Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**802.16.3 Functional Requirements Comment Resolution Status, Output from Session #8**
Date Submitted	**2000-08-07**
Source(s)	Brian Petry Voice: 858-674-8533 3Com mailto:brian_petry@3com.com 12230 World Trade Dr. San Diego, CA 92128
Re:	Comments received on Functional Requirements, "Functional Requirements for the 802.16.3 Interoperability Standard", 802.16.3-00/02r2 (may be found at http://ieee802.org/16/sub11/docs/802163-00_02r2.pdf), and resolved at session #8.
Abstract	A report of the editor's comment database that shows how each comment was resolved at session #8. The report also includes comments that were input to, and resolved at, session #7.
Purpose	Commentors may use this report to confirm that their requested changes were dealt with correctly by the editor. This report is sorted by the commentor's name so it can be reviewed quickly. Note that the 802.16.3 minutes for session #8 should also reflect how comments were resolved.
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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The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard."

Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site
<http://ieee802.org/16/ipr/patents/notices>.

802.16.3 Functional Requirements Comment Resolution Status, Output from Session #8

Brian Petry

3Com

Page/Line: 4 / 11 **Item Number:** 1 **Commentor Name:** Abu-Dayya Adnan **Type:** Technical
Description: | **Reason:** | **Resolution** rejected
Replace "from 1 GHz to 10 GHz" with "2 GHz to 11 GHz" | To be consistent with the PAR.
Editor's note: Rejected because change is already there

Notes:

Page/Line: 4 / 17 **Item Number:** 2 **Commentor Name:** Abu-Dayya Adnan **Type:** Technical
Description: | **Reason:** | **Resolution** accepted
Replace "NLOS blockage" with "channel characteristics" | A more meaningful metric in link design.

Notes:

Page/Line: 10 / 20 **Item Number:** 3 **Commentor Name:** Abu-Dayya Adnan **Type:** Technical
Description: | **Reason:** | **Resolution** rejected
replace "will be a difficult problem for" with "will be a requirement for" | The target markets "residential and small businesses" mandate a non-line-of-sight requirement. Hence, the airlink should be robust in multipath environments.

Notes: withdrawn

Page/Line: 10 / 21 **Item Number:** 4 **Commentor Name:** Abu-Dayya Adnan **Type:** Technical
Description: | **Reason:** | **Resolution** accepted
Delete "The 802.16.3 system capacity ...will also be difficult" | Not a very meaningful sentence; serves no purpose.

Notes:

Page/Line: 2 / 21 **Item Number:** 194 **Commentor Name:** Costa Jose **Type:** Editorial
Description: | **Reason:** | **Resolution** rejected
After "The access standards define" please insert "the ways to use" | Standards do not define technology by rather the way technology is used (e.g., techniques)..

Notes:

Page/Line: 7 / 28 **Item Number:** 200 **Commentor Name:** Costa Jose **Type:** Technical
Description: | **Reason:** | **Resolution** accepted
Propose to replace the title and first paragraph with: | To generalize the field of application of the 802.16.3 systems. We need to

3 Supported Service Capabilities | focus on services capabilities so that operators may build services according to their own market requirement.

This section describes typical service capabilities supported by an 802.16.3 air interface.

Notes:

Page/Line: 7 / 29 **Item Number:** 201 **Commentor Name:** Costa Jose **Type:** Technical
Description: | **Reason:** | **Resolution** accepted
In the sentence starting "In this document, services refer.....", | This service definition belongs in the Protocols section.
change the word "document" to "section", and move the sentence to page 9
line 15 , just before "IEEE 802 protocols...."
Notes:

Page/Line: 7 / 38 **Item Number:** 202 **Commentor Name:** Costa Jose **Type:** Technical
Description: | **Reason:** | **Resolution** accepted-modified
Propose to replace the title and first paragraph with: | To generalize the field of application of the 802.16.3 systems. We need to

3.1 Voice Transport Service Capabilities | focus on services capabilities so that operators may build services according to their own market requirement.

802.16.3 systems SHALL support voice communications to subscribers in

a way that eases the migration of legacy voice equipment and public
switched
telephone network (PSTN) access technologies to 802.16.3 systems. The

802.16.3 access transport will be packet based (as opposed to circuit
Notes:

Page/Line:	8 / 43	**Item Number:** 203	**Commentor Name:** Costa		Jose	**Type:** Technical		

Description: **Reason:**   **Resolution** accepted
    Propose to replace the title and first paragraph with: To generalize the field of application of the 802.16.3 systems. We need to

3.2 Data Transport Service Capabilities - Internet   focus on services capabilities so that operators may build services
                                                                              according to their own market requirement.
    The 802.16.3 system MUST directly transport variable-length
datagrams
efficiently. Both IP versions 4 and 6 must be supported. For efficient
transport of IPv6, TCP/IP header compression over the air interface
SHOULD
be supported. The 802.16.3 IP service MUST provide support for
real-time and
non-real-time service capabilities. It SHOULD be possible to support the

Notes:

Page/Line:	9 / 5	**Item Number:** 204	**Commentor Name:** Costa		Jose	**Type:** Technical

Description: **Reason:**   **Resolution** accepted
    Propose to replace the title and first paragraph with: To generalize the field of application of the 802.16.3 systems. We need to

3.3 Bridged LAN Service Capabilities   focus on services capabilities so that operators may build services
                                                                              according to their own market requirement.
The 802.16.3 protocols SHOULD support bridged LANS service
capabilities,
whether directly or indirectly, including always on, ad hoc and on-demand

Notes:

Page/Line:	1 / 4	**Item Number:** 5	**Commentor Name:** Freedman		Avi	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Change "Broadband Wireless Access (BWA)" to "Wideband Wireless   To distinguish 802.16.3 activity from 802.16.1
Access
(WWA)" all over the document.
Notes:

Page/Line:	1 / 45	**Item Number:** 6	**Commentor Name:** Freedman		Avi	**Type:** Editorial

Description: **Reason:**   **Resolution** accepted
Delete comma after "networks"   Grammar

Notes:

Page/Line:	3 / 29	**Item Number:** 7	**Commentor Name:** Freedman		Avi	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Exchange the paragraph between lines 29 and 35 (starting with "A   The definition of the markets is more important than the examples of
broadband   possible services.
wireless access" with the next paragraph (between lines 37 and 42,
starting
Notes:

Page/Line:	3 / 30	**Item Number:** 8	**Commentor Name:** Freedman		Avi	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Change "markets" to "services"   The technologies provide services and are not special to markets.

Notes:

Page/Line:	4 / 7	**Item Number:** 9	**Commentor Name:** Freedman		Avi	**Type:** Editorial

Description: **Reason:**   **Resolution** accepted
Insert space between "802.16.3" and "MAC"   Typo

Notes:

Page/Line:	4 / 11	**Item Number:** 10	**Commentor Name:** Freedman		Avi	**Type:** Editorial

Description: **Reason:**   **Resolution** accepted
Insert space between "to" and "3.5"   Typo

Notes:

Page/Line: 6 / 1	**Item Number:** 11	**Commentor Name:** Freedman	Avi	**Type:** Editorial
Description:		**Reason:**		**Resolution** conferred to group
Change "A base" to "Base"		Refer to "interfaces"		

Notes:

Page/Line: 6 / 11	**Item Number:** 12	**Commentor Name:** Freedman	Avi	**Type:** Editorial
Description:		**Reason:**		**Resolution** conferred to group
Remove space in "comm on"		Typo		

Notes:

Page/Line: 6 / 12	**Item Number:** 13	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** conferred to group
Add optional Central Control Station and more base station to diagram		The diagram may be adequate for 802.16.1 but it is too simplistic for 802.16.3, where there is hihg influence between stations. A diagram similar to the ETSI TM4 refernce diagram should be used.		

Notes:

Page/Line: 7 / 17	**Item Number:** 14	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** rejected
Add "mainly" between "be" and "packet".		There is no reason to assume nor to limit voice services to Voice over packets. Other mechanisms may be found to be better.		

Notes:

Page/Line: 7 / 18	**Item Number:** 15	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** rejected
Change "will be recovered" with "may be recovered"		See above		

Notes: withdrawn

Page/Line: 7 / 29	**Item Number:** 16	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** conferred to group
change "will be provided by VoIP" to "might be provided by VoIP"		See above.		

Notes:

Page/Line: 9 / 28	**Item Number:** 17	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** rejected
Change "DAVIC" to "DAVIC or other"		No reason to limit the convergence layer to DAVIC.		

Notes: Part of figure deleted

Page/Line: 10 / 32	**Item Number:** 189	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** accepted-modified
Replace "rapidly changing" with "diverse"		The channels in fixed wireless access are not rapidly changing in time. They may slowly change, however the key issue is that each link is different.		

