

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Technical Comments on P802.16.2/D2-2001	
Date Submitted	2001-04-12	
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Re:	IEEE Sponsor Ballot of P802.16.2/D2-2001	
Abstract	This is a compound technical comment to be submitted in the Sponsor Ballot of P802.16.2/D2-2001.	
Purpose	This document is intended to editorially improve P802.16.2/D2-2001	
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Document under Review: **P802.16.2/D2-2001**

Comment # **M01** Comment submitted by: Roger Marks

Starting Page Number Starting Line Number Section

Change Type Technical, Non-binding

Change Table 13, column 5 heading to "Spacing at which simulation results have shown the interference to be generally below target level" with a note following the table regarding the target level and the range of possibilities.

The Note should read: "While the target level of interference is generally referenced to a level which is 6dB below the receiver noise floor, in many scenarios the acceptability of the spacing guideline requires assessment of the results of a statistical analysis and the acceptability of a small percentage of instances when this target level is exceeded."

Reason

The current proposal is misleading because in some cases the spacing guidelines do not always ensure interference below the target "6dB below noise floor".

Document under Review: **P802.16.2/D2-2001**

Comment # **M02** Comment submitted by: Roger Marks

Starting Page Number 35 Starting Line Number 4 Section 5.3.1.3.2

Change Type Editorial

In Figure 6, change "Hub" to "BS"

Reason

Consistency with text

Document under Review: **P802.16.2/D2-2001**

Comment # **M03** Comment submitted by: Roger Marks

Starting Page Number 37 Starting Line Number 24 Section 6.1.1

Change Type Technical, Non-binding

detete quotation marks around "Carrier Bandwidth", or add a definition

Reason

"Carrier Bandwidth" appears in quotation marks. This suggests that there is something unusual about the use of the term. If so, ithat use should be defined.

Document under Review: **P802.16.2/D2-2001**

Comment # **M04**

Comment submitted by: Roger

Marks

Starting Page Number **38**

Starting Line Number **13**

Section **6.1.1.1**

Change

Type **Technical, Non-binding**

In view of the Note, add the following (with correct citations) to the normative references:

* ITU-R Document 9/2 (currently in bibliography)

* Addendum 1 to Document 9/2

* RR Article S21

* Recommendation ITU-R F.1336

* Recommendation ITU-R SA.1276

Reason

This note seems to be a recommendation; it uses the word "should". If so, then the references on which it is based need to be normative.

Document under Review: **P802.16.2/D2-2001**

Comment # **M05**

Comment submitted by: Roger

Marks

Starting Page Number **40**

Starting Line Number **6**

Section **6.1.1.4**

Change

Type **Technical, Non-binding**

Rewrite the sentence "When point-to-point IILSs are employed, if the recommendations for SS EIRP and unwanted emissions provided in Sections 6.1.1.2 and 6.1.3, respectively, are followed, the coexistence environment described elsewhere in this Recommended Practice should apply." to reflect its intent.

Perhaps: "Coexistence issues related to point-to-point in-band inter-cell link stations should be subject to the recommendations of 6.1.1.2."

Delete the abbreviation "IILS" from the abbreviation list, the header, and the paragraph.

Reason

I don't understand the sentence. One problem here is the casual use of the critical word "should".

Also, there is no need to introduce the abbreviation "IILS".

Document under Review: **P802.16.2/D2-2001**

Comment # **M06**

Comment submitted by: Roger

Marks

Starting Page Number **41**

Starting Line Number **31**

Section **6.1.3**

Change

Type **Technical, Non-binding**

Rewrite the sentence "Several transmitters into a common non-active antenna cannot use the multi-carrier mask for the composite signal. In this case, the appropriate mask applies to the individual transmitter." to reflect its intent.

Perhaps: "When several transmitters share a passive antenna, each transmitter should satisfy the individual mask; the multi-carrier mask should not be applied in this case."

Reason

I don't understand the sentence.

Document under Review: **P802.16.2/D2-2001**

Comment # **M07**

Comment submitted by: Roger

Marks

Starting Page Number **43**

Starting Line Number **8**

Section **6.1.3**

Change

Type **Technical, Non-binding**

If, in ETSI territory, the recommendations of 6.1.3 are supposed to be superceded by those in [13], then:

(a) [13] should be moved to the normative references

(b) the note should be rewritten, because the relevant comparison is not of [13] to [14] but [13] to the recommendations of 6.1.3.

Also, "within Europe" should be replaced by something like "Within areas subject to regulation tied to ETSI standards" (or a more accurate version of this).

Reason

This note:

"NOTE Unwanted emission in Europe

Within Europe the ETSI limits of EN 301 390 [13] should be applied which has limits that are 10 dB more stringent than CEPT/ERC Recommendation 74-01 [14] for noise-like emissions over 10 certain frequency bands."

seems to mean that, in ETSI territory, the recommendations of 6.1.3 are superceded by those in [13]

Document under Review: **P802.16.2/D2-2001**

Comment # **M08**

Comment submitted by: Roger

Marks

Starting Page Number **44**

Starting Line Number **3**

Section **6.1.3**

Change

Type **Technical, Non-binding**

Rewrite the sentence "allowance is given for no more than 10 discrete (CW) spurious emissions which are permitted to exceed the limit up to -30 dBm"

to reflect its intent. I have tried to suggest an alternative, but I can't because I simply don't understand it.

