 and MobileIPv6.

Suggested Remedy

Change to read: "MobileIPv4, MobileIPv6, or Simple IP." Remove the fragment starting with "for the preservation..."

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 248   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 30   **Fig/Table#**   **Section** 4.5.1.1

This term Simple IP is not well defined in this document and was developed in TIA TR45 and 3GPP2.

Suggested Remedy

Add a definition for "Simple IP"

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **249**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 32   **Fig/Table#**   **Section** 4.5.1.1

This sentence is not relevant to handoff, but rather to NAT (Network Address Translation) techniques. These are implemented at higher layers than the 802.20 air interface will address.

Suggested Remedy
Delete this sentence.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **247**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 19   **Line** 30   **Fig/Table#**   **Section** 4.5.1.1

Since there is a requirement for both IPv4 and IPv6, the Mobile IP support should cite both MobileIPv4 and MobileIPv6.

Suggested Remedy
Change to read: "MobileIPv4, MobileIPv6, or Simple IP." Remove the fragment starting with "for the preservation..."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

not necessary to remove fragment starting with "for the preservation..." as it is informative.

Reason for Recommendation
improved clarity

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   248   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 30   **Fig/Table#**   **Section** 4.5.1.1

This term Simple IP is not well defined in this document and was developed in TIA TR45 and 3GPP2.

Suggested Remedy

Add a definition for "Simple IP"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Joanne Wilson

Add definition to Appendix A - Definition of Terms and Concepts

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   249   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 32   **Fig/Table#**   **Section** 4.5.1.1

This sentence is not relevant to handoff, but rather to NAT (Network Address Translation) techniques. These are implemented at higher layers than the 802.20 air interface will address.

Suggested Remedy

Delete this sentence.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

agree that this is not related to handoffs

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   248   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 30   **Fig/Table#**   **Section** 4.5.1.1

This term Simple IP is not well defined in this document and was developed in TIA TR45 and 3GPP2.

Suggested Remedy

Add a definition for "Simple IP"

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   249   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 32   **Fig/Table#**   **Section** 4.5.1.1

This sentence is not relevant to handoff, but rather to NAT (Network Address Translation) techniques. These are implemented at higher layers than the 802.20 air interface will address.

Suggested Remedy

Delete this sentence.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Lalit Kotecha

Delete Following Sentence

"Multiple IP addresses behind one terminal may also be supported."

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 9   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by**   Naguib, Sutivong, Tomicik
Same as comment 273 - Reject comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 19   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by**   Naguib, Sutivong, Tomcik
Same as comment 273 - Reject comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   83   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 273 - Reject comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   88   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 21   **Line** 9   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomick
Same as comment 273 - Reject comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **96**   **Comment by:**

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik
See suggested remedy for comment 250

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **158**   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line**   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Similar to comment 273 - Reject comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **284**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naquib, Sutivong, Tomick
Same as comment 273 - Reject comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **9**   **Comment by:**

Comment **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee
Keep Option 2.

Reason for Recommendation
To be consistent with the architecture of IEEE 802 standards, and to allow better flexibility in service variations.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **158**   **Comment by:**

Comment   **Type**   Technical, Binding   **Page** 20   **Line**   **Fig/Table#**   **Section** 4.5.2

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Anna Tee

Keep option 2

Reason for Recommendation

To be consistent with the architecture of IEEE 802 standards, and to allow better flexibility in service variations.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **9**   **Comment by:** Todd   Chauvin

Comment   **Type**   Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy

Remove Section

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Making it optional would be acceptable

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 19   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy

Remove Section

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Duplicate

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 83   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy

Remove Section

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

This is a duplicate comment see reply to original comment.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 88   **Comment by:** Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 21   **Line** 9   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy

Remove Section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

See reply comment to initial comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 158   **Comment by:** Vincent   Park

Comment   **Type** Technical, Binding   **Page** 20   **Line**   **Fig/Table#**   **Section** 4.5.2

Requirements with regard to 802.1Q are detailed in the 802 P&P "5 criteria", the 802.20 "5 criteria", and the 802.20 PAR. If needed the relevant sections of those documents should simply be referenced, to avoid introduction of any ambiguity regarding the requirement.