Notes:

Page/Line: 13 / 1	**Item Number:** 19	**Commentor Name:** Freedman	Avi	**Type:** Technical
Description:		**Reason:**		**Resolution** conferred to group
All reference should be revisitied		Most of the reference are not releavant to 802.16.3		

Notes:

Page/Line: 13 / 25	**Item Number:** 18	**Commentor Name:** Freedman	Avi	**Type:** Editorial
Description:		**Reason:**		**Resolution** conferred to editor
Remove space within "T he"		Typo		

Notes:

Page/Line: 1 / 5	**Item Number:** 20	**Commentor Name:** Goldhammer	Marianna	**Type:** Editorial

Description:
Insert "data" after "packet"

Reason:
clarification

Resolution accepted-modified

Notes:

Page/Line: 3 / 38   **Item Number:** 21   **Commentor Name:** Goldhammer   Marianna   **Type:** Technical

Description:
Insert "telecommuters" after "SOHO"

Reason:
To add this market segment

Resolution rejected

Notes:

Page/Line: 6 / 0   **Item Number:** 23   **Commentor Name:** Goldhammer   Marianna   **Type:** Editorial

Description:
Change "voice, data and video" to "data, voice and video"

Reason:
Consistence throughout the document

Resolution conferred to group

Notes:

Page/Line: 6 / 1   **Item Number:** 22   **Commentor Name:** Goldhammer   Marianna   **Type:** Editorial

Description:
Change" voice, data and video" to "packet data, voice and in some cases video"

Reason:
Make a correlation between the market size for each service and the order

Resolution conferred to group

Notes:

Page/Line: 7 / 10   **Item Number:** 24   **Commentor Name:** Goldhammer   Marianna   **Type:** Technical

Description:
Change the phrase starting with "The MAC and PHY protocols"
with:"The MAC
and PHY protocols will not have explicit support for each and every service,
due to the fact that generic data streams SHALL be used for transport.
The
MAC and PHY protocols SHALL provide for QoS service specific

Reason:
Clarification

Resolution accepted-modified

Notes:

Page/Line: 7 / 32   **Item Number:** 25   **Commentor Name:** Goldhammer   Marianna   **Type:** Technical

Description:
Insert after business). "The required bandwidth is minimized
with VoIP, the associated codecs providing a very good
compression: 8kb/s for G.729, 6.3kb/s for G.723. The
compression result is the increase of the delay.

Reason:
To make clear what is VoIP rate

Resolution conferred to group

Notes:

Page/Line: 7 / 34   **Item Number:** 26   **Commentor Name:** Goldhammer   Marianna   **Type:** Editorial

Description:
Delete"low"

Reason:
The VoIP delay is not low

Resolution conferred to group

Notes:

Page/Line: 7 / 34   **Item Number:** 27   **Commentor Name:** Goldhammer   Marianna   **Type:** Technical

Description:
Change "MUST" with "SHOULD"

Reason:
The delay amount is depending on many factors, the MAC being
only one of them.The delay amount, due to echo cancellers used
with VoIP, is not extremly critical.

Resolution conferred to group

Notes:

Page/Line: 7 / 36   **Item Number:** 28   **Commentor Name:** Goldhammer   Marianna   **Type:** Technical

Description:
Insert after the conversation. "The QoS requiremets should take
into account the characteristics of the VoIP technology: codec
end-to-end delay of 50ms for 10ms frame (G.729), 120ms for
30ms frame (G.723), the possibility to transmit concatenated
voice packets, the mandatory use of echo cancellers.

Reason:
Give a feeling of what VoIP delay is

Resolution conferred to group

Notes:

Page/Line: 7 / 39   **Item Number:** 29   **Commentor Name:** Goldhammer   Marianna   **Type:** Technical

Description:
Insert new paragraph with bullet: BER level The MAC and PHY
protocols SHOULD provide for a reasonable BER Level for

Reason:
Make clear the BER issue

Resolution conferred to group

voice services. BER of 10-4 is sufficient for voice services
and 10-5 for FAX.

Notes:

Page/Line:	8 / 6	**Item Number:** 30	**Commentor Name:** Goldhammer	Marianna	**Type:** Technical

Description: **Reason:** **Resolution** rejected

Insert new numbered paragraph: Internet protocol properties
Bullet: Packet length - the IP datagrams are characterized by
variable length. The MAC protocols MUST support efficiently
variable length packets.
Bullet: Bit Error Rate - the TCP/IP protocol, as known from
literature, drops its performance by 90% when the packet error
rate reaches 10%. The MAC and PHY protocols MUST provide
means for realible data transport, the BER target for cellular
deployment SHELL be 10-9, equivalent to the performance of
wired networks.

important issue (Reason)

Notes:

Page/Line:	9 / 0	**Item Number:** 31	**Commentor Name:** Goldhammer	Marianna	**Type:** Technical

Description: **Reason:** **Resolution** accepted

Delete right column, avoiding the MAC layer for DAVIC

Video is a service that should be supported exactly in the same
way as other services (Reason)

Notes:

Page/Line:	9 / 45	**Item Number:** 32	**Commentor Name:** Goldhammer	Marianna	**Type:** Technical

Description: **Reason:** **Resolution** accepted

Insert: The IEEE 802.16.3 protocol stack SHALL be the same for
all the supported services.

It is no reason to provide special means to the VIDEO service, which is
not
the main application and generally the allocated bandwidth size will not
permit video service offering (Reason)

Notes:

Page/Line:	10 / 16	**Item Number:** 34	**Commentor Name:** Goldhammer	Marianna	**Type:** Technical

Description: **Reason:** **Resolution** accepted-modified

Insert paragraph 6 Wireless media characteristics
Sub-paragraph 6.1 Duplex model
Paragraph start The radio regulations permit two access modes:
Frequency Division Duplex - FDD and Time Division Duplex -
TDD. The MAC and PHY protocol MUST support both FDD
and TDD duplex modes. Spectral efficiency is maximized in
FDD with full-duplex operation, while in TDD with means to
avoid collocation problems and more complex interference
scenarios. The PHY and MAC protocols MUST provide for full
duplex operation, while preserving the QoS, BER and spectral
efficiency requirements for data and voice traffic. The MAC and
PHY protocols MUST provide means to resolve the collocation
and interference problems in TDD deployment.

Missing paragraph (Reason)

Notes:

Page/Line:	10 / 16	**Item Number:** 35	**Commentor Name:** Goldhammer	Marianna	**Type:** Technical

Description: **Reason:** **Resolution** accepted-modified

Insert paragraph 6.2 Channelization
New paragraph The standardization bodies providing channelization
recommendations are ITU-R, CEPT and FCC. The allocated
bandwidth per operator varies between 5MHz and 120MHz.
In Europe, the typical allocated bandwidth is 14MHz. The
operators target a good frequency reuse factor, using 4-6 sectors
for Base Stations.The Base Station bandwidth per sector can be
between 1.75MHz and 7MHz in in CEPT countries and between
2MHz and 6MHz in MMDS. The MAC and PHY protocols MUST
permit the operation with channel spacing per sector of 1.75, 3.5
and 7MHz when using ETSI masks and 2, 3, 5 and 6MHz when
using other masks. The typical value for performance analysis
SHOULD be 3.5MHz for ETSI mask and 3MHz for MMDS mask.

Missing paragraph (Reason)

Notes:

Page/Line:	10 / 16	**Item Number:** 36	**Commentor Name:** Goldhammer	Marianna	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Insert paragraph 6.3 Cellular deployment   Missing paragraph
New paragraph In cellular deployment, due to interference, the
 system spectral efficiency can be considerably lowered. The
 PHY and MAC protocols SHOULD permit good frequency reuse
 factors, providing at least 2bit/s/cell.In order to reduce the
 interference level, the PHY and MAC protocols MUST permit
 power control per subscriber up-link and SHOULD permit
 power control per subscriber down-link. The PHY and MAC
 protocols SHALL permit real-time changing of power levels,
 as function of propagation conditions, in order to use the
 minimum power needed for the target BER.

Notes:

| **Page/Line:** | 10 / 30 | **Item Number:** 33 | **Commentor Name:** Goldhammer | Marianna | **Type:** Editorial |

Description: **Reason:**   **Resolution** accepted
Replace "Bandwidth" with "Capacity"   Bandwidth is measured in Hz, not bit/s

Notes:

| **Page/Line:** | 12 / 4 | **Item Number:** 37 | **Commentor Name:** Goldhammer | Marianna | **Type:** Technical |

Description: **Reason:**   **Resolution** conferred to group
Delete from row 4 to row 14   Telephony will be delivered using VoIP, and the requirements
                                                        here are relevant only for classic 64kb/s voice.

