

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	802.16.3 Functional Requirements Comments Resolved at Session #9	
Date Submitted	2000/09/14	
Source(s)	Brian Petry 3Com 12230 World Trade Dr. San Diego, CA 92128	Voice: 858-674-8533 mailto:brian_petry@3com.com
Re:	This document is a report of comments resolved against 802.16.3-00/02r3 (Functional Requirements for the 802.16.3 Air Interface Standard). These comments were disposed of at Session #9. Please refer to the Call for Comments (IEEE 802.16.3-00/11r0).	
Abstract	All comments input to Session #9 were resolved. This document lists all each comment and its resolution. The report is divided into two sections: Pages 2-9: Sorted by page number and then line number Pages 10-17: Sorted by submitter name, then page number, then line number	
Purpose	Output from Session #9. The task group can use this report to verify how comments were resolved and verify that the comments were integrated correctly in the document.	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
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802.16.3 Functional Requirements Comments for Session #9

Brian Petry

3Com

Page/Line: 0 / 0	Number 0	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Technical
Description: Empty			Reason: To correct use of undefined messages		Resolution rejected
Notes: Rejected because no specific change request given.					
Page/Line: 1 / 43	Number 1	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: Sentence starting in this line should read: So, "functional requirements" describes the functions of typical systems...			Reason: Clarifies meaning		Resolution accepted
Notes:					
Page/Line: 1 / 46	Number 2	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: requirements in broad terms: what the required functions are but not how			Reason: Clarifies meaning		Resolution accepted
Notes:					
Page/Line: 2 / 2	Number 3	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Technical
Description: functions and procedures of the PHY and MAC protocols.			Reason: improve sentence		Resolution accepted-modified
Notes:					
Page/Line: 2 / 5	Number 4	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: line should read support. These services have...			Reason: not all service capabilities are transported		Resolution accepted
Notes:					
Page/Line: 2 / 8	Number 5	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: Delete the word "neatly"			Reason: undefined and unnecessary term		Resolution accepted
Notes:					
Page/Line: 2 / 26	Number 6	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Technical
Description: Sentence should read, "Other medium access types are ..."			Reason: Clarifies meaning		Resolution accepted-modified
Notes:					
Page/Line: 2 / 28	Number 7	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: Replace the word "technologies" with either "services" or functionalities,			Reason: preferable terms		Resolution accepted
Notes: Editor chose the first option					
Page/Line: 3 / 23	Number 8	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Technical
Description: End sentence after "forth" and delete the rest of the sentence			Reason: To correct use of undefined messages		Resolution accepted-modified
Notes: Perhaps a citation of the "five criteria" document should added.					
Page/Line: 3 / 32	Number 9	Date: 9/9/00	Name: Trinkwon	David	Type: Editorial
Description: Move item up one line and delete editorial comment			Reason: Implementation of previously approved editorial change		Resolution accepted
Notes:					
Page/Line: 4 / 3	Number 10	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Technical
Description: Sentence should read; 802.16.3-based systems serve fixed location or relocatable customer terminals, but not mobile terminals.			Reason: To remove confusion		Resolution accepted-modified
Notes: Rest of sentence should be deleted					
Page/Line: 4 / 8	Number 11	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: The sentence starting on this line should read "The model identifies the main features..."			Reason: main features should not be left out of the model. So remove words some of Moreover it does not describe but just identify		Resolution accepted

Notes:

Page/Line: 4 /14 **Number** 12 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: replace the word "transported" with "supported" **Reason:** Clearer description **Resolution** accepted

Notes:

Page/Line: 4 /16 **Number** 13 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: The sentence starting on this line should be deleted **Reason:** Its meaning is not clear. Perhaps because it states a partial truth that is obvious. LOS also may be possible if the span distance is appropriate **Resolution** rejected

Notes:

Page/Line: 4 /19 **Number** 14 **Date:** 9/9/00 **Name:** van Waes Nico **Type:** Technical
Description: Replace figure 2-1 with provided figure and replace "Figure 2-1 depicts a typical 802.16.3 system."
 (Note: figure will be submitted directly to editor, as the reflector rejects attachments)
 with:
 Figure 2-1 shows an example deployment configuration including the optional use of a repeater **Reason:** More comprehensive example of system configuration. (figure reworked from TR) **Resolution** accepted-modified

Notes:

Page/Line: 4 /23 **Number** 15 **Date:** 9/9/00 **Name:** van Waes Nico **Type:** Technical
Description: Add after line 23:
 However, cell-sizes as noted in Table 1 are envisioned as typical and SHOULD generally be supportable by an 802.16.3 system with at least 95% cell-coverage. **Reason:** Splitting the desired cell-sizes into traditional environments provides a better understanding of what TG3 envisions and promotes more thorough coverage modeling (especially of urban and suburban scenarios, which form the largest market-shares) than merely suggesting "up to 50 km". **Resolution** rejected

Notes:

Page/Line: 4 /23 **Number** 15 **Date:** 9/9/00 **Name:** van Waes Nico **Type:** Technical
Description: Add after line 23:
 However, cell-sizes as noted in Table 1 are envisioned as typical and SHOULD generally be supportable by an 802.16.3 system with at least 95% cell-coverage. **Reason:** Splitting the desired cell-sizes into traditional environments provides a better understanding of what TG3 envisions and promotes more thorough coverage modeling (especially of urban and suburban scenarios, which form the largest market-shares) than merely suggesting "up to 50 km". **Resolution** rejected

environment	LOS (km)	NLOS (km)
urban	7.5	2
suburban	10	2.5
rural	15	4

Table 1 Typical cell-sizes

Delete page 12, line 29 "* radio range (up to 50 km)"

Notes:

Page/Line: 5 /7 **Number** 16 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: The line should read To facilitate description, and 802.16.3 system consists... **Reason:** Removes confusing phrase **Resolution** accepted

Notes:

Page/Line: 5 /21 **Number** 17 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: The line should start Figure 2.2 **Reason:** The text refers to Figure 2.2 on the next page and not Fig 2.1 on this page **Resolution** accepted

Notes:

Page/Line: 6 /3 **Number** 18 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: The sentence should end with "...to support UNI and CNI requirements. **Reason:** more meaningful sentence **Resolution** accepted

Notes:

Page/Line: 6 /4 **Number** 19 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Insert the following text :
 For clarification, the performance characteristics of the 802.16.3 air interface SHALL apply at a hypothetical point within the SS and BS where the **Reason:** To avoid confusion, especially that delay and capacity parameters exclude voice **Resolution** rejected

Notes:

Page/Line: 6 /6 **Number** 20 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Figure 2-2... **Reason:** Correction **Resolution** accepted

Notes:

Page/Line: 6 /10 **Number** 21 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: The word "affect" is repeatedly used in this paragraph requires **Reason:** WCA Engineering Committee: Insertion of a technical definition of the word **Resolution** rejected

"affect" is required to assure a common interpretation. For example, if the PHY

Notes: Rejected because the comment did not specify a change to the document.

