| date | from (individual) | from (organization) | section | comment | response | agreed change |
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| 2015-11-02 | Osama Aboul-Magd | NesCom member | | Please use the present tense to describe the scope of the project. | Agreed | Change scope wording as follows: "This project specifies WirelessMAN-OFDMA TDD operation in exclusively-licensed spectrum with channel bandwidth up to 1.25 MHz, including 100 kHz and 1 MHz explicitly. The project amends Clause 12 of IEEE Std 802.16, adding a new system profile and amending other clauses as required to support the narrower channel widths." |
| 2015-11-09 | | 802.3 WG | PAR 4.2, 4.3 | These are very aggressive schedule dates, especially for a joint project. Please make sure they are realistic. | The scope is narrowly specified, and we think the schedule is reasonable. The MTT/SCC Joint Sponsor is not expected to be actively involved except in final ballot review. | |
| 2015-11-10 | | 802.11 WG | | In 2014, 802.16 was in the process of closing down open projects. What evidence do we have for the support of a new project? | There is a clear market requirement and interest in this work. Over 100 utilities have deployed 802.16 to support their grid operations. Changes to the 3.65 GHz band have left utilities looking for other options for licensed spectrum. The 700 MHz upper A block has been purchased by some utilities, but the 1 MHz channel width is not currently supported by any standard. 23 people, from four utilities, five equipment vendors, and several other organizations attended the teleconferences to develop this PAR. Please see 802.16-15-0049-00-Gdoc and scroll down to the attendance list. | |
| 2015-11-10 | | 802.11 WG | 5.1 | We do not believe that there are 15 interested parties when 802.16 has only 6 members. There may not be enough interest to support this new project. Are you expecting a lot of cross interest from the Microwave society? | 23 people, from four utilities, five equipment vendors, and several other organizations attended the teleconferences to develop this PAR. Please see 802.16-15-0049-00-Gdoc and scroll down to the attendance list. The equipment vendors have expressed their intention to actively participate in the development, in addition to existing members of 802.16. We also expect a few participants from academic and international research institutes. | |
| 2015-11-10 | | 802.11 WG | 7.1 | 3GPP develops NB-IOT (narrow band LTE for Internet of Things) which is similar in scope to this project scope – from 5.2b: “This system profile will specify operation in exclusively-licensed spectrum with channel sizes up to 1.25 MHz, including 1 MHz explicitly”. How is this project different from the 3GPP case? | NB-IOT is not of similar scope. This project is to amend the 802.16 standard. 3GPP standards are not compatible with the 802.16 standard. | |
| 2015-11-10 | | 802.11 WG | CSD 1.2.1 | a) How does this project justify the claimed market share of the cited studies, given that this appears to be one of many technologies in this competitive market place? | The statistic in 1.2.1 is not claiming a projected market for this amendment - it is an example of the overall market size. The marketplace for network infrastructure suitable for critical applications that supports narrow channels is competitive, but currently offers only proprietary solutions. The industry desires a standard to allow choice of vendors and better control of the product lifecycle | |
| 2015-11-10 | | 802.11 WG | CSD 1.2.1 | b) given that there are only 6 members of 802.16, that does not appear to match the list of “Multiple Vendors and numerous users” categories, what evidence of interests is there from participants in each category? | 23 people, from four utilities, five equipment vendors, and several other organizations attended the teleconferences to develop this PAR. Please see 802.16-15-0049-00-Gdoc and scroll down to the attendance list. The equipment vendors have expressed their intention to actively participate in the development, in addition to existing members of 802.16. We also expect a few participants from academic and international research institutes. | |
| 2015-11-10 | | 802.11 WG | CSD 1.2.1 | This response could be enhanced by including and building on the statement from 1.2.4 b) “At least five utilities in the US have either deployed or are testing a proprietary system based on a variation of IEEE 802.16 technology.” | Salt River Project and Great River Energy have explicitly indicated their support by posting to Mentor and on the 802.16 reflector. Puget Sound Electric and BC Hydro (Power Tech Labs) have been involved in the PAR definition process. Several other utilities are in phases of negotiation and are not publically expressing their interest at this time. | Add text to CSD 1.2.1b: Six posts expressing support for this standardization activity have been posted to 802.16 Mentor and the 802.16 reflector. |