Notes: Not actually deleted, but the paragraphs reworked into the QoS table. Referred to QoS ad-hoc group

| **Page/Line:** | 13 / 21 | **Item Number:** 38 | **Commentor Name:** Goldhammer | Marianna | **Type:** Technical |

Description: **Reason:**   **Resolution** conferred to group
Change from table the 10ms in row 7 to "1/4 of the VoIP codec   Requirements non consistent with VoIP
 end-to-end delay"

Notes:

| **Page/Line:** | 0 / 0 | **Item Number:** 48 | **Commentor Name:** Jansson | Leif | **Type:** Editorial |

Description: **Reason:**   **Resolution** rejected
The section numbering is wrong.   Editorial.
                                                        **Rejected because editor will clean up the requirements summary
                                                        appendix**
Notes:

| **Page/Line:** | 0 / 0 | **Item Number:** 49 | **Commentor Name:** Jansson | Leif | **Type:** Technical |

Description: **Reason:**   **Resolution** rejected
Delete R17.   This is not requirement on a BWA system.
                                                        **Rejected because editor will re-work this appendix by scanning the
                                                        document
                                                        body to verify all requirements**
Notes:

| **Page/Line:** | 1 / 4 | **Item Number:** 39 | **Commentor Name:** Jansson | Leif | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-modified
Replace sentence "The BWA" through "services" with   Clearly defined requirement that clarifies meaning of the sentence.
 "The BWA system shall support all services (real time and non
 real time) in a packet oriented manner."

Notes:

| **Page/Line:** | 3 / 34 | **Item Number:** 40 | **Commentor Name:** Jansson | Leif | **Type:** Technical |

Description: **Reason:**   **Resolution** rejected
Delete lines 34 to 35   This is a mixture of access technologies and services.

Notes:

| **Page/Line:** | 3 / 36 | **Item Number:** 41 | **Commentor Name:** Jansson | Leif | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted
Add one more competing technology: Fiber   To add this market segment.

Notes:

| **Page/Line:** | 6 / 29 | **Item Number:** 42 | **Commentor Name:** Jansson | Leif | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-duplicate
Delete lines 29 to 32   This text is to fluffy.

Notes:

Page/Line: 7 / 0   **Item Number:** 50   **Commentor Name:** Jansson   Leif   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Change to mandatory.   This is important for a good BWA system.
                                                             **Editor's note: Rejected because the change request does not specify what
                                                               to
                                                             change**

Notes:

Page/Line: 10 / 13   **Item Number:** 43   **Commentor Name:** Jansson   Leif   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
What is DAV and DAVIC ?   Specify.
                                                             Editor's note: Rejected because no specific change suggested

Notes:

Page/Line: 10 / 22   **Item Number:** 44   **Commentor Name:** Jansson   Leif   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Delete "local LOS obstruction"   The target performance levels shall be higher.

Notes: text deleted

Page/Line: 11 / 44   **Item Number:** 45   **Commentor Name:** Jansson   Leif   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Delete the whole sentence "In a telephony network" through   This is not requirement on a BWA system.
"300 ms [15][17][75]"
Notes:

Page/Line: 12 / 7   **Item Number:** 46   **Commentor Name:** Jansson   Leif   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
What is "transit delay"?   Specify.
                                                             Editor's note: Rejected because no specific change suggested

Notes:

Page/Line: 15 / 12   **Item Number:** 47   **Commentor Name:** Jansson   Leif   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Replace "face" with "case".   Editorial.
Editor's note: Rejected because "face" is fine

Notes:

Page/Line: 0 / 0   **Item Number:** 74   **Commentor Name:** Kasslin   Mika   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Delete rows M9, M10 and M12.   These statements don't occur in the text.
                                                             Editor's note: Rejected because the editor will revise this appendix

Notes:

Page/Line: 1 / 4   **Item Number:** 51   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-duplicate
Replace sentence "The BWA" through "services" with   Clearly defined requirement that clarifies the initial sentence.
"The BWA system shall support all services (real time and non
real time) in a packet oriented manner."

Notes:

Page/Line: 1 / 11   **Item Number:** 52   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Delete lines 11 to 15   Contradictory with "MUST comply" in next paragraph. Statement on
                                                             revisions and changes is obvious and fluff.
Notes:

Page/Line: 3 / 36   **Item Number:** 53   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Add fifth competing technology: Native Ethernet   To add this market segment.

Notes:

Page/Line: 4 / 11   **Item Number:** 54   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified

Replace 3.5 with 4.2   Fits CEPT recommendations and covers all the bands.

Notes: Next version of document may need to have more precise ranges called-out.

Page/Line: 4 **/** 13   **Item Number:** 56   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Replace "require" with "benefits from"   There is no direct need for NLOS operation, though signal
                                                          attenuation from partial obstructions is still low enough to
                                                          be technically compensated for (=solution for NLOS operation).
                                                          This feature improves the system performance.

Notes:

Page/Line: 4 **/** 13   **Item Number:** 55   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Replace "near line-of-sight" with "non line-of-sight"   Non line-of-sight operation is also possible, not restricted to near
                                                          line-of-sight.

Notes:

Page/Line: 4 **/** 19   **Item Number:** 57   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** conferred to group
Insert after conditions. "Figure <as inserted below> shows an example   This figure displays the typical deployment configuration of
deployment configuration. The base station can serve individual buildings,   HIPERACCESS
                                                          and is more comprehensive than the currently shown figure, which depicts
multiple subscribers in multiple buildings (using multiple radio links),
or multiple subscribers in a single building by use of a single radio link   a specific scenario. This should also be our basis in the interest of
and further in-building distribution systems. It shows the use of a
repeater and route diversity in order to provide coverage in difficult
areas.
This does not imply the use of these features in all systems. However
it does require the capability to implement them if required, and leave
them out if not."

Notes: Tabled to submitters to rework the diagram and associated text.

Page/Line: 5 **/** 0   **Item Number:** 58   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** conferred to group
Replace figure 2-1 with figure 4-3 from TR 101 177 V1.1.1 (1998-05)   This figure displays the typical deployment configuration of
by ETSI/BRAN/HIPERACCESS   HIPERACCESS and is more comprehensive than the currently
                                                          shown figure, which depicts a specific scenario. This should
                                                          also be our basis in the interest of convergence of standards

Notes: tabled; submitters will rework for next round of comments

Page/Line: 5 **/** 6   **Item Number:** 59   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Delete lines 6 to 12: "The base station" through "possible."   The antenna solution is the manufacturer's and providers
                                                          turf, not to be mandated by 802.16.3.

Notes:

Page/Line: 5 **/** 13   **Item Number:** 60   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Delete the beginning of the sentence starting with "Since the base"   The antenna solution is the manufacturer's and providers
through "oriented". Start the sentence with "Multiple base station   turf, not to be mandated by 802.16.3.
radios will likely,".

Notes: withdrawn

Page/Line: 5 **/** 23   **Item Number:** 61   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Delete lines 23 to 26: "Also" through "document."   The decision on an IDU/ODU vs. an ODU solution itself is
                                                          entirely outside the scope of this document.
                                                          Editor's note: Rejected because of duplicate comment from Kostas

Notes:

Page/Line: 6 **/** 0   **Item Number:** 62   **Commentor Name:** Kasslin   Mika   **Type:** Technical
Description: **Reason:**   **Resolution** conferred to group
In Figure 2-2 delete the drawings inside the SS and BS boxes   The decision on an IDU/ODU vs. an ODU solution itself is
and delete the terms IDU and ODU.   entirely outside the scope of this document.

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Notes:

Page/Line: 6 / 26	**Item Number:** 63	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete lines 26 through 29: "In the" through "contention-oriented bus," and start the sentence with "802.16.3 protocols".

Reason:
This text is both fluff (who cares about similarities) and the poor arbitrary usage of the word channel might be mis-interpreted as implicitly mandating FDD.

Resolution accepted-duplicate

Notes:

Page/Line: 7 / 15	**Item Number:** 64	**Commentor Name:** Kasslin	Mika	**Type:** Editorial	

Description:
Replace "telephony" with "voice services" throughout the whole section.

Reason:
Consistence throughout the section

Resolution accepted

Notes:

Page/Line: 7 / 18	**Item Number:** 65	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete lines 18 to 21: "The consumer" through "services)"

Reason:
The statement does not provide any valuable information.

Resolution conferred to group

Notes:

Page/Line: 7 / 25	**Item Number:** 66	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete the entire subsection 3.1.1.1

Reason:
These statements here add nothing but fluff. The requirements for telephony services are sufficiently dealt with in the QoS section. The statement before this subsection already refers there, so there's no need to repeat that here without any hard values.

Resolution conferred to group

Notes:

Page/Line: 9 / 0	**Item Number:** 67	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete both DAVIC and DIGITAL AUTO/VIDEO from the right column in the figure.
Editor's note: Rejected because of duplicate comment from Goldhammer

Reason:
These titles and references are misleading and irrelevant. It is impossible to guarantee services if a parallel Video stream gobbles up bandwidth without consulting the MAC. Digital audio/video should run on top of the MAC, not alongside.

Resolution rejected

Notes:

Page/Line: 10 / 6	**Item Number:** 68	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete lines 6 to 8: "Note that" through "layer."
Editor's note: Rejected because of duplicate comment from Kostas

Reason:
ARQ shouldn't be ruled out already in this phase.