Page/Line: 6 / 11 **Number** 22 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Delete the sentence that starts on this line
Reason: WCA Engineering Committee: Sentence is dictating how the repeater function is to be implemented. TDD repeaters optimal implementation may require
Resolution: accepted

Notes:

Page/Line: 6 / 11 **Number** 23 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Deletion of Sentence starting on line 11
Reason: First the requirements document should not dictate how the repeater is to be
Resolution: rejected

Notes: Rejected because it was a duplicate of comment #23.

Page/Line: 6 / 13 **Number** 24 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Delete sentence starting on this line
Reason: WCA Engineering Committee: Too rigid a requirement at this time. Operations and Maintenance procedures required by network providers will likely require PHY
Resolution: accepted

Notes:

Page/Line: 6 / 15 **Number** 25 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Insert the following text :
Reason: Clarification of intent.
Resolution: rejected

Note : This does not preclude the use of other methods of providing repeater, relay or remote antenna capabilities using non 802.16.3 standard interfaces

Notes:

Page/Line: 6 / 19 **Number** 26 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Change "bandwidth" to "capacity" or "throughput"
Reason: Technical accuracy.
Resolution: accepted-modified

Notes: editor chose the first option

Page/Line: 6 / 30 **Number** 27 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: replace the word "meaning" with "resulting in"
Reason: To correct use of undefined messages
Resolution: accepted
 Improve meaning

Notes:

Page/Line: 7 / 42 **Number** 28 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Delete sentence starting on this line
Reason: Redundant sentence; improves the meaning w/o any loss
Resolution: rejected

Notes: Rejected because this section is under review by an ad-hoc group.

Page/Line: 8 / 15 **Number** 29 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Replace word Special with additional
Reason: To clarify meaning
Resolution: accepted

Notes:

Page/Line: 8 / 18 **Number** 30 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Replace the sentence that starts on this line with "The 802.16.3 protocols determine the interoperability of multiple vendors"
Reason: more appropriate wording
Resolution: accepted

Notes:

Page/Line: 9 / 3 **Number** 31 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: replace transport with support
Reason: Improves meaning
Resolution: accepted

Notes:

Page/Line: 9 / 8 **Number** 32 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Replace the sentence that starts on this line with Each of the protocols above the PHY and MAC support "convergence"
Reason: Improve wording
Resolution: accepted

Notes:

Page/Line: 9 / 17 **Number** 33 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Add a bullet: Other Convergence sub-Layers as may be required by
Reason: WCA Engineering Committee: To assure that the standard-based protocols
Resolution: accepted-modified

additional can be

Notes:

Page/Line: 9 /17 **Number** 34 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: **Reason:** **Resolution** accepted-duplicate
 Insert To identify flexibility for supporting higher layer requirements
 Other convergence sub-layers may be required by specific high layer requirements

Notes:

Page/Line: 9 /18 **Number** 35 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: **Reason:** **Resolution** accepted
 The sentence on this line should read The IEEE 802.16.3 PHY and MAC protocol For clarity

Notes:

Page/Line: 9 /24 **Number** 36 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: **Reason:** **Resolution** accepted-modified
 Change "bandwidth" to "capacity" Technical accuracy

Notes:

Page/Line: 10 /0 **Number** 37 **Date:** 9/9/00 **Name:** Ran Moshe **Type:** Technical
Description: **Reason:** **Resolution** accepted-modified
 section 5.2 lines 1,3 This reference design for the peak data rate should be at least 20Mbps.
 Change in section 5.2: 10 Mbps to 20 Mbps This design goal for PEAK performance is not too optimistic based on
 6 MHz channels and 4 bits/symbol. In any case this PEAK number should
 be

Notes:

Page/Line: 10 /16 **Number** 38 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: **Reason:** **Resolution** rejected
 Add sentence For clarity of objectives
 This should not preclude a service provider from offering best effort service performance

Notes: withdrawn

Page/Line: 10 /21 **Number** 39 **Date:** 9/9/00 **Name:** Goldhammer Marianna **Type:** Technical
Description: **Reason:** **Resolution** accepted-modified
 Insert new paragraph Introduce requirements to improve spectral efficiency.
 5.3 Spectral efficiency

The spectral efficiency is an important performance parameter of a wireless access system. The 802.16.3 system introduces specific aspects that shall be taken into consideration.

5.3.1 Cell size

The large cell radius, up to 50km, will produce a large propagation delay difference between near and far CPE units. This difference can be as large as 150us. The PHY and MAC protocol SHOULD provide

for far CPEs propagation delay compensation.

5.3.2 Multirate support

In order to preserve the same link budget, the wireless systems may use different modulation schemes for far and near CPEs. In this way the data rate to/from relatively near CPE can be higher, increasing the overall system capacity. The PHY and MAC protocols SHALL provide for multirate support.

5.3.4 Interference minimization

The inter-cell and intra-cell interference have a negative effect on system capacity. The burst transmission in the down-link minimizes the interference effects, as the necessity to lower the rates or to retransmit data packets. The PHY and MAC protocols SHALL support bursty transmission and SHALL NOT use the spectrum if there is no information to transmit.

