

***Proposed Letter to 802.11 SG on 3.65 GHz:***

IEEE has published a standard for wireless MAN's, IEEE 802.16-2004 (Part 16: Air Interface for Fixed Broadband Wireless Access Systems) that covers equipment that operates over a wide range of frequencies including the 3650-3700MHz range that is the subject of the recent FCC R&O FCC 05-56. The 802.16 technology is based upon scheduled transmissions and provides high spectral efficiency and Quality of Service that is attractive to wireless service providers including Wireless ISP's even in License Exempt frequency bands.

Members of the 802.16 Working Group have a strong interest in the R&O that the FCC has made regarding access to the 3650-3700MHz band but have some concerns with the details listed below:

- Incompatibility with the scheduled transmissions concept:  
The requirement described as a "Contention Based Protocol" destroys the ability for scheduled transmissions to operate and thereby removes the ability to offer Quality of Service.
- Destroying the high spectral efficiency concept:  
The requirement to schedule time for other transmissions is not necessary if there are no other systems in operation.
- Incompatible with directional antennas:  
CPE's operating in different networks may be shielded from each other thereby reducing the ability of the interference detection procedure to sense other networks.
- Does not prevent the interference at the receiver location:  
The requirement to sense the channel before transmission at the transmitter location does not guarantee protection to the receivers in another network as they are not co-located.

Therefore the 802.16 Working Group does not consider the Contention Based Protocol a valid solution to the coexistence issues. In fact examination of the FCC R&O definition of the protocol is consistent with the developments taking place in 802.16h but the protocol name creates confusion and false assumptions.

The 802.16 Working Group considers that any protocols developed to address coexistence need to be addressed by joint activity between the 802 working groups representing the technologies possible within the band to ensure effective solutions. This can support the FCC desire for an "industry consensus" on the appropriate solution.

Concerning the "CBP-SG Five Criteria draft" (doc: IEEE 802.11-05/0351r0) the 802.16 Working Group has the following comments:

a) Section 4d concerning Coexistence Assurance Document is missing.

b) It is requested that the information given in section 3a regarding the distinct identity be corrected as follows:

***a) Substantially different from other 802 Projects***

*There are no other IEEE 802 Projects for FCC Part 90 operation in the 3650-3700MHz band*

Should be changed to:

“IEEE 802.16-2004 is a standard for equipment operating in any frequencies below 11GHz and a coexistence protocol is currently being addressed in the 802.16h task group”.

c) In Section 3b the “unique solution” should refer to the coexistence problem for which there should be one solution in 802 which responds to the FCC wish for an industry wide consensus on this issue.