Resolution rejected

Notes:

Page/Line: 10 / 12	**Item Number:** 69	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete " and DAV" in the sentence starting on line 11: "Like the"

Reason:
DAV (Digital Audio/Video?) should run on top of the MAC, any MAC convergence layer does not have to deal with its needs.

Resolution accepted

Notes:

Page/Line: 11 / 3	**Item Number:** 70	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Replace 99.94% with 99.95%

Reason:
More commonly used value

Resolution accepted-modified

Notes:

Page/Line: 11 / 5	**Item Number:** 71	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Delete sentence "Note that" through "a year."

Reason:
Irrelevant information.

Resolution accepted

Notes:

Page/Line: 11 / 27	**Item Number:** 72	**Commentor Name:** Kasslin	Mika	**Type:** Technical	

Description:
Insert after "see section)." "In a multicell environment intercell interference can not be neglected as an outage increasing factor."

Reason:
There should be a requirement providing that some level of interference resilience is supported.

Resolution accepted

Notes:

Page/Line:	12 / 26	**Item Number:** 73	**Commentor Name:** Kasslin	Mika	**Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified
Delete bullet points on lines 26 and 27.   Implementation issue, leave to manufacturers and providers
                                                                                 (range determined by number of sectors and antenna type etc.)

Notes:

Page/Line:	22 / 0	**Item Number:** 75	**Commentor Name:** Kasslin	Mika	**Type:** Editorial

Description: **Reason:**   **Resolution** accepted
Delete the last incomplete sentence "This" through "provisioning"   Useless and misleading sentence

Notes:

Page/Line:	22 / 0	**Item Number:** 76	**Commentor Name:** Kasslin	Mika	**Type:** Editorial

Description: **Reason:**   **Resolution** conferred to editor
Delete "Protocol" till end of text   Incomplete and irrelevant sentence

Notes:

Page/Line:	25 / 0	**Item Number:** 77	**Commentor Name:** Kasslin	Mika	**Type:** Technical

Description: **Reason:**   **Resolution** conferred to editor
Replace 99.94% with 99.95%   Consistency with the text in section 5.4 if the corresponding
                                                                                 earlier comment is approved.

Notes:

Page/Line:	26 / 0	**Item Number:** 78	**Commentor Name:** Kasslin	Mika	**Type:** Technical

Description: **Reason:**   **Resolution** conferred to editor
Delete the following bullet points: Consistency with the text in section 5.7 if the corresponding
"- Radio range (shaped sector radius)" earlier comment is approved.
"- Width of the sector"

Notes:

Page/Line:	1 / 4	**Item Number:** 79	**Commentor Name:** Kostas	Demosthenes	**Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified
The BWA system is intended to support a wide-range of transport   To explicitly state the reason for this BWA
capabilities
(e.g., frame relay, ATM, IP, and Ethernet 802.11) that in turn can
Notes:

Page/Line:	1 / 4	**Item Number:** 85	**Commentor Name:** Kostas	Demosthenes	**Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified
The BWA system is intended to support a wide-range of transport   To explicitly state the reason for this BWA
capabilities
(e.g., frame relay, ATM, IP, and Ethernet 802.11) that in turn can
Notes:

Page/Line:	1 / 5	**Item Number:** 80	**Commentor Name:** Kostas	Demosthenes	**Type:** Editorial

Description: **Reason:**   **Resolution** rejected
Deletion of sentence starting at end of this line   Sentence is redundant with second Paragraph.

Notes: withdrawn

Page/Line:	1 / 17	**Item Number:** 81	**Commentor Name:** Kostas	Demosthenes	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Change second sentence on this line to read "These functional   Third Paragraph Second Sentence is not consistent with the Second
requirements,   Paragraph. Second Paragraph states that this document provides
with possible future amendments, are to be used to identify the constrains   "guidelines"
                                                                                 and the third Paragraph states that "The requirements with future
in the development of the 802.16.3 air interface standard. Such terms as   amendments, are binding"... the air interface standard MUST comply...
                                                                                 with

Notes:

Page/Line:	1 / 46	**Item Number:** 82	**Commentor Name:** Kostas	Demosthenes	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Change sentence to read, "So, "Functional Requirements" describes the   To explicitly state the reason for this BWA
802.16.3 MAC and PHY Layer functions and system parameters that
need be
specified so that the BWA system can support a wide-range of transport
capabilities (e.g., Frame Relay, ATM, and Ethernet 802.11), that in turn

Notes: withdrawn

| **Page/Line:** | 2 / 17 | **Item Number:** 83 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** rejected
Change sentence to read "The 802.16.3 air interface interoperability   To more explicitly state the reason for this Air interface interworking
SHALL interwork with existing local, metropolitan, and wide   capabilities.
area network standards."   In a requirements document the emphasis of being part of a family of
                                                                              standards is misleading.

Notes:

| **Page/Line:** | 2 / 18 | **Item Number:** 84 | **Commentor Name:** Kostas | Demosthenes | **Type:** Editorial |

Description: **Reason:**   **Resolution** rejected
As an example, Figure 1 shows how the 802.16.3 PHY and MAC layers   To Clarify that this is only and example: i.e., the 802.16.3 PHY and
relate to   MAC
                                                                              will relate to others.

Notes:

| **Page/Line:** | 2 / 22 | **Item Number:** 86 | **Commentor Name:** Kostas | Demosthenes | **Type:** Editorial |

Description: **Reason:**   **Resolution** accepted-modified
Change title of Figure 1 to   To avoid misunderstanding of the phrase "other Protocol Standards"
Figure 1: Relationship between 802.16.3 and other 802 Protocol

Notes: change figure instead

| **Page/Line:** | 2 / 24 | **Item Number:** 87 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** rejected
Insert a Figure 0. That depicts the how the 802.16.3 MAC and PHY   To explicitly depict the more general application of the PHY and MAC
Layers   being
relate   developed and not just the family.
to the supported upper layer protocols (e.g., Frame Relay, ATM,
802.11);

Notes:

| **Page/Line:** | 3 / 36 | **Item Number:** 88 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** rejected
Insert a bullet "Point-to-Point ATM access"   To include an important broadband access alternative

Notes: withdrawn

| **Page/Line:** | 5 / 22 | **Item Number:** 89 | **Commentor Name:** Kostas | Demosthenes | **Type:** Editorial |

Description: **Reason:**   **Resolution** accepted
The ending of second sentence should read,   Clarify
"... envisaged, but the 802.16.3 protocols focus on the Air Interface
shown

Notes:

| **Page/Line:** | 5 / 23 | **Item Number:** 90 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted
Replace sentence starting on this line, and the sentence following with   Makes meaning clearer
"Also shown in Figure 2.2 are typical
configurations of the Base Station (BS) and the Subscriber Station (SS),
that include the functions of "Indoor Units"(IU) and "Outdoor Units"
(OU).
However, the physical separation and protocols between OU and IU are

Notes:

| **Page/Line:** | 5 / 26 | **Item Number:** 91 | **Commentor Name:** Kostas | Demosthenes | **Type:** Editorial |

Description: **Reason:**   **Resolution** conferred to group
Change the sentence starting in the middle of this line and the sentence   Facilitate reading
that follows with,

"An additional function to this System Reference Model that should be
considered is Security. The BS Network Interface (BNI) and the SS
Network

Notes:

| **Page/Line:** | 6 / 4 | **Item Number:** 92 | **Commentor Name:** Kostas | Demosthenes | **Type:** Editorial |

Description: **Reason:**   **Resolution** conferred to group
Delete   Incorrect phrase. Interfaces are no interworking functions.
"which are sometimes called interworking functions(IWFs),

Notes:

| **Page/Line:** | 6 / 22 | **Item Number:** 93 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-modified

Change sentence to read,   Improve English
"The Subscriber Stations may identify the bandwidth needed to achieve
the
required QoS (see section) , but the BS has the "smarts" to allocate
Notes:

Page/Line: 6 / 26   **Item Number:** 94   **Commentor Name:** Kostas   Demosthenes   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Replace the paragraph starting on this line with   To simplify reading

In the downstream direction, within a channel, the network topology is
similar to a contentionless broadcast bus, since the transmissions are
transmitted by the base station, and more than one Subscribe Station
can share a downstream channel. In the upstream direction the topology

is similar to a contention-oriented bus, and thus 802.16.3 protocols
MUST provide the means to multiplex traffic from multiple SS, resolve
contention, and allocate bandwidth in the upstream direction.
Notes: Amended with deletions.

Page/Line: 6 / 34   **Item Number:** 95   **Commentor Name:** Kostas   Demosthenes   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Change paragraph under Section 3 to read,   To streamline the meaning. Original paragraph found confusing
This section describes some services that an 802.16.3 system SHOULD
support.
In what follows both the target markets and their associated bearer
Notes:

Page/Line: 7 / 5   **Item Number:** 96   **Commentor Name:** Kostas   Demosthenes   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Replace this paragraph with   To streamline the meaning. Original paragraph found confusing
"This Section describes typical services supported by an 802.16.3 system.

