

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Comments on IEEE802.16.2-00/01r9	
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Re:	Call for comments on the 802.16.2 working group draft practice for discussion at the TG2 Interim Meeting in Ottawa 25/26 th October 2000.	
Abstract	Provides comments on draft practice.	
Purpose	Improve text	
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Comments on IEEE802.16.2-00/01r9

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Informal comments on the draft coexistence recommended draft prepared for discussion at the Interim 802.16.2 meeting, 25-26th October 2000.

Comment 1:

Definition of “Mesh” required in section 3.1

Proposal:

“A wireless network topology known also as multipoint to multipoint, in which a number of subscriber terminal stations within a geographic area are interconnected and can act as repeater stations, in a manner that allows facilitates a variety of routes between the core network and any subscriber terminal station. There are no base stations in the conventional point to multipoint sense.”

[I’m sure Phil W could improve on this!]

Comment 2:

Section 4.1;

I believe the words “do not” are missing after the second word at the start of the paragraph.

[Otherwise we wouldn’t have any work to do!!]

Comment 3:

Recommendation 1;

This talks of the I/N value = -6dB as being the “acceptable” interference level from **each interfering operator**. However later in the document the triggers used for initiating co-ordination are based upon levels derived from a single interfering transmitter. This seems confusing and unclear.

Proposal:

Alternative first sentence:

“Adopt a “6dB below receiver thermal noise in the victim receiver criterion” as being a value of interference from any of the neighbouring operators individual transmitters which is “acceptable””.

In the second paragraph, delete “...each other operator.”

Comment 4:

If Recommendations 2, 6 and 7 apply only to the “Co-ch” scenario then this needs to be made clear.

Comment 5:

In Recommendation 6 and in several places through out the document reference is made to Canadian and UK specific procedures. This could be dangerous as the administrations associated with these processes may amend or change their specific detail. I believe it is right though that this document highlights examples of processes where appropriate so I would recommend that the following text changes are made to generalise:

Proposals:

Replace “in Canada” with “by some administrations” in the last line of Recommends 6 and in the last line of 7.3, with a reference to the appropriate annex.

Comment 6:

Recommendation 8 appears incomplete as it says that “usually” one guard channel is needed but does not detail the exceptions or how these might be assessed.

Proposal:

Alternative text for the first sentence;

For same area/ adjacent channel interference cases, deployments will usually need “guard frequency” between

at the edges of the neighbouring frequency blocks. The amount of “guard frequency” depends on a variety of factors such as “out of block” emission levels and in some cases is linked to the probability of interference in given deployment scenarios. Section 8 provides insight into some methods that can be employed to assess these situations.

In most cases deployment will usually need one guard channel.....”*continue with the existing text* .

Comment 7:

Section 4.2 and Table1;

It is not clear why p-mp subscriber stations are not mentioned. Is it because only the dominant interference path are mentioned?

Alternatively should the entries in Table 1 be amended to read “ Mesh or Subscriber Stations”?

Comment 8:

Section 5 (System Overview) appears late in the document.

Proposal;

Move sections 5 to 5.3.1 to between sections 3 and 4.

Comment 9:

Section 5.1.2; Use common language.

Proposal;

Add “(Mesh)” after the existing heading.

Comment 10:

Section 5.3.1.2, it would be useful for reader comprehension to convert the noise floor figures and interference levels into dBW/MHz for consistency with other parts of the document.

Proposals;

-168dBm/Hz = -138dBW/MHz

-174dBm/Hz = -132dBW/MHz

-167dBm/Hz = -137dBW/MHz.

Comment 11:

Section 5.3.1.3.1; Lots of text. To help the reader suggest highlighting “Case A” , “Case B” etc.. through to “Case G” at the start of the relevant paragraphs.

Comment 12:

Section 6.1.1; In the text following Table 2 I’m not clear why the regulatory limits “may be approached in the future” considering that the simulations are based upon typical and reasonable operating conditions including coverage areas and availabilities. To help emphasise the difference between the regulatory and assumed power levels the following is proposed:

Start the first sentence with; “The regulatory limits are significantly higher*etc to available equipment*”.

Amend the second sentence to read “ They are also significantly higher than those utilised by the coexistence simulations which considered reasonable cell sizes, link budgets and availabilities and were the basis for the recommendations contained in this Practice. Table 2 compares regulatory limits to those used in simulation.”

Amend the final sentence in this paragraph to read “Typical parameters used.....etc”

The final paragraph is confusing when the sections 6.1.1.1 and 6.1.1.2 are read. In this paragraph the document suggests that “much lower EIRPs” be used (than the regulatory limits) and then the document actually recommends the regulatory power limits albeit with some caveats.

I suggest that we recommend the levels suggested by the simulations and make the higher powers the exception with suitable caveats.

Comment 13:

Section 7, Is the penultimate paragraph still true considering the guard frequency recommendations?

Comment 14:

Section 7.1.1, 5th paragraph should refer to Table 11 rather than specific values for PSFD. Delete the text in brackets at the end of this 5th paragraph – Table 11 refers.

Comment 15:

Is the text in section 7.2 still relevant given the text in Recommendation 8?

Comment 16:

Section 7.3; Following the existing reference to Annex B add the following additional proposal:

“The psfd limit can be applied in different ways that affect the probability of interference and two examples are given in Annexes..” [?The IC and UK annex]

Comment 17:

Section 8.1.2; Add bullet points in the appropriate places to help clarity for the reader.

Comment 18:

The actual title for the CEPT/ERC report is;

“Preliminary Report on the analysis of the coexistence of two FWA cells in the 24.5-26.5 GHz and 27.5-29.5 GHz bands”

Perhaps this should be added to the Bibliography.

Comment 19:

Section 9.2; Propose the following clarification added to the end of the existing third paragraph;

“...when located in adjacent areas and enable site sharing when located in the same area but in adjacent frequency blocks.”

Comment 20:

Annex B: In several places the text needs editorially tidying to reflect the latest structure of the document. For example, the section headed “20-30 GHz” mentions psfd A and processes described above. These processes are in other annexes now.

Propose: Delete the offending text.

The next section needs to be headed “30 – 43.5GHz” for consistency with the frequency ranges elsewhere in the document. The text needs to reflect this change also.

Towards the end of the Annex, the last main paragraph includes text suggesting an arbitrary further 10dB of interference that can be tolerated. Is there any basis for this?

Proposal:

This text and the table of psfd values appear specific to the Industry Canada process and therefore should be included in the appropriate annex that details the examples of psfd limit application.

Annex C: In several places there is a reference to results of simulations. Can some of these be added to the document. They would add to the readers understanding of the statistical nature of some of the results providing insight into nature of the “coexistence problem”.

Comment 22:

Propose that the Industry Canada procedure should be in the same annex E as the UK RA procedure example. For the same reasons mentioned above in Comment 5, this annex should be re-titled so as not to appear “administration specific” (– since sometimes we change our minds!!) .

Proposed title for Annex E:

Examples of two alternative applications of psfd limits to the same frequency / adjacent area scenario from two administrations.

Comment 23:

In the “Industry Canada” section is the reference to figure 2 (same area/adjacent frequency) still appropriate?

Comment 24:

Annex E (see comment 22 regarding title);