Suggested Remedy

Option 1: Preferred. The 802.1Q section should be dropped.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **250** **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

We support Option 1, removing this section. It does not seem relevant to the air interface requirements.

Suggested Remedy
Remove Section.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **273** **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Delete Section.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

Reason for Recommendation
This is a duplicate see initial reply comment

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **9**   **Comment by:** Todd   Chauvin

Comment **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
agree.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **19**   **Comment by:** John   Chen

Comment **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **83** **Comment by:** Marc Goldburg

Comment **Type** Technical, Binding **Page** 19 **Line** 34 **Fig/Table#** **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **88** **Comment by:** Kazuhiro Murakami

Comment **Type** Technical, Binding **Page** 21 **Line** 9 **Fig/Table#** **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **96**   **Comment by:** Mark   Klerer

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Two options are specified. The objectives specified can be satisfied in a number of ways and no single mechanism should be mandatory. I, therefore, support either option 1 or option 2 modified as below.

Suggested Remedy

Delete or use the following text:

The system should support a mechanism that allows the managment of backbone traffic and/or the distinguishing of traffic for wholesale partners in a wholesale environment. One that mechanism that is available at layer 2 is 802.1Q tagging.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

prefer option 1, which is to delete the section. The proposed replacement text for option 2 is also acceptable.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **158**   **Comment by:** Vincent   Park

Comment   **Type** Technical, Binding   **Page** 20   **Line**   **Fig/Table#**   **Section** 4.5.2

Requirements with regard to 802.1Q are detailed in the 802 P&P "5 criteria", the 802.20 "5 criteria", and the 802.20 PAR. If needed the relevant sections of those documents should simply be referenced, to avoid introduction of any ambiguity regarding the requirement.

Suggested Remedy

Option 1: Preferred. The 802.1Q section should be dropped.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **250**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Non-binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

We support Option 1, removing this section. It does not seem relevant to the air interface requirements.

Suggested Remedy

Remove Section.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **273**   **Comment by:** Joanne   Wilson

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy

Delete Section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 284   **Comment by:** Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach.
This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without
specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames
are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 19   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 19   **Line** 34   **Fig/Table#**   **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach.
This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without
specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames
are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **83** **Comment by:** Marc Goldburg

Comment **Type** Technical, Binding **Page** 19 **Line** 34 **Fig/Table#** **Section** 4.5.2

Advocating a specific mechanism for separation of traffic does not allow 802.20 to maintain a network agnostic approach. This can be accomplished in many ways allowing use of 802.1q tagging, PPP or MPLS across the air interface without specifically mandating any particular technology at layer 2 Eg. 802.16 defines a convergence sublayer when VLAN frames are to be carried over the air interface without mandating 802.1 q at layer 2

Suggested Remedy
Remove Section

Proposed Resolution **Recommendation:** **Superceded** **Recommendation by** Lalit Kotecha
Comment #9

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **8** **Comment by:**

Comment **Type** Technical, Binding **Page** 20 **Line** 7 **Fig/Table#** **Section** 4.5.3

Suggested Remedy

Proposed Resolution **Recommendation:** **Rejected-Duplicate** **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 155 - Reject Comment

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 18   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 155 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 82   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 155 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 89   **Comment by:**

Comment **Type** Technical, Binding   **Page** 21   **Line** 17   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 155 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 155   **Comment by:**

Comment **Type** Technical, Binding   **Page** 20   **Line** 8   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomick
 This is a terminal feature and has nothing to do with MAC/phy specs. Recommend to remove the section

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 252   **Comment by:**

Comment **Type** Technical, Binding   **Page** 20   **Line** 8   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:**   **Recommendation by**

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 274   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 155 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 283   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 155 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 8   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 18   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **82**   **Comment by:** Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **89**   **Comment by:** Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 21   **Line** 17   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 155   **Comment by:** Doug   Knisely

Comment   **Type** Technical, Binding   **Page** 20   **Line** 8   **Fig/Table#**   **Section** 4.5.3

Not sure how this is a MAC/PHY requirements. Software upgrades should be an upper layer issue. Suggest simpler wording.