Reason

I don't understand the sentence.

Document under Review: **P802.16.2/D2-2001**

Comment # **M09** Comment submitted by: Roger Marks
Starting Page Number 44 Starting Line Number 9 Section 6.1.3

Change Type Technical, Non-binding

Change abbreviation of "CS" (for "channel separation") in Figs. 9-10 to something else. "S" would be fine.

Delete footnotes in Fig 9-10.

Modify abbreviation of "CS" in abbreviation list (p. 18)

Reason

"CS" is already used for "Central Station" and needs to remain that way due to reference to work of other bodies in Annex D.

This double usage is needlessly confusing. The Figures are in vector graphics and can easily be edited. No body text need be changed.

Document under Review: **P802.16.2/D2-2001**

Comment # **M10** Comment submitted by: Roger Marks
Starting Page Number 58 Starting Line Number 17 Section 6.3.1.3

Change Type Technical, Non-binding

Rewrite the sentence: "Simulation results described in other sections of this document indicate that limiting co-channel interference impairments will likely occur as the result of some-one major interference conflict."

to reflect its intent. I have tried to suggest an alternative, but I can't because I simply don't understand it.

Reason

I don't understand the sentence.

Document under Review: **P802.16.2/D2-2001**

Comment # **M11** Comment submitted by: Roger Marks
Starting Page Number 60 Starting Line Number 2 Section 6.3.2

Change Type Technical, Non-binding

Rewrite: "Where coordination between the victim and interfering operators is possible, the occasions where this kind of interference is experienced may be reduced."

I suggest, "Coordination between operators will reduce the likelihood of this kind of interference." [provided that this matches the intent.]

Reason

I don't understand the sentence.

Document under Review: **P802.16.2/D2-2001**

Comment # **M12**

Comment submitted by: Roger

Marks

Starting Page Number 69

Starting Line Number 24

Section 8.1.8

Change

Type Technical, Non-binding

Rewrite the sentence: "It is concluded that, although many results are improved by use of more tightly specified antennas, the absolute value (probability of interference) tends to be quite low with all the antennas considered."

to reflect its intent. I have tried to suggest an alternative, but I can't because I simply don't understand it. I suggest deleting "absolute value," because that is particularly mysterious.

Reason

I don't understand the sentence.

Document under Review: **P802.16.2/D2-2001**

Comment # **M13**

Comment submitted by: Roger

Marks

Starting Page Number 73

Starting Line Number 38

Section 9.4

Change

Type Technical, Non-binding

Delete the paragraph on lines 38-40.

Reason

This paragraph is inconsistent with 5.3.1.3.1, Case B, which says: "Note that downstream power control from BS transmitters is usually not employed, as the BS signal is received by a variety of SSs, both near and far, and power control would tend to create an imbalance in the level of signals seen from adjacent sectors."

It is also inconsistent with the statement in 6.1.1.6 that "This Practice assumes that no downstream power control is employed." If someone follows the suggestion in 9.4, then they will be in violation of the assumptions of the Recommended Practice.

Document under Review: **P802.16.2/D2-2001**

Comment # **M14**

Comment submitted by: Roger

Marks

Starting Page Number 76

Starting Line Number 17

Section 9.10

Change

Type Technical, Non-binding

Delete subclause 9.10.

Alternately, decide the topic of the subclause and whether emissions are part of it. Explain the topic in the opening paragraph of the subclause. If appropriate, delete the reference to emission in 9.10.2. Explain in Proposal 3 whether the references refer to emission or immunity.

Reason

I don't understand the topic of 9.10. The opening paragraph seems to describe the problem of interference with a BWA system. However, 9.10.2 introduces BWA emissions as a topic. It also speaks of "regulatory requirements," which I assume are mainly on emissions (but it also refers to "stringent requirements for immunity stated in many regulatory requirements"; I don't understand). Are emissions addressed in any of the proposals? I don't see them anywhere, although they might be in the references cited in Proposal 3.

What is the problem this subclause is solving?

Document under Review: **P802.16.2/D2-2001**

Comment # **M15** Comment submitted by: Roger Marks

Starting Page Number 76 Starting Line Number 29 Section 9.10

Change Type Technical, Non-binding

Replace the word "Proposal" with the word "Technique" for the six items labeled as "Proposals" in 9.10.1 and 9.10.2. This corresponds to the word "technique" used in the introductory paragraph to 9.10.

Reason

The use of the word "Proposal" is ambiguous. The purpose of a Recommended Practice is to state what "should" be done, not to list "proposals" for what should be done.