| 2015-11-10 | | 802.11 WG | CSD 1.2.4 | Concern that the statements are somewhat vague. Is there evidence that could be identified for the cited systems? How much of a “variation” in the system is cited? Could supporting documents be cited from 802.16 document repository? | The proprietary system used as an example of feasibility is described in 802.16 contribution 802.16-15-0035-00-Gcon. Other vendors have somewhat different approaches that will be considered in the Task Group. | Add reference to this document to CSD: "See 802.16 contribution 802.16-15-0035-00-Gcon for further details." |
| 2015-11-10 | Radhakrishna Canchi | 802.20 WG | 5.2.b | •There are other standards (other than IEEE802.16), which covers the above scope of PAR, while supporting the operation with the channel sizes up to 1.25 MHz in the licensed spectrum below 3.5GHz.<br>•The scope needs to be modified while not duplicating the existing TDD standards. | We are not aware of other standards with similar scope. See next comment for further detail. | |
| 2015-11-10 | Radhakrishna Canchi | 802.20 WG | 7.1 | •The PAR answer for item #7.1 is incorrect.<br>•There other existing and Global TDD standards in Channel Sizes up to 1.25 MH:<br>-IEEE Std. 802.20-2008 (TDD Modes)<br>-ATIS –HC-SDMA- 2005<br>-ATIS –HC-SDMA- 2007<br>-ARIB STD-T97 Sep.2008 (JAPAN)<br>-ISO 25113:2010<br>•The PAR must answer Yes to item #7.1 and list all the above listed TDD standards | IEEE Std 802.20 (and, to our knowledge, the other referenced standards) supports an optional TDD mode operating in 625 KHz channels, which is inapplicable to the bandwidths of interest in this project. The fixed 625 KHz channel size would not efficiently use the 1 MHz spectrum that is an objective of this amendment, and precludes many required frequency reuse methods. The wideband TDD mode of the 802.20 standard only supports channel widths above 2.5 MHz. Consequently, we don't believe that the referenced standards are of similar scope. | |
| 2015-11-09 | James Gilb | NesCom member | 5.2.b | How can it be both "minor" and "consequential". Change "and if necessary, minor consequential amendments to other clauses" to be "and changes to other clauses required to implement the larger channel sizes." Move the first sentence to after the second sentence and rewrite the entire scope in present tense. | Agreed | Change scope wording as follows: "This project specifies WirelessMAN-OFDMA TDD operation in exclusively-licensed spectrum with channel bandwidth up to 1.25 MHz, including 100 kHz and 1 MHz explicitly. The project amends Clause 12 of IEEE Std 802.16, adding a new system profile and amending other clauses as required to support the narrower channel widths." |
| 2015-11-09 | James Gilb | NesCom member | | What are the specific frequency bands that are targeted. In the need for the project, VHF and UHF are listed, but no specific frequencies are indicated. Please specify the frequency range that is in scope. The ITU defines the frequency range for VHF/UHF to be 30 MHz to 3 GHz, which is a very large range. | The amendment is applicable to any of the carrier frequencies specified in the current base standard. The amendment is not making any changes to carrier frequencies. Section 5.5 of the PAR is explaining the need for narrower channels, and the mention of VHF/UHF is only to further illustrate the application, but not intended to limit the scope. | |
| 2015-11-09 | James Gilb | NesCom member | | Change "transport:" to be "transport;", i.e., use a semi-colon as with the other items in the list. | Agreed | transport; |
| 2015-11-09 | James Gilb | NesCom member | 5.4 | What is meant by "private" in "private licensed wireless access systems"? | Agreed | Added explanatory note in 8.1 |
| 2015-11-09 | James Gilb | NesCom member | 5.2.b | The upper limit on the channel sizes is 1.25 MHz, what is the lower limit? Also, "channel bandwidth" is typically used rather than "channel size", please change the PAR to reflect this. | Agreed | Add 100 KHz as exemplary lower bandwidth. Globally changed "channel size" to "channel bandwidth" |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 3.3 | Joint Sponsorship: I am opposed to joint sponsorship for an 802 standard unless there is a compelling reason why the other sponsor is required. I don't think that MTT/SCC has the relevant experience to support this project. | The MTT Society has been a joint sponsor of the base standard and its amendments since 2001. It would be inappropriate to further amend the standard without continuing the joint sponsorship. The MTT society has significant expertise in the field. The previous MTT liaison official has attended PAR comment resolution discussions and supports the continuation of the joint sponsorship but has recommended that the name of the contact official be updated. | Change MTT contact official to Nick Ridler. |

| date | from (individual) | from (organization) | section | comment | response | agreed change |