5.3.5 Packetized voice traffic

The SoHo, Small business and multi-tenant units will support a number of simultaneously voice call. The voice and associated signaling are transmitted in small packets, that have an intrinsic overhead due to the associated MAC and PHY headers. In order to improve the spectral efficiency, the MAC and PHY protocol SHALL permit the concatenation

of the short packets, going to the same destination, into a single larger packet.

5.3.6 Support for VAD and IP header compression

The voice activity detection and silence suppression are widely used to reduce the number of the transmitted packets. The MAC protocols SHOULD permit to take advantage of the VAD benefits, while still

providing for the same level of QoS.

The IP header, with IP v.4, is as large as 40bytes and will be much more with IP v.6. The IP header compression standard permits to reduce this overhead to 5 bytes. The 802.16.3 MAC protocols SHOULD permit to take advantage of the IP header compression benefits, while still providing for the same level of QoS.

5.3.7 Requests for bandwidth and retransmissions

To minimize the overhead associated with the ARQ process and the

Notes:

- Page/Line:** 10 /23 **Number** 40 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Change "bandwidth" to "capacity" (multiple occurrences) **Reason:** Technical accuracy **Resolution** accepted
Notes:
- Page/Line:** 10 /32 **Number** 41 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Delete "better than" **Reason:** WCA Engineering Committee: Than standard should require better than required BER **Resolution** rejected
Notes: read carefully
- Page/Line:** 10 /32 **Number** 42 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Delete the words better than **Reason:** Clarity **Resolution** rejected
Notes: Duplicate of comment #41.
- Page/Line:** 11 /0 **Number** 43 **Date:** 9/9/00 **Name:** Ran Moshe **Type:** Technical
Description: section 5.5 line 3
Delete the sentence that begins with:
" with the following exception: the bit error rate ratio (BER) SHALL be 10E-6 (in accordance with...) or better."
Reason: It stated in section 3.2 that the system MUST directly transport variable length IP. So that section 5.5 must address packet error rate.
In addition it is necessary to define higher BER conditions, e.g., QEF, for the headers of the packets. **Resolution** rejected
Notes:
- Page/Line:** 11 /6 **Number** 44 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Add :
"It should be noted that although outages of a link can be minimized by appropriate location of antennas resulting in LOS links, this may not always
Reason: To clarify meaning **Resolution** rejected
Notes:
- Page/Line:** 11 /9 **Number** 45 **Date:** 9/9/00 **Name:** Ran Moshe **Type:** Technical
Description: Add a sentence as follows:
The 802.16.3 MAC and PHY protocols SHALL be optimized to reasonable interference environment under the previously mentioned [see sec 1.2] critical
Reason: This sentence clearly states some guideline following the sentence : In a multicell environment, intercell interference can not be neglected. **Resolution** rejected
Notes:
- Page/Line:** 11 /30 **Number** 46 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Change the first sentence of the paragraph so that it would become, "Delay and
Reason: WCA Engineering Committee: This paragraph is supposed to be about delay but it **Resolution** accepted
Notes:
- Page/Line:** 11 /34 **Number** 48 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Change sentence to read:
The end to end delay is a metric that depends on an entire application-specific network often encompassing all 7 layers of the OSI model
Reason: Clarity **Resolution** rejected
Notes: withdrawn
- Page/Line:** 11 /34 **Number** 47 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Change the first sentence to, "The end-to-end delay depends on an entire
Reason: WCA Engineering Committee: End-to-end delay is not a subjective metric. **Resolution** accepted
Notes:
- Page/Line:** 12 /11 **Number** 49 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Delete the sentence starting with "The standard SHALL support".
Reason: WCA Engineering Committee: The word "planning" is typically understood as "network planning" which is outside the scope of the standard. If another meaning is meant for the word "planning", then it needs to be stated **Resolution** rejected

clearly so
as not to be misleading.

Notes:

Page/Line: 12 /11 **Number** 50 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Delete sentence starting on this page as no standard can support careful planning
Reason: Meaningless sentence
Resolution: accepted

Notes: Duplicate of comment #49

Page/Line: 12 /14 **Number** 51 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Change the first sentence to "The delivered P-MP cell capacity varies depending
Reason: WCA Engineering Committee: Based on the definition on page 5, lines 10-12, each base station corresponds to one sector. On the other hand, each P-MP cell
Resolution: rejected

Notes:

Page/Line: 12 /14 **Number** 52 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Deletion
Paragraph starting on this line requires clarification. What does Sector Capacity measure? How can it be intended to be used/or misused
An example of its use is needed.
Reason: Paragraph's intent not clear so best constructive comment is to delete it as
Resolution: rejected

Notes:

Page/Line: 12 /16 **Number** 53 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: WCA Engineering Committee: An Insertion is needed to clarify the utility of the terms Sector Capacity, Modulation Factor, and Sector-Bandwidth Factor, with perhaps a numerical example that further clarifies the utility of such
Reason: Purpose of terminology unclear
Resolution: rejected

Notes: Rejected because comment did not specify a concise change to the document.

Page/Line: 12 /41 **Number** 54 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Deletion of the paragraph starting on this line
Reason: it states not any requirements
Resolution: accepted-modified

Notes:

Page/Line: 12 /41 **Number** 55 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Delete the paragraph starting on line 41.
Reason: WCA Engineering Committee: This paragraph is does not belong here. It states some facts, not functional requirements, neither does it provide basis for
Resolution: accepted-duplicate

Notes: Duplicate of comment #54

Page/Line: 13 /0 **Number** 56 **Date:** 9/9/00 **Name:** Ran Moshe **Type:** Technical
Description: section 6.1
Deletion of two sentences :
"Full duplex operation is used in FDD to maximize the spectral efficiency.
In TDD, spectral efficiency is maximized with means to avoid colocation
Reason: The argument cited in paragraph 6.1 is not within the WHAT part of functional requirements. The insertion is to make the requirements reasonable under the
Resolution: accepted-modified

problems and more complex interference scenarios."

Insertion of the following paragraph at the end of 6.1
" .. under the previously mentioned [see sec 1.2] critical parameters for serving the target markets."

