Contribution from 802.16 WG to Contention-Based Protocol Study Group:

IEEE Std 802.16-2004 (Air Interface for Fixed Broadband Wireless Access Systems) covers equipment that may operate over a wide range of frequencies, including the 3650-3700 MHz 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. The Working Group is currently in the early stages of developing the P802.16h project on "Improved Coexistence Mechanisms for License-Exempt Operation."

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

- Incompatibility with the scheduled transmissions concept: The requirement of a "Contention Based Protocol" (according to the conventional meaning of the term, but not according to the FCC's definition) interferes with a scheduled transmission protocol supporting Quality of Service.
- The requirement to schedule time for other transmissions is not necessary if there are no other systems in operation.
- Incompatibility 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 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 fully valid solution to the coexistence issues. In fact, the FCC R&O definition of "Contention Based Protocol" is broad enough to include protocols beyond those that are contention-based. The definition is consistent with the developments taking place in the P802.16h project 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:
"Systems compliant to IEEE Std 802.16-2004 can operate in the 3650-3700 Mhz band, and a coexistence protocol for such systems is currently being addressed in the P802.16h project".

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