Document under Review: **P802.16.2/D2-2001**

Comment # **M16** Comment submitted by: Roger Marks

Starting Page Number 76 Starting Line Number 34 Section 9.10.1

Change Type Technical, Non-binding

Change the statement:

"It has been considered that grounding the coax cable every 50 feet will mitigate voltage potential differences."

to say something specific, such as "Coax cables should be grounded every 50 feet to mitigate voltage potential differences." Alternatively, delete the sentence.

Reason

The intent of this statement is impossible to decipher. Is this a recommendation, or is it not? If not, do you need it?

Document under Review: **P802.16.2/D2-2001**

Comment # **M17** Comment submitted by: Roger Marks

Starting Page Number 76 Starting Line Number 40 Section 9.10.2

Change Type Technical, Non-binding

Change first paragraph of 9.10.2 to "Human-generated EMI effects can be avoided by good design."

Reason

Line 40, refers to "the product"; this is repeated on Page 77 (Lines 2, 6, and 17). What product is this? The document as a whole refers not to products but to behaviors of operators. If the concept of products is suddenly introduced, there is an obligation to explain. It would be easier and more effective to delete most of the words.

See also comment regarding Page 76, Line 17.

Document under Review: **P802.16.2/D2-2001**

Comment # **M18**

Comment submitted by: Roger

Marks

Starting Page Number 77

Starting Line Number 6

Section 9.10.2

Change

Type Technical, Non-binding

Add to Clause 2 the following, with the correct citation format:

*"ETSI standard EN 300 385 (new number EN 301 489-4) ' EMC standard for fixed radio links and ancillary equipment'

*Bellcore GR-1089-CORE ' Electromagnetic Compatibility and Electrical Safety – Generic Criteria for Network Telecommunications Equipment '

Reason

Proposal 3 is a serious recommendation, since it uses the word "should". The "should" refers to the recommendation to follow two standards. If the intent is really to make this recommendation, then the two standards should be cited in the normative reference list (Clause 2). [Right now, they aren't even in the Bibliography.]

Document under Review: **P802.16.2/D2-2001**

Comment # **M19**

Comment submitted by: Roger

Marks

Starting Page Number 77

Starting Line Number 6

Section 9.10.2

Change

Type Technical, Non-binding

Change "The product" to "The system"

Reason

I don't know what "the product" is, but this document is supposed to apply to the operation of a system.

Document under Review: **P802.16.2/D2-2001**

Comment # **M20**

Comment submitted by: Roger

Marks

Starting Page Number 77

Starting Line Number 13

Section 9.10.2

Change

Type Technical, Non-binding

Delete Proposal 4.

Reason

I cannot understand the meaning of Proposal 4: "In a fixed BWA inter-system environment, the system many have to be located at a minimum distance from the other operator's equipment, to reduce interference to an acceptable level." In any case, the issue of inter-system interference is dealt with at great length elsewhere in the draft. This cursory reference to the issue here trivializes the entire matter.

Document under Review: **P802.16.2/D2-2001**

Comment # **M21** Comment submitted by: Roger Marks
Starting Page Number 77 Starting Line Number 17 Section 9.10.2

Change Type Technical, Non-binding

Change "The product" to "The system"

Reason

I don't know what "the product" is, but this document is supposed to apply to the operation a system.

Document under Review: **P802.16.2/D2-2001**

Comment # **M22** Comment submitted by: Roger Marks
Starting Page Number 77 Starting Line Number 18 Section 9.10.2

Change Type Technical, Non-binding

Change "interference with" to "interference from"

Reason

To clarify that the issue is BWA system immunity, not BWA system emissions.

Document under Review: **P802.16.2/D2-2001**

Comment # **M23** Comment submitted by: Roger Marks
Starting Page Number 90 Starting Line Number 6 Section Annex C

Change Type Technical, Non-binding

Add captions to captionless figures in Annex C:

C.3: Layout Model

C.4: Victim CS

C.5: Worst-Case Interference

C.6: Subscriber-to-subscriber (TS-to-TS), same area, adjacent channel, TDD only

C.8: Simulation Geometry

C.9: Mesh to PMP CS, co-channel, adjacent area

Reason

All figures should have captions.

Document under Review: **P802.16.2/D2-2001**

Comment # **M24** Comment submitted by: Roger Marks
Starting Page Number 102 Starting Line Number 1 Section Annex C

Change Type Technical, Non-binding

Add caption to captionless Table C.1 in Annex C:

C.1: Simulation Results

Reason

All tables should have captions.

Document under Review: **P802.16.2/D2-2001**

Comment # **M25**

Comment submitted by: Roger

Marks

Starting Page Number 104 Starting Line Number 1

Section Annex D

Change Type Technical, Non-binding

Add caption to captionless Table D.1 in Annex D:

D.1: Interference Classes

Reason

All tables should have captions.

Document under Review: **P802.16.2/D2-2001**

Comment # **M26**

Comment submitted by: Roger

Marks

Starting Page Number 120 Starting Line Number

Section Annex G

Change Type Technical, Non-binding

Move References 16, 21, 22, 26, 27, 28, and 29 to the end of the bibliography.

Preface that section with the statement:

"The following documents, while not directly referenced in the text, are related and may be helpful to the reader."

Reason

These references are not cited in the text