

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	802.16.3 Functional Requirements Comments for Session #9	
Date Submitted	2000/09/09	
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 received against the 802.16.3-00/02r3, Functional Requirements for the 802.16.3 Air Interface Standard . These comments are input to session #9. Please refer to the call-for-comments, IEEE 802.16.3-00/11r0, at http://ieee802.org/16/sub11/docs/802163-00_11r0.pdf .	
Abstract	<p>This document lists all comments received. It is divided into two sections:</p> <p>Pages 2-10: Sorted by page number and then line number</p> <p>Pages 11-18: Sorted by submitter name, then page number, then line number</p> <p>Total comments: 74 Technical comments: 40 Editorial comments: 34</p> <p>Note that, although 802.16.3 does not have a formal mechanism for receiving comments from organizations, Reza Arefi has submitted comments on behalf of the <i>WCA Engineering Committee</i>.</p> <p>And congratulations to Reza for collecting the most technical comments (17). But the most prolific overall commentor was Demosthenes Kostas with 32 editorial and 10 technical comments.</p>	
Purpose	Input to session #9. Comment submitters should verify that all their comments were received and processed correctly.	
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

Unresolved Comments by Page #/Line#

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 unresolved
Notes:					
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 unresolved
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 unresolved
Notes:					
Page/Line: 2 /2	Number 3	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: functions and procedures of the PHY and MAC protocols.			Reason: improve sentence		Resolution unresolved
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 unresolved
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 unresolved
Notes:					
Page/Line: 2 /26	Number 6	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: Sentence should read, "Other medium access types are ..."			Reason: Clarifies meaning		Resolution unresolved
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 unresolved
Notes:					
Page/Line: 3 /23	Number 8	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: End sentence after "forth" and delete the rest of the sentence			Reason: To correct use of undefined messages		Resolution unresolved
Notes: What follows are not 5 criteria					
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 unresolved
Notes:					
Page/Line: 4 /3	Number 10	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
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 unresolved
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		Resolution unresolved

Moreover it does not describe but just identify

Notes:

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

Notes:

Page/Line: 4 /16 **Number**13 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Editorial
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** unresolved

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** unresolved

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** unresolved

environment	LOS (km)	NLOS (km)
lurban	7.5	2
lsuburban	10	2.5
lrural	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** unresolved

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** unresolved

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** unresolved

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** unresolved

Notes:

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

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 **Resolution** unresolved

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

Notes:

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 unresolved

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 unresolved

Notes:

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 unresolved

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 unresolved
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 unresolved

Notes:

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 unresolved
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 unresolved

Notes:

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 unresolved

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 unresolved

Notes:

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

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 unresolved

Notes:

Page/Line: 9 /17 **Number**33 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description:
Reason:
Resolution unresolved

Add a bullet: Other Convergence sub-Layers as may be required by additional

WCA Engineering Committee: To assure that the standard-based protocols can be

Notes:

Page/Line: 9 /17 **Number**34 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Technical
Description: Insert **Reason:** To identify flexibility for supporting higher layer requirements **Resolution** unresolved

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: The sentence on this line should read The IEEE 802.16.3 PHY and MAC protocol **Reason:** For clarity **Resolution** unresolved

Notes:

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

Notes:

Page/Line: 10 /0 **Number**37 **Date:** 9/9/00 **Name:**Ran Moshe **Type:** Technical
Description: section 5.2 lines 1,3 Change in section 5.2: 10 Mbps to 20 Mbps **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 **Resolution** unresolved

Notes:

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

Notes:

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

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 unresolved
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 unresolved
Notes:
- Page/Line:** 10 /32 **Number**42 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Editorial
Description: Delete the words better than
Reason: Clarity
Resolution unresolved
Notes:
- 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 unresolved
Notes:
- Page/Line:** 11 /6 **Number**44 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Editorial
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 unresolved
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 unresolved
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 unresolved
Notes:
- Page/Line:** 11 /34 **Number**48 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Editorial
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 unresolved
Notes:
- 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 unresolved
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 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 unresolved

Notes:

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

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 unresolved

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 unresolved

Notes:

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

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

Notes:

Page/Line: 13 /0 **Number**56 **Date:** 9/9/00 **Name:**Ran Moshe **Type:** Editorial
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 unresolved

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 unresolved

Notes:

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

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 unresolved

Notes:

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 operator also MUST have the means to securely shut down a base station
Reason: WCA Engineering Committee:
Resolution unresolved
 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 unresolved

Notes:

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 unresolved

Notes:

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 ??? that a single Subscriber Station can give access to a number of users that
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
Resolution unresolved

Notes:

Page/Line: 16 /15 **Number**64 **Date:** 9/9/00 **Name:** Trinkwon David **Type:** Technical
Description: Insert after "key management" service suspend/resume, relocation, anti-cloning,
Reason: Implementation of previous discussion
Resolution unresolved

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 unresolved

Notes:

Page/Line: 16 /18 **Number**66 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Change 2nd and 3rd lines to read
Reason: To clarify the intent by eliminating vague and meaningless terms
Resolution unresolved
 Is when a subscriber station registers itself with the Base Station. This initial authentication MUST prevent "enemy"...

Notes:

Page/Line: 16 /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
Resolution unresolved
 ...to shut down and reactivate a subscriber station...
 ...to shut down and reactivate a base station remotely.

Notes:

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 unresolved

Notes:

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

change line to read

Permission to access certain services...