Notes:

Page/Line: 13 /5 **Number** 57 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Insertion:
Definition of Spectral Efficiency is needed
To make the paragraph 6.1 meaningful
Reason: Key term undefined
Resolution: rejected

Notes: Rejected because the comment does not supply a definition. Also see comment #39, which strives to add text to address spectral efficiency.

Page/Line: 13 /9 **Number** 58 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Delete the words "in TDD deployment"
Reason: Both FDD and TDD have interference problems
Resolution: accepted-modified

Notes:

Page/Line: 15 /32 **Number** 59 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Add "802.16.3 protocols MUST comply with the above-mentioned standards and
Reason: WCA Engineering Committee: The section needs to take a position on compliance
Resolution: accepted-modified

Notes:

Page/Line: 15 /40 **Number** 67 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Insert to read **Reason:** Operational requirement to avoid truck rolls to investigate potentially faulty

...to shut down and reactivate a subscriber station...

...to shut down and reactivate a base station remotely.

Notes: Double check

Page/Line: 15 /41 **Number** 60 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Modify the last two sentences of the paragraph with the following. "The **Reason:** WCA Engineering Committee: **Resolution** accepted-modified

operator also MUST have the means to securely shut down a base station

1.. To provide consistency; MUST vs. SHALL as opposed to SHOULD. Automatic shut down is an important feature.
 2.. To require that the shut down must be done in a secure way so that only

Notes:

Page/Line: 15 /42 **Number** 61 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: line should read "down a remote base station securely. The 8702.16.3 protocol should also support a fail safe and reliable function that automatically shuts down..." **Reason:** To explicit state the security and reliability requirements of those functions **Resolution** rejected

Notes: Withdrawn

Page/Line: 16 /6 **Number** 62 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Change the sentence to "An operator MUST be able to account for time- and bandwidth-utilization and various service features for each subscriber service **Reason:** WCA Engineering Committee: QoS issues are still open and there are likely **Resolution** accepted-modified

Notes: Editor didn't understand the second part of the requested change.

Page/Line: 16 /7 **Number** 63 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Change line to read SHOULD be able to account for each service time- and bandwidth-used and service features and parameters(e.g., delay). Also recall from Section ??? **Reason:** MUST is Replaced by should as at this time the Accounting aspects of the **Resolution** rejected
 different services that are likely to be offered by service providers are not well understood(An access channel may offer a set of services to a customer), the group has as yet not defined QoS and Accounting subsystem

Notes: withdrawn

Page/Line: 16 /15 **Number** 64 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Insert after "key management" **Reason:** Implementation of previous discussion **Resolution** accepted

service suspend/resume, relocation, anti-cloning,

Notes:

Page/Line: 16 /17 **Number** 65 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Change the paragraph to "There are two levels of authentication for an 802.16.3 system. In the first level, a subscriber station MUST authenticate itself with the network every time it registers with the network. This authentication MUST **Reason:** WCA Engineering Committee: The term "network entry" is not clear enough. Also, using the term "unauthorized" is preferred over "enemy". The original text also implies that periodic authentication is required. This may not necessarily **Resolution** accepted-modified

Notes:

Page/Line: 16 /18 **Number** 66 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: Change 2nd and 3rd lines to read **Reason:** To clarify the intent by eliminating vague and meaningless terms **Resolution** rejected

Is when a subscriber station registers itself with the Base Station. This initial authentication MUST prevent "enemy"...

Notes: Withdrawn

Page/Line: 17 /1 **Number** 68 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Change the bullet to "Permission to request for a given service a specific **Reason:** WCA Engineering Committee: QoS profile is yet to be defined and there will be **Resolution** accepted-modified

Notes:

Page/Line: 17 /1 **Number** 69 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical
Description: **Reason:** **Resolution** rejected

change line to read

improve wording and a meaningful listing of credentials is to exchange bullet 1 with bullet 2

Permission to access certain services...

Notes: Withdrawn

Page/Line: 17 /3 **Number**70 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical

Description:

change line to read

Reason:

To correct use of undefined messages

Resolution rejected

Generic statement of requirements in order to avoid use of terms not as yet

Permission for a user to request for a given service a specific service feature and/or QoS parameter

Notes: Withdrawn

Page/Line: 17 /3 **Number**71 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical

Description:

Replace "operate" with "access".

Reason:

WCA Engineering Committee: To be technically correct.

Resolution accepted-modified

Notes:

Page/Line: 17 /5 **Number**72 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical

Description:

Change line to read

Reason:

Enables each service provider to decide for a given service whether such security features are required

Resolution accepted-modified

The access system MUST be capable for each service offered to transact

Notes:

Page/Line: 17 /12 **Number**73 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Technical

Description:

Deletion

Delete the adjective "strong"

Reason:

undefined term

Resolution accepted-modified

Notes:

Comments Sorted by Submitter Name

Page/Line: 6 / 10	Item Number: 21	Commentor Name: Arefi Reza	Type: Technical
Description: The word "affect" is repeatedly used in this paragraph requires		Reason: WCA Engineering Committee: Insertion of a technical definition of the word "affect" is required to assure a common interpretation. For example, if the PHY	Resolution: rejected
Notes: Rejected because the comment did not specify a change to the document.			
Page/Line: 6 / 11	Item Number: 22	Commentor Name: Arefi Reza	Type: Technical
Description: Delete the sentence that starts on this line		Reason: WCA Engineering Committee: Sentence is dictating how the repeater function is to be implemented. TDD repeaters optimal implementation may require	Resolution: accepted
Notes:			
Page/Line: 6 / 13	Item Number: 24	Commentor Name: Arefi Reza	Type: Technical
Description: Delete sentence starting on this line		Reason: WCA Engineering Committee: Too rigid a requirement at this time. Operations and Maintenance procedures required by network providers will likely require PHY	Resolution: accepted
Notes:			
Page/Line: 9 / 17	Item Number: 33	Commentor Name: Arefi Reza	Type: Technical
Description: Add a bullet: Other Convergence sub-Layers as may be required by additional		Reason: WCA Engineering Committee: To assure that the standard-based protocols can be	Resolution: accepted-modified
Notes:			
Page/Line: 10 / 32	Item Number: 41	Commentor Name: Arefi Reza	Type: Technical
Description: Delete "better than"		Reason: WCA Engineering Committee: Than standard should require better than required BER	Resolution: rejected
Notes: read carefully			
Page/Line: 11 / 30	Item Number: 46	Commentor Name: Arefi Reza	Type: Technical
Description: Change the first sentence of the paragraph so that it would become, "Delay and		Reason: WCA Engineering Committee: This paragraph is supposed to be about delay but it	Resolution: accepted
Notes:			
Page/Line: 11 / 34	Item Number: 47	Commentor Name: Arefi Reza	Type: Technical
Description: Change the first sentence to, "The end-to-end delay depends on an entire		Reason: WCA Engineering Committee: End-to-end delay is not a subjective metric.	Resolution: accepted
Notes:			
Page/Line: 12 / 11	Item Number: 49	Commentor Name: Arefi Reza	Type: Technical
Description: Delete the sentence starting with "The standard SHALL support."		Reason: WCA Engineering Committee: The word "planning" is typically understood as "network planning" which is outside the scope of the standard. If another meaning is meant for the word "planning", then it needs to be stated clearly so as not to be misleading.	Resolution: rejected
Notes:			
Page/Line: 12 / 14	Item Number: 51	Commentor Name: Arefi Reza	Type: Technical
Description: Change the first sentence to "The delivered P-MP cell capacity varies depending		Reason: WCA Engineering Committee: Based on the definition on page 5, lines 10-12, each base station corresponds to one sector. On the other hand, each P-MP cell	Resolution: rejected
Notes:			
Page/Line: 12 / 16	Item Number: 53	Commentor Name: Arefi Reza	Type: Technical
Description: WCA Engineering Committee: An Insertion is needed to clarify the utility of the terms Sector Capacity, Modulation Factor, and Sector-Bandwidth Factor, with perhaps a numerical example that further clarifies the utility of such		Reason: Purpose of terminology unclear	Resolution: rejected
Notes: Rejected because comment did not specify a concise change to the document.			
Page/Line: 12 / 41	Item Number: 55	Commentor Name: Arefi Reza	Type: Technical

Description:

Delete the paragraph starting on line 41.

Notes: Duplicate of comment #54

Page/Line: 15 /32 **Item Number:** 59

Description:

Add "802.16.3 protocols MUST comply with the above-mentioned standards and

Notes:

Page/Line: 15 /41 **Item Number:** 60

Description:

Modify the last two sentences of the paragraph with the following. "The operator also MUST have the means to securely shut down a base station

Notes:

Page/Line: 16 /6 **Item Number:** 62

Description:

Change the sentence to "An operator MUST be able to account for time- and bandwidth-utilization and various service features for each subscriber service

Notes: Editor didn't understand the second part of the requested change.

Page/Line: 16 /17 **Item Number:** 65

Description:

Change the paragraph to "There are two levels of authentication for an 802.16.3 system. In the first level, a subscriber station MUST authenticate itself with the network every time it registers with the network. This authentication MUST

Notes:

Page/Line: 17 /1 **Item Number:** 68

Description:

Change the bullet to "Permission to request for a given service a specific

Notes:

Page/Line: 17 /3 **Item Number:** 71

Description:

Replace "operate" with "access".

Notes:

Page/Line: 10 /21 **Item Number:** 39

Technical

Description:

Insert new paragraph
5.3 Spectral efficiency
The spectral efficiency is an important performance parameter of a wireless access system. The 802.16.3 system introduces specific aspects that shall be taken into consideration.

5.3.1 Cell size

The large cell radius, up to 50km, will produce a large propagation delay difference between near and far CPE units. This difference can be as large as 150us. The PHY and MAC protocol SHOULD provide

for far CPEs propagation delay compensation.

5.3.2 Multirate support

In order to preserve the same link budget, the wireless systems may use different modulation schemes for far and near CPEs. In this way the data rate to/from relatively near CPE can be higher, increasing the overall system capacity. The PHY and MAC protocols SHALL provide for multirate support.

5.3.4 Interference minimization

The inter-cell and intra-cell interference have a negative effect on system capacity. The burst transmission in the down-link minimizes the interference effects, as the necessity to lower the rates or to retransmit data packets. The PHY and MAC protocols SHALL support

Reason:

WCA Engineering Committee: This paragraph is does not belong here. It states

some facts, not functional requirements, neither does it provide basis for

Resolution

accepted-duplicate

Commentor Name:

Arefi Reza

Type: Technical

Reason:

WCA Engineering Committee: The section needs to take a position on compliance

Resolution

accepted-modified

Commentor Name:

Arefi Reza

Type: Technical

Reason:

WCA Engineering Committee:

Resolution

accepted-modified

1.. To provide consistency; MUST vs. SHALL as opposed to SHOULD. Automatic shut down is an important feature.

2.. To require that the shut down must be done in a secure way so that only

Commentor Name:

Arefi Reza

Type: Technical

Reason:

WCA Engineering Committee: QoS issues are still open and there are likely

Resolution

accepted-modified

Commentor Name:

Arefi Reza

Type: Technical

Reason:

WCA Engineering Committee: The term "network entry" is not clear enough. Also, using the term "unauthorized" is preferred over "enemy". The original text also implies that periodic authentication is required. This may not necessarily

Resolution

accepted-modified

Commentor Name:

Arefi Reza

Type: Technical

Reason:

WCA Engineering Committee: QoS profile is yet to be defined and there will be

Resolution

accepted-modified

Commentor Name:

Arefi Reza

Type: Technical

Reason:

WCA Engineering Committee: To be technically correct.

Resolution

accepted-modified

Commentor Name:

Goldhammer

Type: Marianna

Reason:

Introduce requirements to improve spectral efficiency.

Resolution

accepted-modified

bursty transmission and SHALL NOT use the spectrum if there is no information to transmit.

5.3.5 Packetized voice traffic

The SoHo, Small business and multi-tenant units will support a number of simultaneously voice call. The voice and associated signaling are transmitted in small packets, that have an intrinsic overhead due to the associated MAC and PHY headers. In order to improve the spectral efficiency, the MAC and PHY protocol SHALL permit the concatenation

of the short packets, going to the same destination, into a single larger packet.

