Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Comments on the draft 802.16.2 Co-existence Recommended Practice**
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Re:	Call for comments on the draft Recommended Practice for BFWA co-existence.(802.16.2-00/01)
Abstract	Editorial and substantive comments on the latest draft.
Purpose	Consider comments for inclusion in the draft practice.
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Comments on Draft BFWA Co-existence Recommended Practice

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Scope:

Towards the end of the Scope section, "systems deployed in the same geographic area in different bands…" are included but it is not clear whether "systems deployed by different operators in the same geographic area but in different sub-bands of the same frequency band" are included. It is possible that different parts of a band may be allocated to a number of competing operators in the same area or region.

Proposed replacement sentence:
The scope includes both interference between systems deployed across geographic boundaries in the same frequency band and systems deployed in the same geographic area but in neighbouring parts of the same frequency band. The latter includes the possibility of different systems deployed by a single licence holder in sub bands of the licensees authorised bandwidth.

Definitions;

Propose just the first sentence for *Digital Modulation.* The rest should be under other headings like *Multiple Carrier Systems.* Delete the reference to spread spectrum as this can be considered as either a multiple access scheme or perhaps an interference mitigation mechanism. In both cases there are further issues that would need to be addressed in any rigorous definition (TDMA, Freq hopping etc….). the following is proposed:

Digital Modulation; The process by which some characteristic (frequency, phase, amplitude or combinations thereof) of a carrier frequency is varied in accordance with a digital signal.

Multiple Carrier System 1: Systems which may emit a number of carriers within an overall radio channel typically around 4 to 6, which can each carry independent or non-independent traffic streams through a common RF amplifier. Flexibility in delivered data rate is achieved by varying the number of carriers used as the service requires at any one time.

Multiple Carrier System 2: Systems that deliberately spread the transported data over many carriers (typically 100's or more) in order to mitigate against propagation impairments. The overall signal often comprises a multiplex of a number of data streams with each carrier transporting a relatively low data rate compared to the overall baseband data. Systems employing OFDM are an example.

Definitions for frequency blocks and slots should be added:

Proposal:

Frequency Block: A portion of radio spectrum assigned to an operator. A block would normally be considerably larger than any individual radio channel.

Slot: The smallest element of a frequency band plan that can be aggregated to form a block assignment.

Section 2, System Overview

Proposal for some extra text in the fourth paragraph to inform on systems other than LMDS and LMCS:
"*In some territories, systems delivering these services are referred to as Multimedia Wireless Systems (MWS) in order to reflect the convergence between traditional telecommunications services and entertainment services.*"

Section 2.3, penultimate sentence would be more accurate if re-worded slightly:
"*Co-existence specifications for MWS which will include the requirements for HIPERACCESS are being prepared.……etc.*"

Sections 3.2.1.1 and 3.2.1.2:

Presumably the interferers are the same signal type as the victim. This is not clearly stated.

Section 6 Frequency Plans

Contribution to the Alburquerque meeting titled "Broadband Fixed Wireless Access in the 40GHz Band" provides input on BFWA frequency plans in other territories. This input should be considered for inclusion in this section.

Section 7 Deployment and Co-ordination

The structure of this section appears very specific to the individual co-ordination process in one territory. The section says nothing about co-ordination between systems located in the same area but in adjacent frequencies (included in the scope).

Proposal for reconfiguring this section: (but not the actual text!)

Section 7.1; This could detail the methodology in a generic fashion, providing information on the suitability of a pfd boundary condition and co-ordination distance. It should also address adjacent frequency use in the same area (usually guard bands).

Follow on section: This could provide potential operators with guidance on the calculation of boundary pfd and suitable guard bands as well as suitable mitigation techniques that can be employed to ease difficulties. To some extent this is already in section 7.1 and it should show the relationship with the parameters and characteristics included in section 3.

Follow on section: This could include most of the text currently in section 7.1 with other examples of the application and justification of a specific pfd boundary conditions and co-ordination distances in a number of territories which may have different deployment conditions.

Contribution to the Alburquerque meeting titled "Broadband Fixed Wireless Access in the 40GHz Band" provides input on co-ordination guidelines, including pfd boundary conditions, guard bands and multiple interferers. Since the frequency range 2 covers 20-43.5GHz it would seem appropriate that this is included.