In this document services refer to the services provided by the MAC layer
 to
the layer above it. The term services is also used in this document as an
Notes:

Page/Line: 7 / 11   **Item Number:** 97   **Commentor Name:** Kostas   Demosthenes   **Type:** Editorial
Description: **Reason:**   **Resolution** accepted
Delete sentence starting on this line   Not clear of its meaning

Notes:

Page/Line: 7 / 18   **Item Number:** 98   **Commentor Name:** Kostas   Demosthenes   **Type:** Editorial
Description: **Reason:**   **Resolution** accepted-modified
Delete lines 18 through 24   Unnecessary and confusing verbiage

Notes:

Page/Line: 7 / 34   **Item Number:** 99   **Commentor Name:** Kostas   Demosthenes   **Type:** Technical
Description: **Reason:**   **Resolution** conferred to group
-second bullet, should be modified to read,   To include delay variation and improve English

"Delay - as apparent to the end user, the amount of delay and delay
variation
MUST be kept within acceptable limits. Again the specific amount of
delay
Notes:

Page/Line: 8 / 9   **Item Number:** 100   **Commentor Name:** Kostas   Demosthenes   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Insert before this line Section   Important MAN based services
"3.1.1.1.1.1 ATM Protocol Services

The 802.16.3 system MUST transport constant bit rate(CBR),
non-real-time
variable-bit-rate(non-rt VBR), real-time variable-bit-rate(rt VBR) and
Notes:

Page/Line: 8 / 13   **Item Number:** 101   **Commentor Name:** Kostas   Demosthenes   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Delete this sentence   No basis given for prejudging now other services' requirements

13

Notes:

| **Page/Line:** | 8 / 16 | **Item Number:** 102 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-modified

Delete lines 17 through 33 of this Section   This is informational text on a specific user or the 802.16.3. PHY and MAC

                                                          and thus does not belong in this requirements document

Notes:

| **Page/Line:** | 10 / 6 | **Item Number:** 103 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-modified

sentence beginning on this line should read,   In the below 11GHz bands ARQ should be a MAC requirement as it very
                                                           effectively meets the
"Note that the function of the MAC layer can include error correction by   needs of many applications.

Notes:

| **Page/Line:** | 10 / 7 | **Item Number:** 104 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-modified

Delete sentence starting on this line   MAC needs to support ARQ

Notes:

| **Page/Line:** | 10 / 18 | **Item Number:** 105 | **Commentor Name:** Kostas | Demosthenes | **Type:** Editorial |

Description: **Reason:**   **Resolution** accepted

Sentence should read   Clarification
"Specifying protocols that can maintain a specified/mandatory
performance
levels in the face of rapidly changing channel characteristics(e.g., due to

Notes:

| **Page/Line:** | 10 / 28 | **Item Number:** 106 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** rejected

Change sentence to read   Clarification

"The 802.16.3 protocols SHOULD allow for increases in capacity and
performance."

Notes:

| **Page/Line:** | 14 / 20 | **Item Number:** 107 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** unresolved

Change Sentence to read   To include the support of additional services
"The 802.16.3 protocols SHALL define a set of parameters to meet the
required
QoS parameters for the supported services (e.g., ATM CBR Services and

Notes:

| **Page/Line:** | 14 / 32 | **Item Number:** 108 | **Commentor Name:** Kostas | Demosthenes | **Type:** Technical |

Description: **Reason:**   **Resolution** unresolved

The last sentence parenthesis should read   To include the support of additional services to IP
(such as those required for IP- and ATM-based services)

Notes:

| **Page/Line:** | 1 / 5 | **Item Number:** 182 | **Commentor Name:** Nativ | Adi | **Type:** Technical |

Description: **Reason:**   **Resolution** accepted-duplicate

Delete: "packet-based"   To allow support of non packet-based services in addition to pocket based.

Notes:

| **Page/Line:** | 1 / 7 | **Item Number:** 180 | **Commentor Name:** Nativ | Adi | **Type:** Editorial |

Description: **Reason:**   **Resolution** conferred to editor

Erase one of two dots after "locations".   typing error, one dot too much.

Notes:

| **Page/Line:** | 4 / 13 | **Item Number:** 183 | **Commentor Name:** Nativ | Adi | **Type:** Editorial |

Description: **Reason:**   **Resolution** accepted-duplicate

Define the range instead of stating: "the above range".   No range is mentioned "above" in that section.

Notes: Duplicate of 197

Page/Line: 7 / 41 **Item Number:** 184 **Commentor Name:** Nativ   Adi   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-duplicate
Delete sentence: "The access transport will ... recovered from the   To allow non-packet based services in addition.
packets".

Notes: Duplicate of 188

Page/Line: 9 / 23 **Item Number:** 181 **Commentor Name:** Nativ   Adi   **Type:** Editorial
Description: **Reason:**   **Resolution** conferred to editor
Insert line 23 before line 19   Title should be attached to the figure.

Notes:

Page/Line: 12 / 29 **Item Number:** 185 **Commentor Name:** Nativ   Adi   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Change first sentence in 5.7 to the following: "802.16.3 system was   Capacity issues should consider matters such as modulation type and
defined   frequency reuse factor.
in section 2 to consist of one base station.
A 802.16.3 system capacity is therefore defined as the product of the
number
of sectors per base station and a sector capacity.
A sector capacity requirement is defined as the product of two factors: the

"modulation-gain" factor and the "sector-bandwidth".
The "modulation-gain" is defined as the sector's aggregate bit rate devided

by the bandwidth, depending mainly on the type of modulation in use.
The "sector-bandwidth" is defined as the total frequency band available
for
Notes:

Page/Line: 1 / 5 **Item Number:** 186 **Commentor Name:** Padan   Uzi   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-duplicate
Delete "packet based" or replace "packet based" with "packet based or   There is no need to limit the services and solutions to pure packets.
circuit switching based"   There is a need to enable compatibility with legacy networks.

Notes: Duplicate of 182

Page/Line: 4 / 19 **Item Number:** 187 **Commentor Name:** Padan   Uzi   **Type:** Editorial
Description: **Reason:**   **Resolution** accepted
Change "regulatory and atmospheric conditions" to " local regulations   Those are totally different issues and should be separated
and atmospheric conditions"

Notes:

Page/Line: 7 / 41 **Item Number:** 188 **Commentor Name:** Padan   Uzi   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Delete the sentence "The access transport will be packet based (as   There is no need to limit the services and solutions to pure packets.
opposed   Enabling circuit switched as an option will ease the migration from legacy
to circuit switched) and voice serivces will be recovered form the
packets"   networks, as mentioned in a previous sentence.
Notes:

Page/Line: 0 / 1 **Item Number:** 109 **Commentor Name:** Petry   Brian   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Change title to "Functional Requirements for the 802.16.3   A simple, meaningful title that won't change as revisions are made and the
Interoperability
Standard"; make other changes throughout document as necessary.   document is completed.
Notes:

Page/Line: 1 / 4 **Item Number:** 110 **Commentor Name:** Satapathy   Durga   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
The BWA system is intended to provide packet, cell and other   To expand the scope of BWA standard.
transport services.
Notes:

Page/Line: 6 / 4 **Item Number:** 111 **Commentor Name:** Satapathy   Durga   **Type:** Editorial
Description: **Reason:**   **Resolution** conferred to group
Replace   Need to address both interfaces and any interworking functions.
"which are sometimes called interworking functions(IWFs),"
by
"and related interworking functions (IWFs),"
Notes:

Page/Line: 7 / 17   **Item Number:** 112   **Commentor Name:** Satapathy   Durga   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Change sentence beginning in line 17 to: See no need to limit transport of voice services to packet based.
"The access transport will be packet based or cell based."
Notes:

Page/Line: 7 / 29   **Item Number:** 113   **Commentor Name:** Satapathy   Durga   **Type:** Editorial
Description: **Reason:**   **Resolution** conferred to group
Delete the sentence   See no need to limit voice services to VOIP.
"Voice connectivity will be provided by a VOIP protocol and may
involve low rate vocoding."
Notes:

Page/Line: 8 / 9   **Item Number:** 114   **Commentor Name:** Satapathy   Durga   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Insert   To ensure 802.16.3 standard supports ATM-based BWA solutions.
"3.1.2 ATM Services   **Editor's note: rejected because of duplicate comment from Kostas**

The 802.16.3 system MUST provide efficient transport for CBR, VBR (rt

and nrt),
Notes:

Page/Line: 8 / 9   **Item Number:** 115   **Commentor Name:** Satapathy   Durga   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Change section number from 3.1.2 to 3.1.3   Above insertion
                                                                              Editor's note: rejected because editor will do cleanup/numbering/etc.

Notes:

Page/Line: 8 / 11   **Item Number:** 116   **Commentor Name:** Satapathy   Durga   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Change section number from 3.1.3 to 3.1.4   Above insertion
Editor's note: rejected because editor will do cleanup/numbering/etc.