Notes:

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

Description:
change line to read

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

Reason:
To correct use of undefined messages
Generic statement of requirements in order to avoid use of terms not as yet

Resolution unresolved

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

Notes:

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 unresolved

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 unresolved

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:** Editorial

Description:
Deletion
Delete the adjective "strong"

Reason:
undefined term

Resolution unresolved

Notes:

Unresolved Comments by Page #/Line#

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	unresolved
Notes:					
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	unresolved
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	unresolved
Notes:					
Page/Line: 2 /2	Number 3	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: functions and procedures of the PHY and MAC protocols.		Reason: improve sentence		Resolution	unresolved
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	unresolved
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	unresolved
Notes:					
Page/Line: 2 /26	Number 6	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: Sentence should read, "Other medium access types are ...		Reason: Clarifies meaning		Resolution	unresolved
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	unresolved
Notes:					
Page/Line: 3 /23	Number 8	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: End sentence after "forth" and delete the rest of the sentence		Reason: To correct use of undefined messages		Resolution	unresolved
Notes: What follows are not 5 criteria					
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	unresolved
Notes:					
Page/Line: 4 /3	Number 10	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
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	unresolved
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	unresolved
Notes:					
Page/Line: 4 /14	Number 12	Date: 9/9/00	Name: Kostas	Demosthenes	Type: Editorial
Description: replace the word "transported" with "supported"		Reason: Clearer description		Resolution	unresolved
Notes:					

Page/Line: 4 /16 **Number** 13 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
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: unresolved

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: unresolved

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: unresolved

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: unresolved

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: unresolved

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: unresolved

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: unresolved

Notes:

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

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
 WCA Engineering Committee: Insertion of a technical definition of the word "affect" is required to assure a common interpretation. For example, if the PHY
Reason:
Resolution: unresolved

Notes:

Page/Line: 6 /11 **Number** 22 **Date:** 9/9/00 **Name:** Arefi Reza **Type:** Technical
Description: Delete the sentence that starts on this line
 WCA Engineering Committee: Sentence is dictating how the repeater
Reason:
Resolution: unresolved

function is
to be implemented. TDD repeaters optimal implementation may require

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

Notes:

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

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.

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.

Notes:

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
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

Notes:

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

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

Notes:

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

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

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 additional
Reason: WCA Engineering Committee: To assure that the standard-based protocols can be

Notes:

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

requirements

Notes:

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

Notes:

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

Notes:

Page/Line: 10 /0 **Number**37 **Date:** 9/9/00 **Name:**Ran Moshe **Type:** Technical
Description: section 5.2 lines 1,3
Change in section 5.2: 10 Mbps to 20 Mbps
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
Resolution unresolved

Notes:

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

Notes:

Page/Line: 10 /21 **Number**39 **Date:** 9/9/00 **Name:**Goldhammer Marianna **Type:** 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 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: unresolved
- 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: unresolved
- Notes:**
- Page/Line:** 10 /32 **Number**42 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description: Delete the words better than
Reason: Clarity
Resolution: unresolved
- Notes:**
- 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: unresolved
- Notes:**
- Page/Line:** 11 /6 **Number**44 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
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: unresolved
- 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: unresolved
- 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: unresolved
- Notes:**
- Page/Line:** 11 /34 **Number**48 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
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: unresolved
- Notes:**
- 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: unresolved
- 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 clearly so as not to be misleading.
Resolution: unresolved
- Notes:**
- Page/Line:** 12 /11 **Number**50 **Date:** 9/9/00 **Name:** Kostas Demosthenes **Type:** Editorial
Description:
Reason:
Resolution: unresolved

Delete sentence starting on this page as no standard can support careful planning

Meaningless sentence

Notes:

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

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 unresolved

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 unresolved

Notes:

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

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 unresolved

Notes:

Page/Line: 13 /0 **Number**56 **Date:** 9/9/00 **Name:** Ran Moshe **Type:** Editorial
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 unresolved

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 unresolved

Notes:

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

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 unresolved

Notes:

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 operator also MUST have the means to securely shut down a base station
Reason: WCA Engineering Committee:
Resolution unresolved

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 unresolved

Notes:

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 unresolved

Notes:

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 ???
that a single Subscriber Station can give access to a number of users that
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
Resolution unresolved

Notes:

Page/Line: 16 /15 **Number**64 **Date:** 9/9/00 **Name:**Trinkwon David **Type:** Technical
Description:
Insert after "key management"
service suspend/resume, relocation, anti-cloning,
Reason: Implementation of previous discussion
Resolution unresolved

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 unresolved

Notes:

Page/Line: 16 /18 **Number**66 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Editorial
Description:
Change 2nd and 3rd lines to read
Is when a subscriber station registers itself with the Base Station. This
initial authentication MUST prevent "enemy"..."
Reason: To clarify the intent by eliminating vague and meaningless terms
Resolution unresolved

Notes:

Page/Line: 16 /40 **Number**67 **Date:** 9/9/00 **Name:**Trinkwon David **Type:** Technical
Description:
Insert to read
...to shut down and reactivate a subscriber station...
...to shut down and reactivate a base station remotely.
Reason: Operational requirement to avoid truck rolls to investigate potentially
faulty
Resolution unresolved

Notes:

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 unresolved

Notes:

Page/Line: 17 /1 **Number**69 **Date:** 9/9/00 **Name:**Kostas Demosthenes **Type:** Technical
Description:
change line to read
Permission to access certain services...
Reason: improve wording and a meaningful listing of credentials is to exchange
bullet 1 with bullet 2
Resolution unresolved

Notes:

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

Description:

change line to read

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

Notes:

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

Description:

Replace "operate" with "access".

Notes:**Reason:**

To correct use of undefined messages

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

Resolution

unresolved

Reason:

WCA Engineering Committee: To be technically correct.

Resolution

unresolved

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

Description:

Change line to read

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

Reason:

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

Resolution

unresolved

Notes:

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

Description:

Deletion

Delete the adjective "strong"

Notes:**Reason:**

undefined term

Resolution

unresolved