

# P802.3 PARs ad hoc report

IEEE P802.3 comments to and responses from other WGs

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# P802.11 (revision)

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*Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY)*

- PAR, 6.1, b) — Std 802.11 definitely has registration activity (e.g., use of OUI and EUI-48). Possibly the revision has nothing that the RAC hasn't reviewed before (e.g., the RAC has reviewed for inclusion of CID into the standard). We would suggest checking the box and explaining the scope of RAC review (or why RAC review may not be needed) that might be expected in the revision.
- ✓ Response summary – 6.1.b answered yes. Subsequent action to add explanation in the “If yes” field.

# P802.15.3f (amendment)

*High Data Rate Wireless Multi-Media Networks*

*Amendment Extending the Physical layer (PHY) specification for millimeter wave to operate from 57.0 GHz to 71 GHz*

~~*Amendment extending the millimeter wave physical layer (PHY) to use the 64 to 71 GHz spectrum*~~

## General

- The frequency numbers do not make sense. The base standard specifies the mmWave PHY as operating in the "57.0—66.0 GHz range". Yet, the amendment title specifies an extension that overlaps with this frequency range (64—71 GHz). Documents also frequently indicate the extension adding 7 GHz to the range. The math simply doesn't work.
- Further, nowhere in the project documents can one unfamiliar with the base standard know the complete resulting frequency range. That would be helpful.
- ✓ Response – Agree. Title and other project information changed.

# P802.15.3f (amendment) cont.

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## PAR

- 2.1 Title — The title does not have the proper format. The system output will produce Amendment: Extending... The general problem on frequency range confusion could be simplified if the amendment title was “Extending the millimeter wave Physical Layer (PHY) to to operate from 57.0 GHz to 71.0 GHz”.
- ✓ Response – Title changed to be close to suggestion.

# P802.15.3f (amendment) cont.

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## PAR (cont.)

- 4.x project dates — Perhaps the specification changes to extend the range are simpler than those not familiar with the detail of the standard would expect, but such aggressive dates typically lead to NesCom comment, and questions from other 802 WGs. The Sponsor ballot date leaves 4 months for draft development and WG balloting, highly unusual. The first concern is that technical decisions have been made before approval of the project in violation of IEEE-SA procedures (excluding potentially interested parties) to enable such aggressive dates. Three months for SB even with conditional submittal is similarly hard to believe. There is no penalty to submitting more conservative dates on the PAR, while working to a more aggressive schedule within the TG.
- ✓ Response – less aggressive dates on new PAR.
- 5.1 expected number active on project — The number looks like WG members, not those expected to be active on P802.15.3f draft development and expert contribution/review.
- ✓ Response – Agree, participants estimate changed to 10.

# P802.15.3f (amendment) cont.

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## CSD

- 1.2.1, a) Broad Market — As previously pointed out, the frequency numbers don't add up, with the extension range overlapping the specified operational range already in Std 802.3.15.3. If the FCC didn't allow operation over the complete range supported in the existing standard, that should not be confused with the extension of the specified operating range in the standard. The current standard shows the fourth channel referenced in this item as being 63.720 GHz to 65.880 GHz so the 7 GHz and 64 GHz numbers appear to be wrong. If the FCC doesn't allow operation in the fourth channel, then the justification here doesn't seem to be right. Mixing up the number of channels being added to the standard and the channels that will be usable in the US with the amendment is neither the scope of work, nor market justification for the asserted additional 7 GHz provided by the amendment. Please make the math work, and make the changes to the standard clearly distinct from the changes made by the FCC extending the range that can be used by 802.15.3.
- ✓ Response – Agree, descriptions changes to make math work for frequencies and number of added channels.

# P802.15.3f (amendment) cont.

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## CSD (cont.)

- 1.2.3 — The answer to the question is not really a responsive answer. The amendment is distinct because 802.15.3 operation is not currently specified from 66 GHz to 71 GHz.
- ✓ Response – The text was changed significantly incorporating changes suggested by others than 802.3.

## P802.15.4 (revision)

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### *Standard for Low-Rate Wireless Networks*

#### PAR

- 6.1, b) — Std 802.15.4 definitely has registration activity (e.g., use of OUI and EUI-64). Possibly the revision has nothing that the RAC hasn't reviewed before (e.g., the RAC has already reviewed for inclusion of CID into the standard). We would suggest checking the box and explaining the scope of RAC review (or why RAC review may not be needed) that might be expected in the revision.
- ✓ Response: Comment accepted with helpful explanation in "If yes" field.



## P802.15.~~11~~13 (new)

*Multi-Gigabit per Second Optical Wireless Communications (OWC) with Ranges up to 200 meters Standard for ~~Multi-Gigabit/s Optical Wireless Communications~~*

### General

- The project documents do not give any indication why this project should be done in 802.15. There is no indication that there is any scope commonality with the rest of 802.15. There is no indication of the project having similarities to leverage from other 802.15 projects.
- ⊙ Response – Comment rebutted, with rationale why 802.15 does provide commonality.
- It gives no indication of distance the optical communications are to address.
- ✓ Response – 200m range added to scope.

## P802.15.~~11~~13 (new)

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### General (cont.)

- From the documents, it is impossible to make the determination if the new PAR should be assigned to the 802.15 WG, another WG, or a new WG.
- ⊙ Response – Comment rebutted with rationale why it belongs in 802.15. Minor edits to documents provide some rationale.
- The documents do not provide any indication to a reader if they are an interested party (e.g., as a manager, should I send one of my employees to the meetings).
- ⊙ Response – Agree, but don't think they need to do this.

# P802.15.~~4113~~113 (new) cont.

## PAR

- 2.1 Title — The title could apply to any 802 standard. In the past, people even discussed doing an optical wireless PHY for 802.3. Though optical is distinctive, there should be more restricting information in the title, e.g., something about range of the wireless communication — PAN.
- ✓ Response – Title changed: Multi-Gigabit per Second Optical Wireless Communications (OWC) with Ranges up to 200 meters.
- 5.1 expected number active on project — The number looks like WG members, not those expected to be active on P802.15.3f draft development and expert review.
- ✓ Response – Number changed to 15.
- 5.2 Scope — The scope does not align with the title (1 Mb/s is not multi Gb/s). The communication distance to be specified in the standard should be specified in the scope. The purpose describes industrial applications as the driving application, yet requirements of automation islands are very different from communication across a factory floor that can be a kilometer or more.
- ✓ Response – Scope changed to not disagree with Title (reworded to remove the 1 Mb/s).

# P802.15.~~44~~13 (new) cont.

## PAR (cont.)

- 5.2 Scope (cont.) – There is not enough information to understand the technical problems that will need to be addressed (e.g., how bad are the multi-path, cross talk and other issues).
- ⊙ Response – Title, scope and purpose rewritten significantly in response to multiple commenters, to better define the work; but scope remains very broad.
- 5.6 Stakeholders – The stakeholders do not appear to align with the purpose statement. Without reach information, are the stakeholders the manufacturers of the manufacturing equipment used to make aircraft and other transportation devices, or is the industry simply the users of the equipment that includes the proposed optical communication capabilities?
- ✓ Response – Changes to Purpose have them now aligned.
- 6.1, b) registration activity – If the standard is expected to specify the use of OUI, CID, EUI-48 or EUI-64 (i.e., belongs in the family of 802 standards), it does have registration activity.
- ✓ Response – Changed to yes and explanation provided.

# P802.15.~~44~~13 (new) cont.

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## CSD

- 1.2.1, a) Broad Market — 802.3 has industrial applications and is familiar with shorter range automation islands and longer factory floor requirements, but has no idea what a "personalized manufacturing cell" is other than jargon.
- ✓ Response -- "Potential applications include control of mobile robots in manufacturing cells or on assembly lines,..."
- Though less important, what relevance the speed of a train has for internal communications is not clear.
- ✓ Response – Remove high-speed.

# P802.15.~~4113~~113 (new) cont.

## CSD (cont.)

- 1.2.3 Distinct Identity — What is the phrase “in transparent media” supposed to mean? Wouldn’t the fiber optic cable used by 802.3 be transparent—yes? There is no indication if the optics are free space multidirectional or focused line of sight optics.
- ⊙ Response summary – “For visible light that could be water, oil, air, vacuum etc.” Other changes also address line of sight.
- 1.2.4 Technical Feasibility – Because there are virtually no technical restrictions on what the standard will specify, this response has little credibility (e.g., does the answer about devices being available hold for the entire frequency range specified for the standard, for all the unrestricted transmission modes, the range of operational speeds, etc.).
- ✓ Response summary – Significant rewrite asserting feasibility over frequency and speed range.