

Comments of IEEE 802.16 Working Group on the Proposed P802.22 PAR Revision

The IEEE 802.16 Working Group has reviewed the draft P802.22 PAR Revision <<https://mentor.ieee.org/802.22/dcn/13/22-13-0138-03-0000-802-22-revision-par.pdf>> and offers the following comment.

The Scope, per the draft PAR revision, is:

*This standard specifies the air interface, including the cognitive **radio** medium access control layer (MAC) and physical layer (PHY), of point-to-multipoint **and point-to-point** wireless regional area networks comprised of a professional fixed base station with fixed and portable user terminals operating in the **bands that allow spectrum sharing such as VHF/UHF TV broadcast bands between 54 MHz to 862 MHz.***

We note the proposed addition of the term “point-to-point” to the scope, implying the draft standard will specify an air interface of point-to-point in addition to point-to-multipoint wireless regional area networks. To the extent that a point-to-multipoint system can be considered a point-to-point system when a fixed base station communicates with a single user terminal, this additional “point-to-point” text is superfluous since the capability is already included in the existing 802.22 standard. Alternatively, if the intention of this PAR revision is to broaden the PAR scope (for example, to include an air interface between a pair of base stations or a pair of user terminals), this would be a major change in the scope of the existing standard and would require full justification through a Five Criteria statement. However, the Five Criteria statement circulated on 1 November does not provide details justifying such a broadening of scope. We propose to remove the term “point-to-point” from the PAR revision, since there is currently no restriction on the application of a point-to-multipoint system with only a single user terminal communicating with a fixed base station in the 802.22 standard.

We are also concerned about the proposed text “bands that allow spectrum sharing such as” to the modified scope (noting that the word “allow” was not used in the draft PAR revision 02 that was reviewed by many EC members and dramatically alters the meaning of the scope). To our understanding some form of spectrum sharing is allowed in virtually all wireless bands, including licensed bands. Thus, the proposal would expand the scope of the standard from cognitive radio networks to radio networks applicable to any spectrum sharing method in any known band, including bands in which spectrum sharing is allowed but not normally used. Such a significant change of scope would need to be supported by an analysis in an accompanying Five Criteria statement addressing the expansion to all possible spectrum sharing methods. We propose to limit the expansion of the scope to bands requiring cognitive radio solutions.