5.3.6 Support for VAD and IP header compression

The voice activity detection and silence suppression are widely used to reduce the number of the transmitted packets. The MAC protocols SHOULD permit to take advantage of the VAD benefits, while still providing for the same level of QoS.

The IP header, with IP v.4, is as large as 40bytes and will be much more with IP v.6. The IP header compression standard permits to reduce this overhead to 5 bytes. The 802.16.3 MAC protocols SHOULD permit to take advantage of the IP header compression benefits, while still providing for the same level of QoS.

5.3.7 Requests for bandwidth and retransmissions

To minimize the overhead associated with the ARQ process and the

Notes:

Page/Line: 0 / 0 **Item Number:** 0

Description:
Empty

Commentor Name: KostasDemosthenes **Type:** Technical
Reason: **Resolution** rejected
To correct use of undefined messages

Notes: Rejected because no specific change request given.

Page/Line: 1 / 43 **Item Number:** 1

Description:
Sentence starting in this line should read: So, "functional requirements" describes the functions of typical systems...

Commentor Name: KostasDemosthenes **Type:** Editorial
Reason: **Resolution** accepted
Clarifies meaning

Notes:

Page/Line: 1 / 46 **Item Number:** 2

Description:
requirements in broad terms: what the required functions are but not how

Commentor Name: KostasDemosthenes **Type:** Editorial
Reason: **Resolution** accepted
Clarifies meaning

Notes:

Page/Line: 2 / 2 **Item Number:** 3

Description:
functions and procedures of the PHY and MAC protocols.

Commentor Name: KostasDemosthenes **Type:** Technical
Reason: **Resolution** accepted-modified
improve sentence

Notes:

Page/Line: 2 / 5 **Item Number:** 4

Description:
line should read
support. These services have...

Commentor Name: KostasDemosthenes **Type:** Editorial
Reason: **Resolution** accepted
not all service capabilities are transported

Notes:

Page/Line: 2 / 8 **Item Number:** 5

Description:
Delete the word "neatly"

Commentor Name: KostasDemosthenes **Type:** Editorial
Reason: **Resolution** accepted
undefined and unnecessary term

Notes:

Page/Line: 2 / 26 **Item Number:** 6

Description:
Sentence should read, "Other medium access types are ..."

Commentor Name: KostasDemosthenes **Type:** Technical
Reason: **Resolution** accepted-modified
Clarifies meaning

Notes:

Page/Line: 2 / 28 **Item Number:** 7

Description:
Replace the word "technologies" with either "services" or functionalities,

Commentor Name: KostasDemosthenes **Type:** Editorial
Reason: **Resolution** accepted
preferable terms

Notes: Editor chose the first option

Page/Line: 3 / 23 **Item Number:** 8

Description:
End sentence after "forth" and delete the rest of the sentence

Commentor Name: KostasDemosthenes **Type:** Technical
Reason: **Resolution** accepted-modified
To correct use of undefined messages

What follows are not 5 criteria

Notes: Perhaps a citation of the "five criteria" document should added.

Page/Line: 4 / 3	Item Number: 10	Commentor Name: KostasDemosthenes	Type: Technical
Description: Sentence should read; 802.16.3-based systems serve fixed location or relocatable customer terminals, but not mobile terminals.		Reason: To remove confusion	Resolution accepted-modified
Rest of sentence should be deleted			
Notes:			
Page/Line: 4 / 8	Item Number: 11	Commentor Name: KostasDemosthenes	Type: Editorial
Description: The sentence starting on this line should read "The model identifies the main features..."		Reason: main features should not be left out of the model. So remove words some of Moreover it does not describe but just identify	Resolution accepted
Notes:			
Page/Line: 4 / 14	Item Number: 12	Commentor Name: KostasDemosthenes	Type: Technical
Description: replace the word "transported" with "supported"		Reason: Clearer description	Resolution accepted
Notes:			
Page/Line: 4 / 16	Item Number: 13	Commentor Name: KostasDemosthenes	Type: Technical
Description: The sentence starting on this line should be deleted		Reason: Its meaning is not clear. Perhaps because it states a partial truth that is obvious. LOS also may be possible if the span distance is appropriate	Resolution rejected
Notes:			
Page/Line: 5 / 7	Item Number: 16	Commentor Name: KostasDemosthenes	Type: Editorial
Description: The line should read To facilitate description, and 802.16.3 system consists...		Reason: Removes confusing phrase	Resolution accepted
Notes:			
Page/Line: 5 / 21	Item Number: 17	Commentor Name: KostasDemosthenes	Type: Editorial
Description: The line should start Figure 2.2		Reason: The text refers to Figure 2.2 on the next page and not Fig 2.1 on this page	Resolution accepted
Notes:			
Page/Line: 6 / 3	Item Number: 18	Commentor Name: KostasDemosthenes	Type: Editorial
Description: The sentence should end with "...to support UNI and CNI requirements."		Reason: more meaningful sentence	Resolution accepted
Notes:			
Page/Line: 6 / 6	Item Number: 20	Commentor Name: KostasDemosthenes	Type: Editorial
Description: Figure 2-2...		Reason: Correction	Resolution accepted
Notes:			
Page/Line: 6 / 11	Item Number: 23	Commentor Name: KostasDemosthenes	Type: Technical
Description: Deletion of Sentence starting on line 11		Reason: First the requirements document should not dictate how the repeater is to be	Resolution rejected
Notes: Rejected because it was a duplicate of comment #23.			
Page/Line: 6 / 30	Item Number: 27	Commentor Name: KostasDemosthenes	Type: Editorial
Description: replace the word "meaning" with "resulting in"		Reason: To correct use of undefined messages Improve meaning	Resolution accepted
Notes:			
Page/Line: 7 / 42	Item Number: 28	Commentor Name: KostasDemosthenes	Type: Editorial
Description: Delete sentence starting on this line		Reason: Redundant sentence; improves the meaning w/o any loss	Resolution rejected
Notes: Rejected because this section is under review by an ad-hoc group.			
Page/Line: 8 / 15	Item Number: 29	Commentor Name: KostasDemosthenes	Type: Editorial
Description: Replace word Special with additional		Reason: To clarify meaning	Resolution accepted
Notes:			
Page/Line: 8 / 18	Item Number: 30	Commentor Name: KostasDemosthenes	Type: Editorial
Description: Replace the sentence that starts on this line with "The 802.16.3 protocols determine the interoperability of multiple vendors'"		Reason: more appropriate wording	Resolution accepted
Notes:			