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| 2015-11-09 | James Gilb | IEEE 802 EC Member | 5.1 | What gives us confidence that there will be 15 people involved in this project? | There is a clear market requirement and interest in this work. Over 100 utilities have deployed 802.16 to support their grid operations. Changes to the rules in the 3.65 GHz band have left utilities looking for other options for licensed spectrum. The 700 MHz upper A block has been purchased by some utilities, but the 1 MHz channel width is not currently supported by equipment conforming to any standard. 23 people, from four utilities, five equipment vendors, and several other organizations attended the teleconferences to develop this PAR. Please see 802.16-15-0049-00-Gdoc and scroll down to the attendance list. | |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 5.2.b | How can it be both "minor" and "consequential". Change "and if necessary, minor consequential amendments to other clauses" to be "and changes to other clauses required to implement the larger channel sizes." Move the first sentence to after the second sentence and re-write in present tense. | Agreed | Change scope wording as follows: "This project specifies WirelessMAN-OFDMA TDD operation in exclusively-licensed spectrum with channel bandwidth up to 1.25 MHz, including 100 kHz and 1 MHz explicitly. The project amends Clause 12 of IEEE Std 802.16, adding a new system profile and amending other clauses as required to support the narrower channel widths." |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 5.2.b | What are the specific frequency bands that are targeted. In the need for the project, VHF and UHF are listed, but no specific frequencies are indicated. Please specify the frequency range that is in scope. The ITU defines the frequency range for VHF/UHF to be 30 MHz to 3 GHz. | The amendment is applicable to any of the carrier frequencies specified in the current base standard. The amendment is not making any changes to carrier frequencies. Section 5.5 of the PAR is explaining the need for narrower channels, and the mention of VHF/UHF is only to further illustrate the application, but not intended to limit the scope. | |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 5.2.b | The scope does not provide guidance on the required data rates or ranges, yet these are critical in developing the standard. Please provide numerical ranges for data rate and range in the scope of the standard. | The conditions relevant to determining the data rate and range are reflected in the base standard; for example, the spectral efficiency of existing modes is determined by the characteristics of the PHY. The actual data rate and range will be affected by the frequency and channel bandwidth. The data rate is not an input requirement, but a result of the specification of the narrow bandwidth operation. | |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 5.4 | Change "transport:" to be "transport;", i.e., use a semi-colon as with the other items in the list. | Agreed | transport; |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 5.4 | What is meant by "private" in "private licensed wireless access systems"? | Added explanatory note in 8.1 | Added explanatory note in 8.1 |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 7.3 and 7.4 | These items do not appear in the submitted PAR and should be removed from this document as we are not approving the content of the section. | Disagree. Elements 7.3, 7.4, and 7.5 are submitted to IEEE-SA along with the PAR, so the elements do reflect content that should be approved by the sponsor. For example, 7.4 explicitly asks a question regarding the view of the sponsor. If the sponsor does not see or review the proposed response, how can the PAR submission adequately represent the sponsor's view? | |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | 7.5 | does not appear in the submitted PAR and hence it should be deleted from this document. | Disagree. Elements 7.3, 7.4, and 7.5 are submitted to IEEE-SA along with the PAR, so the elements do reflect content that should be approved by the sponsor. For example, 7.4 explicitly asks a question regarding the view of the sponsor. If the sponsor does not see or review the proposed response, how can the PAR submission adequately represent the sponsor's view? | |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | CSD 1.1.1 | - By defining new radio parameters and potentially frequency bands, it seems likely that new managed object definitions will be required. Please change the response to reflect that new managed objects will be required. | | Change response to "No new definitions are anticipated, although existing ones may require amendment." |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | CSD 1.1.2 | - The frequency band hinted at includes TVWS, which while licensed spectrum, also allows unlicensed use as well. If TVWS spectrum is allowed in the scope, then a CA needs to be produced as there are existing IEEE 802 standards operating in the TVWS band. | The scope calls for operation in exclusively licensed spectrum. TVWS is not available as exclusively licensed spectrum. When and if the rules for any part of the spectrum currently included in TVWS change, those frequencies could then become exclusively licensed and thus applicable. | |
| 2015-11-09 | James Gilb | IEEE 802 EC Member | CSD 1.2.2 | - Is the base standard in compliance with 802.1AC and 802.1Q? If so then say so. If not, then the answer is no, but it would be an amendment to an existing standard for which it has been previously determined that compliance is not possible. | Agreed | change the response to 1.2.2 to simply state "Yes" |