Suggested Remedy

~~CPE software upgrade "push" - an operator should have the ability to "push" a software upgrade to CPE that are currently connected to the network. The packets that make up the software image should be given a very high priority and should be coded heavily such that they have a very high chance of arriving error free at the CPE. The CPE should be capable of holding 2 software loads (the existing one and a new one) such that an operator can ensure that the "new" software load has arrived safely at the CPE before deciding to switch from the "old" software load to the "new" software load.~~ The 802.20 AI shall not preclude over-the-air download of firmware and software updates for the mobile terminal. The 802.20 AI shall support network-based bootstrap procedures, e.g., bootp.

Proposed Resolution   **Recommendation:** **Rejected**   **Recommendation by** Klerer

Reason for Recommendation

Agree that this is not a MAC/PHY issue and should, therefore, not be included.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 252   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 20   **Line** 8   **Fig/Table#**   **Section** 4.5.3

This section seems to be a discussion Over the Air Service Provisioning (OTASP). This function, while important to equipment design and implementaiton is not a part of the air interface itself. Hence there should be no requirements on the AI.

Suggested Remedy

Make the section "informative" to show intent or remove it.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 274   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Delete section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 283   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 8   **Comment by:** Todd   Chauvin

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation
agree.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 18   **Comment by:** John   Chen

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   82   **Comment by:**   Marc   Goldburg

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   89   **Comment by:**   Kazuhiro   Murakami

Comment   **Type** Technical, Binding   **Page** 21   **Line** 17   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **155**   **Comment by:** Doug   Knisely

Comment **Type** Technical, Binding   **Page** 20   **Line** 8   **Fig/Table#**   **Section** 4.5.3

Not sure how this is a MAC/PHY requirements. Software upgrades should be an upper layer issue. Suggest simpler wording.

Suggested Remedy

~~CPE software upgrade "push" - an operator should have the ability to "push" a software upgrade to CPE that are currently connected to the network. The packets that make up the software image should be given a very high priority and should be coded heavily such that they have a very high chance of arriving error free at the CPE. The CPE should be capable of holding 2 software loads (the existing one and a new one) such that an operator can ensure that the "new" software load has arrived safely at the CPE before deciding to switch from the "old" software load to the "new" software load.~~ The 802.20 AI shall not preclude over-the-air download of firmware and software updates for the mobile terminal. The 802.20 AI shall support network-based bootstrap procedures, e.g., bootp.

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Joanne Wilson, Mike Youssefmir

Delete the section entirely, or only maintain the sentence, "The 802.20 AI shall not preclude over-the-air download of firmware and software updates for the mobile terminal. "

Reason for Recommendation

This is a good alternative, though my preference is to delete the section.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 252 **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 20   **Line** 8   **Fig/Table#**   **Section** 4.5.3

This section seems to be a discussion Over the Air Service Provisioning (OTASP). This function, while important to equipment design and implementaiton is not a part of the air interface itself. Hence there should be no requirements on the AI.

Suggested Remedy
Make the section "informative" to show intent or remove it.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

preference is to delete the section.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 274   **Comment by:**   Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Delete section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   283   **Comment by:**   Michael   Youssefmir

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment #   18   **Comment by:**   John   Chen

Comment   **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **82**   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Lalit Kotecha
Comment #8

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **283**   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 20   **Line** 7   **Fig/Table#**   **Section** 4.5.3

This is a feature of the user terminal and backend infrastructure and is irrelevant at the MAC/PHY layer. In addition, the need for high priority should be captured within QOS framework

Suggested Remedy
Remove section

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 10   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 97 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 20   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 97 - Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 84   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 97- Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 90   **Comment by:**

Comment   **Type** Technical, Binding   **Page** 21   **Line** 25   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
dup of 157

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 157   **Comment by:**

Comment **Type** Technical, Binding   **Page** 20   **Line**   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Naguib, Sutivong, Tomcik

change "all the hooks" to "specific features"

Reason for Recommendation
More specific language.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 275   **Comment by:**

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik

Same as comment 97- Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 285   **Comment by:**

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

Suggested Remedy

Proposed Resolution   **Recommendation:** **Rejected-Duplicate**   **Recommendation by** Naguib, Sutivong, Tomcik
Same as comment 97- Reject Comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 10   **Comment by:** Todd   Chauvin

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4
All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 20   **Comment by:** John   Chen

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 84   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Accepted-Modified**   **Recommendation by** Klerer

See reply to initial comment

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 90 **Comment by:** Kazuhiro Murakami

Comment Type Technical, Binding **Page** 21 **Line** 25 **Fig/Table#** **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs.

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Klerer

See reply to initial comment

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 157 **Comment by:** Vincent Park

Comment Type Technical, Binding **Page** 20 **Line** **Fig/Table#** **Section** 4.5.4

The parameters and metrics cannot be properly defined before the air interface is finalized.

Suggested Remedy

The AI shall provide all the hooks to enable the provisioning and collection of metrics, so that the network operator can effectively control, monitor, and tune the performance of the 802.20 air interface. Provisionable paramenters, performance metrics, and other OA&M values shall be made avialable through a standards compliant MIB.

Proposed Resolution **Recommendation:** **Accepted** **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 253 **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

OA&M requirements are equipment requirements, not Air Interface Requirements. This section should be informative to show the intent of the service providers attending 802.20. If there are requirements on the AI or on the MIBs these could be stated.

Suggested Remedy

Remove "must" or "will" - to make this an informative section.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 275   **Comment by:** Joanne   Wilson

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 285   **Comment by:** Michael   Youssefmir

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Superceded**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 10   **Comment by:** Todd   Chauvin

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

agree. The current text is more detailed than necessary.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 20 **Comment by:** John   Chen

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 84 **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **90**   **Comment by:** Kazuhiro   Murakami

Comment **Type** Technical, Binding   **Page** 21   **Line** 25   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **97**   **Comment by:** Mark   Klerer

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

This section seems to have 3 options. However Option 3 does not seem to be a standalone section.

I prefer Option 2 as a starting point. But extensive discussion is necessary to decide on the exact set of parameters and on data aggregation and reporting intervals and techniques.

Suggested Remedy

Discuss the section with a technical perspective and develop consensus on the necessary and sufficient data, its collection frequency, data aggregation and reporting frequency.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **157**   **Comment by:** Vincent   Park

Comment **Type** Technical, Binding   **Page** 20   **Line**   **Fig/Table#**   **Section** 4.5.4

The parameters and metrics cannot be properly defined before the air interface is finalized.

Suggested Remedy

The AI shall provide all the hooks to enable the provisioning and collection of metrics, so that the network operator can effectively control, monitor, and tune the performance of the 802.20 air interface. Provisionable paramenters, performance metrics, and other OA&M values shall be made avialable through a standards compliant MIB.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **253**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Non-binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

OA&M requirements are equipment requirements, not Air Interface Requirements. This section should be informative to show the intent of the service providers attending 802.20. If there are requirements on the AI or on the MIBs these could be stated.

Suggested Remedy

Remove "must" or "will" - to make this an informative section.

Proposed Resolution   **Recommendation:** **Accepted-Duplicate**   **Recommendation by** Joanne Wilson

see reply in record #278 to comment #97

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **275** **Comment by:** Joanne Wilson

Comment **Type** Technical, Binding **Page** 20 **Line** 15 **Fig/Table#** **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson

See reply in record #279 to comment #157

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **285** **Comment by:** Michael Youssefmir

Comment **Type** Technical, Binding **Page** 20 **Line** 15 **Fig/Table#** **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution **Recommendation:** **Accepted-Duplicate** **Recommendation by** Joanne Wilson

See reply in record #279 to comment #157

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 20   **Comment by:** John   Chen

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation: Superceded**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 84   **Comment by:** Marc   Goldburg

Comment **Type** Technical, Binding   **Page** 20   **Line** 15   **Fig/Table#**   **Section** 4.5.4

All options are overly detailed with respect to specific statistics that need to be accumulated.

Suggested Remedy

Replace requirement with "The air interface shall support the collection of metrics so that a network operator can effectively monitor the performance of the 802.20 air interfaces through various MIBs."

Proposed Resolution   **Recommendation: Superceded**   **Recommendation by** Lalit Kotecha

Comment #10

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **254**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 22   **Line** 23   **Fig/Table#**   **Section** 4.7

How is the requirement for "fast and dynamic" transitions between states measured? This sentence should be clarified, since it is confusing to the reader.

Suggested Remedy

Clarify this requirement or make the sentence an informative lead-in to the paragraph. It could be done as follows: "The AI is intended to support multiple protocol states with dynamic transitions between states."

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **255**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 22   **Line** 26   **Fig/Table#**   **Section** 4.7

Is the intent of the sentence to promote power management "hooks" in the air interface? The requirement should not mandate any particular technique to achieve this.

Suggested Remedy

Change to read: ...shall provide power conservation features to improve battery life in idle terminals.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 254   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 22   **Line** 23   **Fig/Table#**   **Section** 4.7

How is the requirement for "fast and dynamic" transitions between states measured? This sentence should be clarified, since it is confusing to the reader.

Suggested Remedy

Clarify this requirement or make the sentence an informative lead-in to the paragraph. It could be done as follows: "The AI is intended to support multiple protocol states with dynamic transitions between states."

Proposed Resolution   **Recommendation: Accepted-Modified**   **Recommendation by** Joanne Wilson

The AI shall support multiple protocol states with fast and dynamic transitions among them. It ~~will~~ shall provide efficient signaling schemes for allocating and de-allocating resources, which may include logical in-band and/or out-of-band signaling, with respect to resources allocated for end-user data. The AI shall support paging polling schemes for idle terminals to promote power conservation for MTs.

Reason for Recommendation

editorial improvement

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 255   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 22   **Line** 26   **Fig/Table#**   **Section** 4.7

Is the intent of the sentence to promote power management "hooks" in the air interface? The requirement should not mandate any particular technique to achieve this.

Suggested Remedy

Change to read: ...shall provide power conservation features to improve battery life in idle terminals.

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Joanne Wilson

Reason for Recommendation

this is a good change from a design requirement to the more appropriate functional requirement.

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **256**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment **Type** Technical, Binding   **Page** 22   **Line** 29   **Fig/Table#**   **Section** 4.8

The requirements are vague and unmeasurable. We recommend deletion. There is also a fragment that should be removed, starting on line 9.

Suggested Remedy

Delete the requirement or make it more quantitative than it is.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Joanne Wilson

prefer to delete the section.

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 257   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 23   **Line** 5   **Fig/Table#**   **Section** 5

This contribution is not referenced anywhere in the requirements, and is not approved by the working group.

Suggested Remedy

Delete this reference.

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # 258   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 23   **Line** 9   **Fig/Table#**   **Section** 5

This contribution is not referenced anywhere in the requirements, and is not approved by the working group.

Suggested Remedy

Delete this reference.

Proposed Resolution   **Recommendation: Accepted**   **Recommendation by** Klerer

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **257**   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type**   Technical, Binding   **Page** 23   **Line** 5   **Fig/Table#**   **Section** 5

This contribution is not referenced anywhere in the requirements, and is not approved by the working group.

Suggested Remedy

Delete this reference.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **258**   **Comment by:**   Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type**   Technical, Binding   **Page** 23   **Line** 9   **Fig/Table#**   **Section** 5

This contribution is not referenced anywhere in the requirements, and is not approved by the working group.

Suggested Remedy

Delete this reference.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by**   Joanne Wilson

Reason for Recommendation

Terminology already incorporated into Appendix A

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **257**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 23   **Line** 5   **Fig/Table#**   **Section** 5

This contribution is not referenced anywhere in the requirements, and is not approved by the working group.

Suggested Remedy

Delete this reference.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Comment # **258**   **Comment by:** Ayman, Arak, Jim   Naguib, Sutivong, Tomcik

Comment   **Type** Technical, Binding   **Page** 23   **Line** 9   **Fig/Table#**   **Section** 5

This contribution is not referenced anywhere in the requirements, and is not approved by the working group.

Suggested Remedy

Delete this reference.

Proposed Resolution   **Recommendation:** **Accepted**   **Recommendation by** Lalit Kotecha

Reason for Recommendation

Resolution of Group   **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items