Notes:

Page/Line: 1 / 5   **Item Number:** 117   **Commentor Name:** Trinkwon   David   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Insert after "packet and other services" the words "to individual   To more fully reflect the purpose of the PAR and to differentiate
residential,   802.16.3
SME, SOHO and tele-commuter end-user locations.   from other 802 air interfaces.

Notes:

Page/Line: 1 / 44   **Item Number:** 118   **Commentor Name:** Trinkwon   David   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Replace "at least one subscriber station" with " a large number of   This is the defining characteristic of 802.16.3 FWA/BWA solutions.
end-user locations"   Also, the word "subscriber" implies a billable public service whereas
                                                                              some end user services will be corporate extranet, VPN or private
                                                                              network extensions, not "billable" in the conventional sense.
                                                                              Also, the word Station implies a single customer termination whereas
                                                                              most of the likely applications will be multi-line / multi-service.
                                                                              The air interface delivers an access "pipe" to a location over which
                                                                              services can be delivered to one or more end-user ports or terminal points.

Notes:

Page/Line: 3 / 36   **Item Number:** 119   **Commentor Name:** Trinkwon   David   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Insert new paragraph :   To capture the essence of the key challenge for a commercially viable /
                                                                              successful BWA solution for the 802.16.3 target markets.
"The critical parameters for serving these markets using wireless access
technology is the combination of coverage / capacity factors that affects

access cost per user, the deployability, maintainability and product costs
associated with the customer premise installation, and the spectrum
efficiency / reuse for economically serving the required number of
customer
locations with a minimum number of base station locations and backhaul
Notes:

Page/Line: 3 **/** 38   **Item Number:** 120   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** rejected

Insert "Telecommuters" between "SOHO" and "small businesses" .   These have specific traffic / service / revenue characteristics which need
Proposal : To invite contributions on definitions of these terms and   to be taken into account when determining the capacity, efficiency,
associated   availability and other characteristics of the air interface.
traffic model assumptions, demographic density / distibution criteria and
typical clutter / propagation implications.

Notes: Proposal accepted (results in call-for-contribution)

Page/Line: 3 **/** 38   **Item Number:** 121   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted

replace second / subsequent sentences with "In accordance with ITU-R   To align the requirement with established ITU and FWA terminolology /
definitions,   practice.
FWA (and hence BWA) provides access to one or more (public and
private)
core networks, rather than forming and end-to-end communication
system.
802.16.3 systems serve fixed location customers, but who might be
geographically

Notes:

Page/Line: 4 **/** 8   **Item Number:** 122   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** rejected

Replace "at least one subscriber station" with " a large number of   This is the defining characteristic of 802.16.3 FWA/BWA solutions.
end-user locations"   Also, the word "subscriber" implies a billable public service whereas
                                                                        some end user services will be corporate extranet, VPN or private
                                                                        network extensions, not "billable" in the conventional sense. Also,
                                                                        the word Station implies a single customer termination whereas most
                                                                        of the likely applications will be multi-line / multi-service.
                                                                        The air interface delivers an access "pipe" to a location over
                                                                        which services can be delivered to one or more end-user ports
                                                                        or terminal points.

Notes:

Page/Line: 4 **/** 17   **Item Number:** 123   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** rejected

Replace "NLOS" with "Non Line-of-Sight, Near Line-of-Sight and   The commercial objective (already achieved by some conventional FWA
Line-of-Sight   systems)
                                                                        is Non Line-of-Sight, especially in shorter range urban / cluttered
                                                                        environments.
                                                                        Near LOS and pure LOS is commercially tolerable / preferable in suburban
                                                                        and
                                                                        rural deployments where range or propagation through foliage is more
                                                                        critical.
                                                                        The air interface must be able to cope with all three types of deployment,

Notes: withdrawn

Page/Line: 4 **/** 18   **Item Number:** 124   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted

Insert "regulatory" in front of "and atmospheric conditions".   Regulatory restrictions on bandwidth, power, coexistence, sharing and
                                                                        other
                                                                        licensing criteria can significantly affect the air interface, and can vary
                                                                        from country to country.

Notes:

Page/Line: 5 **/** 7   **Item Number:** 125   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted

Insert "or adaptive array (spacial reuse)" between "shaped sector"   Spatial reuse will be an important technical; possibility for meeting
and "antenna"   the challenging spectral efficiency and economic deployablity criteria
                                                                        for 802.16.3 target markets.

Notes:

Page/Line: 5 **/** 9   **Item Number:** 127   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** rejected

Replace sentence with " Omnidirectional antenna are often used as an   802.16.3 deployments are nothing like conventional mobile or LMDS-like
initial
(low capacity, low cost) base-station in competitive overlay or rural   coverage / deployment plans, and special measures must be taken to ensure
deployments,

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but might be enhanced later to sectored configurations to icrease capacity
or
range as customer penetration / loadingsor distances dictate. It might also
be
necessary to reconfigure coverage from a single "Super-cell" to a
multi-cell
coverage plan at some point in the life of a base station, while minimising

the lowest cost configuration at differing / evolving points in the evolution

Notes: associated text was deleted.

Page/Line:	5 / 10	Item Number: 126	Commentor Name:	Trinkwon	David	Type: Technical

Description:
Delete "highly"

Reason: **Resolution** rejected
FWA customer antennae are typically 15 - 30 degree beamwidth to assist
with low cost / complexity deployment processes, especially with a
esirable capabil;ity for customer installability or technicians with
minimal training / skills.

Notes: associated text deleted

Page/Line:	5 / 13	Item Number: 128	Commentor Name:	Trinkwon	David	Type: Technical

Description:
Replace "are" with "might be"

Reason: **Resolution** accepted
Omni-Directional and adaptive array antenna confugrations are equally
probable
in future FWA/BWA deployments, for economic and deployablity /
capacity

Notes:

Page/Line:	5 / 14	Item Number: 129	Commentor Name:	Trinkwon	David	Type: Technical

Description:
Insert "might" between "and" and "even".

Reason: **Resolution** accepted
This is implementation dependent, and can change.

Notes:

Page/Line:	6 / 12	Item Number: 130	Commentor Name:	Trinkwon	David	Type: Technical

Description:
Amend Figure 2-2 to show :

a) Local Power within the SS box, supplying the IDU and ODU.
b) Multiple ODU's per IDU at the BS

c) Remote IDU's from the BS IDU. These Remote units / antenna would
be located
 away from the BS site to improve coverage / economics in range or
capacity
limited deployments.

d) The BS IDU might not be l;ocated at the BS - it might be at another
location
(which might be the same as the public switch / router)

e) The switch / router might not be public - it might be a private /
corporate
edge device which might, or might not have public network gateways /
connections

Reason: **Resolution** conferred to group
To reflect economic / service characetristics of the 802.16.3 target
markets
and existing FWA practice / experience in many countries.

Notes:

Page/Line:	6 / 26	Item Number: 131	Commentor Name:	Trinkwon	David	Type: Technical

Description:
a) Delete "within a channel" (Line 26) and "more than one subscriber
could
share a downstrean channel" (Lines 27,28)

b) Delete "if subscriber stations share a channel" (Lines 28,29)

c) Change "bandwidth" to "capacity" (Line 31)

Reason: **Resolution** accepted-modified
In FWA/BWA for the 802.16.3 target markets, customer units are always
in
contention for capacity / bandwidth (not channels in the frequency or
radio sense). Not all downstream methods are "broadcast" - beamforming
techniques can address individual customers for improved simultaaneous
frequency reuse within the same cell.

Notes:

Page/Line:	7 / 21	Item Number: 132	Commentor Name:	Trinkwon	David	Type: Technical

Description:
Change to "(supporting FAX and analog modem services)"

Reason: **Resolution** rejected
Customers will continue to have / use analog modems over any presented
"voice" port / circuit. The air interface might need to dynamically allocate

 appropriate resources to accommodate the modem transmissions at up
to V.90

Notes: text deleted

Page/Line: 8 / 10   **Item Number:** 133   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified

Add "including always on, ad hoc and on-demand communication in either   This ha simportant connotations for non-circuit oriented concentrated air
or both

directions "   interface access systems, and will be increasing important to support alerts,

                                                                    telemetry and appliance / control functions in residential and small

Notes:

Page/Line: 9 / 21   **Item Number:** 134   **Commentor Name:** Trinkwon   David   **Type:** Editorial

Description: **Reason:**   **Resolution** rejected

Figure 4-1 : Change "Auto / Video" to "Audio / Video"   Typo

Change "DAVIC" to "DAV TC"

Notes: part of figure deleted

Page/Line: 10 / 3   **Item Number:** 135   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted

Replace "In the downstrean direction ? more than one subscriber station"   To reflect the deployment, capacity management and economic
with   characteristics
                                                                    for the 802.16.3 target markets.
"Since customer units will contend for capacity to/from one or more base

Notes:

Page/Line: 10 / 26   **Item Number:** 136   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified

Add "in particular, the activities being carried out within the Joint   To draw specific attention to this important group.
Rapporteur Group (JRG) 8A/9B (with references etc)

Notes:

Page/Line: 10 / 31   **Item Number:** 144   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified

Change "2 to 10Mb/s" to "up to 5Mb/s in either or both directions"   PAR used 2-10Mb/s to denote the aggregate (shared) channel rate. This
                                                                    part of
                                                                    the FRD refers to the capacity delivered to an individual residential or
                                                                    SME
                                                                    customer location, and is meant to be comparable to DSL or cable modems

Notes:

Page/Line: 10 / 32   **Item Number:** 137   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** rejected

Change "subscriber station" to "residential or SME customer location"   Clarification

Notes:

Page/Line: 11 / 21   **Item Number:** 138   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted

Change "foliage" to "reflections and foliage"   Completeness

Notes:

Page/Line: 11 / 35   **Item Number:** 139   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted-modified

BER should be changed from 10e-9 to 10e-6 or 10e-7 in accordance with   10e-9 is typical; for feeder links and trunk facilities for T1-T3 CBR pipes.

