

**Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)**

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**Re:** [ ]

**Abstract:** [This document gives some comments to complete the technical considerations document of TG 7.]

**Purpose:** [To provide some issues to be discussed more in order to complete the technical considerations document of TG7]

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# ***Some Comments on TCD***

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# Motivations

- *We need to find the identities of TCD.***
- *What we find the identities of TCD  
may be the efficient way to complete  
the TCD.***

# Montreal Interim Meeting

- Application summary document was finished.***
- Some discussions on TRD***
- Reviews on TG7 timeline***
- Proposal of fast track***
- Discussions on new timeline and schedule***

# After Montreal Meeting to 1<sup>st</sup> Call

- ❑ *TRD was changed into TCD.*
- ❑ *Discussions on the background of the reason why TRD was changed into TCD and what the fast track is.*
- ❑ *Some discussions on TCD and some revisions of TCD*

# After 1<sup>st</sup> Call to 2<sup>nd</sup> Call (1)

1. Leave table 4 intact except delete the FOV row (row 2)

2. Delete section 6 entirely and move the content of table 4 to section 9

3. Add another row to table 4 to support the VLCC image sensor FOV concept

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## After 1<sup>st</sup> Call to 2<sup>nd</sup> Call (2)

Device characteristics needed in contributions to help with evaluation

Parameters impacted by device characteristics:

- PER
- Range
- Interference
- Link budget

Open up for TG7 discussion

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# What is the TCD ?

## Difference between Considerations and Requirements (TCD vs. TRD)

↵

The TG7 group decided to use the term “considerations” instead of “requirements” in order to adopt a less rigid and formal process with the intention to be able to develop the standard quickly. This document serves to provide guidance for development of technical contributions for the IEEE 802.15.7 standard. The contents of the document are expected to **be similar to** a technical requirements document. ↵

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- ❑ ***It is clear only that the phrase, be exactly same as, in version 6 was changed into ‘be similar to’ in version 7.***
- ❑ ***It is still not clear what we intend to do with TCD.***
- ❑ ***Current some issues on TCD are related to what the TCD is and what contents should be in TCD.***

# The important thing for TCD is to make a consensus

- We have a regard for the decision that we changed TRD into TCD for a return to our roots and much more organic and much less rigid and formal activities in fast track.*
- There is no consensus to us about what is the TCD, we are going to do what with TCD, and what contents should be in TCD.*

# Some Issues related to the Identities of TCD (1)

- ❑ ***Image Sensor Communication***
- ❑ ***Device Characteristics – FOV in cases of single PD and arrayed PD and detector sensitivity in table 4, section 6***
- ❑ ***Section 14. Form Factor – Implementation issue***
- ❑ ***Section 7. Frequency Usage – Compatibility of VLC receiver***

# Some Issues related to the Identities of TCD (2)

## □ *Section 19. Visibility Support – Is it essential or mandatory function ?*

### ▪ 19. Visibility support

↵

The PAR specifies that the MAC layer **should** support visible links [1]. In certain applications, the user may need to estimate the direction to and roughly aim at the target device for correct alignment for communication. Having support for visibility in the standard can give the user some useful features as follows:↵

- Help the link alignment,↵
- Help verify the link status, and↵
- Provide physical security (due to the beam visibility).↵

Visibility links **should be** considered in the MAC protocol design in order to support alignment and link status indication for communication [14]. ↵

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# Summary

- ❑ *We need to make a consensus about the identities of technical considerations document.*
- ❑ *The word of 'should' in TCD need to be changed into 'may' because it is not a standard.*