Page/Line: 9 / 3	Item Number: 31	Commentor Name: KostasDemosthenes	Type: Technical
Description: replace transport with support		Reason: Improves meaning	Resolution accepted
Notes:			
Page/Line: 9 / 8	Item Number: 32	Commentor Name: KostasDemosthenes	Type: Editorial
Description: Replace the sentence that starts on this line with Each of the protocols above the PHY and MAC support "convergence		Reason: Improve wording	Resolution accepted
Notes:			
Page/Line: 9 / 17	Item Number: 34	Commentor Name: KostasDemosthenes	Type: Technical
Description: Insert Other convergence sub-layers may be required by specific high layer requirements		Reason: To identify flexibility for supporting higher layer requirements	Resolution accepted-duplicate
Notes:			
Page/Line: 9 / 18	Item Number: 35	Commentor Name: KostasDemosthenes	Type: Editorial
Description: The sentence on this line should read The IEEE 802.16.3 PHY and MAC protocol		Reason: For clarity	Resolution accepted
Notes:			
Page/Line: 10 / 16	Item Number: 38	Commentor Name: KostasDemosthenes	Type: Technical
Description: Add sentence This should not preclude a service provider from offering best effort service performance		Reason: For clarity of objectives	Resolution rejected
Notes: withdrawn			
Page/Line: 10 / 32	Item Number: 42	Commentor Name: KostasDemosthenes	Type: Technical
Description: Delete the words better than		Reason: Clarity	Resolution rejected
Notes: Duplicate of comment #41.			
Page/Line: 11 / 6	Item Number: 44	Commentor Name: KostasDemosthenes	Type: Technical
Description: Add : "It should be noted that although outages of a link can be minimized by appropriate location of antennas resulting in LOS links, this may not always		Reason: To clarify meaning	Resolution rejected
Notes:			
Page/Line: 11 / 34	Item Number: 48	Commentor Name: KostasDemosthenes	Type: Technical
Description: Change sentence to read: The end to end delay is a metric that depends on an entire application-specific network often encompassing all 7 layers of the OSI model		Reason: Clarity	Resolution rejected
Notes: withdrawn			
Page/Line: 12 / 11	Item Number: 50	Commentor Name: KostasDemosthenes	Type: Editorial
Description: Delete sentence starting on this page as no standard can support careful planning		Reason: Meaningless sentence	Resolution accepted
Notes: Duplicate of comment #49			
Page/Line: 12 / 14	Item Number: 52	Commentor Name: KostasDemosthenes	Type: Technical
Description: Deletion Paragraph starting on this line requires clarification. What does Sector Capacity measure? How can it be intended to be used/or misused An example of its use is needed.		Reason: Paragraph's intent not clear so best constructive comment is to delete it as	Resolution rejected
Notes:			
Page/Line: 12 / 41	Item Number: 54	Commentor Name: KostasDemosthenes	Type: Technical
Description: Deletion of the paragraph starting on this line		Reason: it states not any requirements	Resolution accepted-modified
Notes:			
Page/Line: 13 / 5	Item Number: 57	Commentor Name: KostasDemosthenes	Type: Technical
Description: Insertion: Definition of Spectral Efficiency is needed To make the paragraph 6.1 meaningful		Reason: Key term undefined	Resolution rejected
Notes: Rejected because the comment does not supply a definition. Also see comment #39, which strives to add text to address spectral efficiency.			
Page/Line: 13 / 9	Item Number: 58	Commentor Name: KostasDemosthenes	Type: Technical

<p>Description: Delete the words "in TDD deployment"</p> <p>Notes:</p>	<p>Reason: Both FDD and TDD have interference problems</p> <p>Resolution accepted-modified</p>
<p>Page/Line: 15 /42 Item Number: 61</p> <p>Description: line should read "down a remote base station securely. The 8702.16.3 protocol should also support a fail safe and reliable function that automatically shuts down..."</p> <p>Notes: Withdrawn</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: To explicit state the security and reliability requirements of those functions</p> <p>Resolution rejected</p>
<p>Page/Line: 16 /7 Item Number: 63</p> <p>Description: Change line to read SHOULD be able to account for each service time- and bandwidth-used and service features and parameters(e.g., delay). Also recall from Section ??? that a single Subscriber Station can give access to a number of users that</p> <p>Notes: withdrawn</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: MUST is Replaced by should as at this time the Accounting aspects of the different services that are likely to be offered by service providers are not well understood(An access channel may offer a set of services to a customer), the group has as yet not defined QoS and Accounting subsystem</p> <p>Resolution rejected</p>
<p>Page/Line: 16 /18 Item Number: 66</p> <p>Description: Change 2nd and 3rd lines to read</p> <p>Is when a subscriber station registers itself with the Base Station. This initial authentication MUST prevent "enemy"...</p> <p>Notes: Withdrawn</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: To clarify the intent by eliminating vague and meaningless terms</p> <p>Resolution rejected</p>
<p>Page/Line: 17 /1 Item Number: 69</p> <p>Description: change line to read</p> <p>Permission to access certain services...</p> <p>Notes: Withdrawn</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: improve wording and a meaningful listing of credentials is to exchange bullet 1 with bullet 2</p> <p>Resolution rejected</p>
<p>Page/Line: 17 /3 Item Number: 70</p> <p>Description: change line to read</p> <p>Permission for a user to request for a given service a specific service feature and/or QoS parameter</p> <p>Notes: Withdrawn</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: To correct use of undefined messages Generic statement of requirements in order to avoid use of terms not as yet</p> <p>Resolution rejected</p>
<p>Page/Line: 17 /5 Item Number: 72</p> <p>Description: Change line to read</p> <p>The access system MUST be capable for each service offered to transact</p> <p>Notes:</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: Enables each service provider to decide for a given service whether such security features are required</p> <p>Resolution accepted-modified</p>
<p>Page/Line: 17 /12 Item Number: 73</p> <p>Description: Deletion Delete the adjective "strong"</p> <p>Notes:</p>	<p>Commentor Name: KostasDemosthenes Type: Technical</p> <p>Reason: undefined term</p> <p>Resolution accepted-modified</p>
<p>Page/Line: 10 /0 Item Number: 37</p> <p>Description: section 5.2 lines 1,3 Change in section 5.2: 10 Mbps to 20 Mbps</p> <p>Notes:</p>	<p>Commentor Name: Ran Moshe Type: Technical</p> <p>Reason: The reference design for the peak data rate should be at least 20Mbps. This design goal for PEAK performance is not too optimistic based on 6 MHz channels and 4 bits/symbol. In any case this PEAK number should be</p> <p>Resolution accepted-modified</p>
<p>Page/Line: 11 /0 Item Number: 43</p> <p>Description: section 5.5 line 3 Delete the sentence that begins with: " with the following exception: the bit error rate ratio (BER) SHALL be 10E-6 (in accordance with...) or better."</p> <p>Notes:</p>	<p>Commentor Name: Ran Moshe Type: Technical</p> <p>Reason: It stated in section 3.2 that the system MUST directly transport variable length IP. So that section 5.5 must address packet error rate. In addition it is necessary to define higher BER conditions, e.g., QEF, for the headers of the packets.</p> <p>Resolution rejected</p>
<p>Page/Line: 11 /9 Item Number: 45</p> <p>Description: Add a sentence as follows:</p>	<p>Commentor Name: Ran Moshe Type: Technical</p> <p>Reason: This sentence clearly states some guideline following the sentence :</p> <p>Resolution rejected</p>

The 802.16.3 MAC and PHY protocols SHALL be optimized to reasonable interference environment under the previously mentioned [see sec 1.2] critical

Notes:

Page/Line: 13 / 0 **Item Number:** 56

Description:
 section 6.1
 Deletion of two sentences :
 "Full duplex operation is used in FDD to maximize the spectral efficiency.
 In TDD, spectral efficiency is maximized with means to avoid colocation

problems and more complex interference scenarios."

Insertion of the following paragraph at the end of 6.1
 " .. under the previously mentioned [see sec 1.2] critical parameters for serving the target markets."

Notes:

Page/Line: 3 / 32 **Item Number:** 9

Description:
 Move item up one line and delete editorial comment

Notes:

Page/Line: 6 / 4 **Item Number:** 19

Description:
 Insert the following text :

For clarification, the performance characteristics of the 802.16.3 air interface SHALL apply at a hypothetical point within the SS and BS where the

Notes:

Page/Line: 6 / 15 **Item Number:** 25

Description:
 Insert the following text :

Note : This does not preclude the use of other methods of providing repeater, relay or remote antenna capabilities using non 802.16.3 standard interfaces

Notes:

Page/Line: 6 / 19 **Item Number:** 26

Description:
 Change "bandwidth" to "capacity" or "throughput"
Notes: editor chose the first option

Page/Line: 9 / 24 **Item Number:** 36

Description:
 Change "bandwidth" to "capacity"
Notes:

Page/Line: 10 / 23 **Item Number:** 40

Description:
 Change "bandwidth" to "capacity" (multiple occurrences)
Notes:

Page/Line: 15 / 40 **Item Number:** 67

Description:
 Insert to read
 ...to shut down and reactivate a subscriber station...
 ...to shut down and reactivate a base station remotely.

Notes: Double check

Page/Line: 16 / 15 **Item Number:** 64

Description:
 Insert after "key management"
 service suspend/resume, relocation, anti-cloning,

Notes:

Page/Line: 4 / 19 **Item Number:** 14

Description:
 Technical

In a multicell environment, intercell interference can not be neglected.

Commentor Name: Ran Moshe **Type:** Technical

Reason: The argument cited in paragraph 6.1 is not within the WHAT part of functional requirements. The insertion is to make the requirements reasonable under the
Resolution: accepted-modified

Commentor Name: TrinkwonDavid **Type:** Editorial

Reason: Implementation of previously approved editorial change
Resolution: accepted

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: To avoid confusion, especially that delay and capacity parameters exclude voice
Resolution: rejected

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: Clarification of intent.
Resolution: rejected

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: Technical accuracy.
Resolution: accepted-modified

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: Technical accuracy
Resolution: accepted-modified

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: Technical accuracy
Resolution: accepted

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: Operational requirement to avoid truck rolls to investigate potentially faulty
Resolution: accepted

Commentor Name: TrinkwonDavid **Type:** Technical

Reason: Implementation of previous discussion
Resolution: accepted

Commentor Name: van Waes Nico **Type:**

Reason: **Resolution:** accepted-modified

Replace figure 2-1 with provided figure and replace "Figure 2-1 depicts a typical 802.16.3 system."
 (Note: figure will be submitted directly to editor, as the reflector rejects attachments)
 with:
 Figure 2-1 shows an example deployment configuration including the optional use of a repeater

More comprehensive example of system configuration. (figure reworked from TR

Notes:

Page/Line: 4 /23 **Item Number:** 15
 Technical

Description:
 Add after line 23:

However, cell-sizes as noted in Table 1 are envisioned as typical and SHOULD generally be supportable by an 802.16.3 system with at least 95% cell-coverage.

environment	LOS (km)	NLOS (km)
urban	7.5	2
suburban	10	2.5
rural	15	4

Table 1 Typical cell-sizes

Delete page 12, line 29 "* radio range (up to 50 km)"

Notes:

Commentor Name: van Waes Nico **Type:**

Reason: **Resolution** rejected
 Splitting the desired cell-sizes into traditional environments provides a better understanding of what TG3 envisions and promotes more thorough coverage modeling (especially of urban and suburban scenarios, which form the largest market-shares) than merely suggesting "up to 50 km".