ITU FWA recs (see JRG8a/9B inputs)   It is not typical / necessary / economic for distribution / access
                                                                    connections

Notes: significant debate

Page/Line: 12 / 13   **Item Number:** 145   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution**   conferred to group

Change jitter specification to 20mS   More realistic requirement for certain forms of implementation.

Notes: Referred to QoS group

Page/Line: 12 / 23   **Item Number:** 140   **Commentor Name:** Trinkwon   David   **Type:** Technical

Description: **Reason:**   **Resolution** accepted

Delete 'channel'   802.16.3 links might not be "channel" oriented (e.g OFDM or CDMA)

Notes:

Page/Line: 12 / 26	**Item Number:** 141	**Commentor Name:** Trinkwon	David	**Type:** Technical

Description: **Reason:**   **Resolution** rejected

Replace Bullets with :   To differentiate from traditional 802.16.1 concepts and embrace traditional

Bullet : Radio Range, width of sector(s) and/or adaptive array parameters   plus emerging FWA practices / experiences.

Bullet : Upstream / downstream link and user rates / asymmetry/ dynamics

Bullet : Types of Duplex (FDD, TDD, Paired TDD)
Bullet : Types of Modulation / Multiple Access (DS,SS etc, TDMA,

Notes:

Page/Line: 13 / 21	**Item Number:** 146	**Commentor Name:** Trinkwon	David	**Type:** Technical

Description: **Reason:**   **Resolution** rejected

                                                        More realistic requirements.

In Table 1 :   **Editor's note: (d) rejected because no specific change specified**

a) All one-way delays should be 20ms

b) Delete circuit-based parameters - rest of FRD stipulates packet based
 (and maybe cell based) services only.

c) Change BER 10 - 8 on last line to 10 - 6

d) Add note that MOS refers to 4.5 scale (not 5.0 scale)

Notes:

Page/Line: 15 / 3	**Item Number:** 147	**Commentor Name:** Trinkwon	David	**Type:** Technical

Description: **Reason:**   **Resolution** accepted

Replace "CMIP/CMIS" with SNMP/CORBA   More appropriate for Access networks / environments, especially for residential
                                                        and SME markets

Notes:

Page/Line: 15 / 15	**Item Number:** 142	**Commentor Name:** Trinkwon	David	**Type:** Technical

Description: **Reason:**   **Resolution** rejected

This needs further elaboration / discussion / contribution. Power control loops   Expand the requirement to better match the needs of the 802.16.3 target
 are probably fundamental for most FWA / customer unit applications and it must
 not be possible to exceed a maximum permitted power level. Also, if a SU is   markets.
"shut down" it must be possible to re-enable it (without visiting the customer
location) to diagnose and fix / dispatch etc. There are also functions necessary
 to handle Primary / secondary power conditions, software downloads/ upgrades,

Notes:

Page/Line: 15 / 27	**Item Number:** 143	**Commentor Name:** Trinkwon	David	**Type:** Technical

Description: **Reason:**   **Resolution** rejected

Needs further expansion / contribution to handle installation, service   To better match the needs for the 802.16.3 target markets.
suspend/resume, relocation, geolocation and anti-cloning processes.

Notes: withdrawn; asks for comments from other people

Page/Line: 17 / 8	**Item Number:** 148	**Commentor Name:** Trinkwon	David	**Type:** Technical

Description: **Reason:**   **Resolution** rejected

Delete 2nd, 3rd and 4th bullets relating to 802 conformance.   Not relevant / practicable for FWA/BWA applications for residential and SME
                                                        markets.

Notes: Withdrawn

Page/Line: 1 / 5	**Item Number:** 190	**Commentor Name:** Wachira	Muya	**Type:** Technical

Description: **Reason:**   **Resolution** accepted

Move the words "packet-based" to between the words "provides" and   To clarify that it is the transport that is packet-based - the services can
"transport", so that the sentence reads: "The BWA system provides   be anything.

packet-based transport capabilities that can support a wide range of
services...."

Notes:

Page/Line:	2 / 2	**Item Number:** 191	**Commentor Name:** Wachira	Muya	**Type:** Technical

Description: **Reason:**   **Resolution** accepted
Replace "services" by "services capabilities"   To generalize the field of application of the 802.16.3 systems. We need to

focus on services capabilities so that operators may build services
according to their own market requirements.
        Was comment # 149 in last round - Editor said it couldn't be
located.

Notes:

Page/Line:	2 / 3	**Item Number:** 192	**Commentor Name:** Wachira	Muya	**Type:** Technical

Description: **Reason:**   **Resolution** accepted-duplicate
Replace "services" by "services capabilities"   To generalize the field of application of the 802.16.3 systems. We need to

focus on services capabilities so that operators may build services
according to their own market requirements.
        Was comment # 149 in last round - Editor said it couldn't be
located.

Notes: Duplicate of 191

Page/Line:	2 / 7	**Item Number:** 149	**Commentor Name:** Wachira	Muya	**Type:** Editorial

Description: **Reason:**   **Resolution** rejected
Replace "service" by "service capabilities" in lines 7 and 8 (two places)   To generalize the field of application of the 802.16.3 systems. We need to

focus on services capabilities so
that operators may build services according to their own market
requirements.
Editor's note: Rejected because the change could not be located

Notes:

Page/Line:	2 / 10	**Item Number:** 150	**Commentor Name:** Wachira	Muya	**Type:** Editorial

Description: **Reason:**   **Resolution** accepted-modified
Replace "802.16.3 systems provide" by "802.16.3 systems will be able to   Grammar

provide"
Notes:

Page/Line:	2 / 10	**Item Number:** 193	**Commentor Name:** Wachira	Muya	**Type:** Technical

Description: **Reason:**   **Resolution** accepted
    Add a new sentence: "As far as possible, these should be common   Commonality improves efficiency.
across the 802.16 systems."

Notes:

Page/Line:	2 / 15	**Item Number:** 151	**Commentor Name:** Wachira	Muya	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Add a new sentence: "As far as possible, these should be common across   Commonality improves efficiency.
the   **Editor's note: OK to use "SHOULD?"**
802.16 systems"
Notes:

Page/Line:	2 / 23	**Item Number:** 195	**Commentor Name:** Wachira	Muya	**Type:** Technical

Description: **Reason:**   **Resolution** rejected
Delete the sentence "Other types are under investigation."   Doesn't add anything to the requirements, unless this investigation will be

concluded before the FRs are complete.

Notes:

Page/Line:	3 / 21	**Item Number:** 196	**Commentor Name:** Wachira	Muya	**Type:** Editorial

Description: **Reason:**   **Resolution** rejected
    Add a reference for the "Five Criteria"   Improve readability/understanding.

Notes:

Page/Line:	3 / 30	**Item Number:** 152	**Commentor Name:** Wachira	Muya	**Type:** Editorial

Description: **Reason:**   **Resolution** accepted
Replace "similar to wired broadband access technologies such as.." by   It is the markets that are similar
"similar to those of certain

wired access technologies such as..".
Notes:

Page/Line: 3 / 42 **Item Number:** 153 **Commentor Name:** Wachira Muya **Type:** Editorial
Description: **Reason:** **Resolution** accepted
Replace "fixed position customers" by "fixed position customer stations" To improve the text

Notes:

Page/Line: 4 / 7 **Item Number:** 154 **Commentor Name:** Wachira Muya **Type:** Editorial
Description: **Reason:** **Resolution** rejected
Replace "in section, an 802.16.3" with "in section 1.1, an 802.16.3" Missing section numbers.
Editor's note: Editor will verify section numbering, etc.

Other missing section numbers on page 5 line 27 (see section 8); page 6 line
23 (see section 6);
page 7 line 2 (section 2), line 24 (Section 6) page 9 (in section 3.1); page

11 line 3 (see section
5.5), line 27 (section 5.7); page 12 line 15 (section 6.2); page 13 (section

Notes:

Page/Line: 4 / 13 **Item Number:** 198 **Commentor Name:** Wachira Muya **Type:** Technical
Description: **Reason:** **Resolution** accepted-modified
    Modify the sentence to read: "Radio communication in the above range   Clarify the sentence.
may be possible even in near- and non-line-of-sight situations between a
base station and subscriber station."
Notes:

Page/Line: 4 / 13 **Item Number:** 197 **Commentor Name:** Wachira Muya **Type:** Technical
Description: **Reason:** **Resolution** accepted-modified
    Insert the original sentence after the word "protocols": "Specific Without this sentence that has the frequency range (which was deleted at
applications of the 802.16.3 point-to multipoint (P-MP) radios include the
2.1 meeting #7), the words "in the above range .." in the sentence beginning
to 3.5 GHz, but the standard is more generally applicable to the range on
from
Notes:

Page/Line: 4 / 22 **Item Number:** 155 **Commentor Name:** Wachira Muya **Type:** Editorial
Description: **Reason:** **Resolution** accepted-modified
Replace "the standard *in* more generally applicable...1 GHz to 10 GHz" Correct typo and maintain consistency on the upper frequency limit.
with
"the standard
is more generally applicable... 2 GHz to 11 GHz"
Notes: Sentence was deleted.

Page/Line: 4 / 23 **Item Number:** 156 **Commentor Name:** Wachira Muya **Type:** Editorial
Description: **Reason:** **Resolution** accepted-modified
Replace "The standard is" with "Equipment based on this standard is". Clarification.

Notes:

Page/Line: 4 / 24 **Item Number:** 157 **Commentor Name:** Wachira Muya **Type:** Technical
Description: **Reason:** **Resolution** rejected
Replace "require near line-of-sight (NLOS)" by "will be required to To permit universal applicability of the standard.
support
both line-of-sight (LOS)
and non line-of-sight" (NLOS)"
Notes:

Page/Line: 4 / 26 **Item Number:** 158 **Commentor Name:** Wachira Muya **Type:** Editorial
Description: **Reason:** **Resolution** accepted
Replace "systems" with "system" Grammar.

Notes:

Page/Line: 5 / 4 **Item Number:** 159 **Commentor Name:** Wachira Muya **Type:** Editorial
Description: **Reason:** **Resolution** rejected
Replace "concern for" by "the interest of" To improve the text
Editor's note: Rejected because text is fine

Notes:

Page/Line: 5 / 5 **Item Number:** 160 **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** accepted
Replace "subscribers" by "subscriber stations"   To be consistent. The system consists of stations.

Notes:

Page/Line: 5 / 7 **Item Number:** 161 **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Instead of "radiating" would "transmitting" or "emitting" be more appropriate here?   To use a better term
Editor's note: Rejected because no specific change specified

Notes:

Page/Line: 5 / 12 **Item Number:** 162 **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Replace "possible" by "supported"   To be precise.

Notes: associated text was deleted

Page/Line: 5 / 23 **Item Number:** 163 **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Remove the sentence starting on line 23, and also the following sentence.   From a standards perspective, there is no need to differentiate between outdoor and indoor units. That is an
implementation issue. At the subscriber end, the antenna could even be indoors, and at the BTS end,
everything except the antenna might be indoors.

Notes: The whole section was temporarily deleted, with comments during next round expected to re-work the section contents.

Page/Line: 5 / 27 **Item Number:** 164 **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Replace "(see section)." With "(see section 8)."   Missing section number.
Rejected. Editor will clean up section references

Notes:

Page/Line: 6 / 1 **Item Number:** 165 **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** conferred to group
Replace "residential networks" by "residential (customer premises) networks"   To further clarify.

Notes:

Page/Line: 6 / 8 **Item Number:** 166 **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Replace "(see section)." With "(see section 3)."   Missing section number.
Editor's note: Editor will clean up section references

Notes:

Page/Line: 6 / 12 **Item Number:** 167 **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** conferred to group
In the figure, remove the reference to IDU and ODU.   From a standards perspective, there is no need to differentiate between outdoor and indoor units. That is an
implementation issue.

Notes:

Page/Line: 6 / 33 **Item Number:** 169 **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Propose to replace this section by: To generalize the field of application of the 802.16.3 systems. We need to

Section 3: Service Capabilities   focus on services capabilities so
that operators may build services according to their own market
An 802.16.3 system SHALL support fixed wireless access to IP networks at bit rates of up to 10   requirements.
Mbit/s. Voice services will be carried as "voice over IP."

Notes:

Page/Line: 6 / 35 **Item Number:** 168 **Commentor Name:** Wachira   Muya   **Type:** Editorial

Description: **Reason:**   **Resolution** accepted-modified
delete "bearer"   The section on bearer services from original document was deleted.

Notes:

Page/Line: 7 / 25   **Item Number:** 199   **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
   Replace the words "means to multiplex traffic to and from multiple   This sentence is addressing the upstream direction only.
subscriber stations" by "means to multiplex traffic from multiple
subscriber
stations"
Notes:

Page/Line: 10 / 31 **Item Number:** 170   **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-modified
Replace "provide the peak capacity from 2-10 Mbps " to "provide the   To accommodate the narrower channel bandwidths that might be required
capacity   to
from 1-10 Mbps "   work into realistic frequency
                                                                      re-use plans in areas where spectrum is limited, e.g. MMDS operators with

                                                                      only a few channels, 3.5 GHz
                                                                      band where 802.16.3 system must share 25 MHz with legacy

   Notes: first part accepted/modified; 2nd part covered by another edit

Page/Line: 10 / 33 **Item Number:** 171   **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Replace "delivered bandwidth " to "delivered capacity"   Capacity is the correct term for bits/sec.
                                                                      **Editor's note: Rejected because of duplicate comment from
                                                                      Goldhammer**

Notes:

Page/Line: 10 / 38 **Item Number:** 205   **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** accepted
Replace "(with references, etc.)" by "(Questions ITU-R 140/9, ITU-R   To provide more specific references.
215/8,
ITU-R 220/9)"

Notes:

Page/Line: 11 / 33 **Item Number:** 172   **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** accepted-duplicate
Replace "from about 99.9 To 99.94% " with "from about 99.9 To   To be consistent with market requirements and technology capabilities.

Notes:

Page/Line: 13 / 21 **Item Number:** 173   **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** conferred to group
In Table 1 column 4 row 7 replace "10 ms " with "100 ms "   Delay of 10 ms for packet-oriented connections is too short. VoIP can
                                                                      tolerate up to about 150 ms delay, as
                                                                      long as frame error rate is below about 1%.

Notes:

Page/Line: 17 / 0   **Item Number:** 175   **Commentor Name:** Wachira   Muya   **Type:** Technical
Description: **Reason:**   **Resolution** rejected
Once the revision of the main text is complete, Tables 2 to 4 should be   Consistency with the text in section 1 to 9.
revised to correspond with   **Rejected because editor will revise the requirements appendices**
the changes made in the document.

Notes:

Page/Line: 17 / 0   **Item Number:** 177   **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected
Replace "according to negotiated user requirements" with "according to   To introduce the concept of dynamism in the definition and also indicate
dynamically negotiated
user requirements and/or network availability"   that network availability
                                                                      could also trigger/cause/impact this variability.
                                                                      Rejected because editor will revise the requirements appendices
Notes:

Page/Line: 17 / 0   **Item Number:** 178   **Commentor Name:** Wachira   Muya   **Type:** Editorial
Description: **Reason:**   **Resolution** rejected

Insert "Techniques for" before "Separation"

To indicate that FDD is not the separation itself as implied in the draft text.
Rejected because editor will revise the requirements appendices

Notes:

| **Page/Line:** | 17 / 0 | **Item Number:** 179 | **Commentor Name:** Wachira | Muya | **Type:** Editorial |
| **Description:** | | | **Reason:** | | **Resolution** rejected |

Insert "Techniques for" before "Separation"

To indicate that TDD is not the separation itself as implied in the draft text.
Rejected because editor will revise the requirements appendices

Notes:

| **Page/Line:** | 17 / 21 | **Item Number:** 176 | **Commentor Name:** Wachira | Muya | **Type:** Editorial |
| **Description:** | | | **Reason:** | | **Resolution** accepted |

Replace the term "bandwidth " with " capacity"

Referring to capacity as "bandwith" is colloquial usage, and we should use the correct terms - bandwidth
expressed in Hz and capacity in bit/s or bps.

Notes:

| **Page/Line:** | 17 / 22 | **Item Number:** 174 | **Commentor Name:** Wachira | Muya | **Type:** Editorial |
| **Description:** | | | **Reason:** | | **Resolution** rejected |

The Appendices should be numbered
A. Requirements Summary
A.1 Mandatory
A.2 Recommended (R)
A.3 Optional (O)
B. Vocabulary of Terms
B.1 Definitions
B.2 Acronyms and Abbreviations
Appropriate page numbering should be used.

Ease of reference.
Rejected because editor will clean up numbering and references

Notes: