

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

Submission Title: [LB comment resolution by the reorganization of 5.5.3, 5.5.4 and 6.9.6 in D1 draft of TG7]

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Re: [Response to LB comment of TG7]

Abstract: [This document describes LB comment resolution by the reorganization of 5.5.3, 5.5.4 and 6.9.6 in D1 draft of TG7.]

Purpose: [To resolve LB comments by the reorganization of 5.5.3, 5.5.4 and 6.9.6 in D1 draft of TG7]

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LB comment resolution
by the reorganization of 5.5.3, 5.5.4
and 6.9.6 in D1 draft of TG7

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Current D1 Draft (5.5.3 and 5.5.4)

5.5.3 Cross Layer Consideration

5.5.3.1 Flicker Compensation

5.5.3.1.1 Intra-frame Flicker Compensation

5.5.3.1.2 Inter-frame Flicker Compensation

5.5.3.2 Light Dimming

5.5.3.2.1 VPM Dimming

5.5.3.2.2 Idle Pattern and Adjustment Time Dimming

5.5.3.2.3 Analog Dimming

5.5.3.3 Idle Pattern

5.5.3.4 Idle Pattern

5.5.4 Flicker Mitigation (Informative)

CIDs related to 5.5.3 and 5.5.4

1. CIDs from 76 to 136 except for a few comments are related to 5.5.3 and 5.5.4.
2. Especially, some CIDs of 28, 78, 95b, 101, 105, 107, 108, 113, 117, 124, 125, and 136 require that a clause and sub-clauses in 5.5.3 and 5.5.4 are deleted. Some CIDs require that they are merged or reorganized.
3. So, I would like to suggest some ideas, which mean 3 options, to resolve the above comments.

Option A (5.5.3 and 5.5.4)

5.5.3 Cross Layer Consideration

5.5.3.1 Flicker Compensation

5.5.3.1.1 Intra-frame Flicker Compensation

5.5.3.1.2 Inter-frame Flicker Compensation

5.5.3.2 Light Dimming

5.5.3.2.1 xxx Dimming (in document 10/0159/r)

5.5.3.2.2 VPM Dimming

5.5.3.2.3 Idle Pattern Dimming

5.5.3.2.4 Adjustment Time Dimming

5.5.3.2.5 Visibility Pattern Dimming (or xxx)

(5.5.3.2.6 Amplitude Dimming)

Option A (5.5.3 and 5.5.4) – cont.

- 5.5.3.2 (Light Dimming) is the general descriptions and introductions on light dimming.
- So, we had better reorganize it to describe all dimming technologies which have been discussed in TG 7 up to now.
- 5.5.3.2.1 xxx dimming indicates the dimming method in document 10/0159/r2.
- The idle pattern dimming and the adjustment time dimming are distinguished because their mechanisms are different a little bit.

Option A (5.5.3 and 5.5.4) – cont.

- Visibility pattern dimming indicates Explicit Visible/Dimming pattern (6.9.6.1) in D1 draft.
- Amplitude dimming (5.5.3.2.6) is the same as 5.5.3.2.3 in D1 draft. "Analog" is replaced with "amplitude" according to some editorial comments. This sub-clause can be deleted if unnecessary.
- 5.5.3.3 (Idle pattern dimming) and 5.5.3.4 (Idle pattern dimming) are deleted because the idle pattern is already described in the renovated sub-clause (5.5.3.2.3 Idle pattern dimming).

Option B (5.5.3 and 5.5.4)

- 5.5.3 Cross Layer Consideration
 - 5.5.3.1 Flicker Compensation
 - 5.5.3.1.1 Intra-frame Flicker Compensation
 - 5.5.3.1.2 Inter-frame Flicker Compensation
 - 5.5.3.2 Light Dimming
 - 5.5.3.2.1 VPM Dimming
 - 5.5.3.2.2 Idle Pattern and Adjustment Time Dimming
 - 5.5.3.2.3 Analog Dimming
 - 5.5.3.3 Idle Pattern
 - 5.5.3.4 Idle Pattern
- 5.5.4 Flicker Mitigation (Informative)

- Delete all of 5.5.3 and 5.5.4 because all of them are informative.

Option C (5.5.3 and 5.5.4)

5.5.3 Cross Layer Consideration

5.5.3.1 Flicker Compensation

5.5.3.1.1 Intra-frame Flicker Compensation

5.5.3.1.2 Inter-frame Flicker Compensation

5.5.3.2 Light Dimming

5.5.3.2.1 xxx Dimming (in document 10/0159/r)

5.5.3.2.2 VPM Dimming

5.5.3.2.3 Idle Pattern Dimming

5.5.3.2.4 Adjustment Time Dimming

5.5.3.2.5 Visibility Pattern Dimming (or xxx)

(5.5.3.2.6 Amplitude Dimming)

After the renovation
as option A

↓
Annex

Current D1 Draft (6.9.6)

6.9.6 Dimming and Flicker Mitigation

6.9.6.1 Explicit Visible/Dimming Pattern

6.9.6.2 VPM Dimming

6.9.6.3 CSK Dimming

6.9.6.4 PHY Type Independent Dimming

- 6.9.6 describes mainly dimming without flicker mitigation.
- 6.9.6.4 has the old text and figures in D0.
- Clause 6.9.6 need to be renovated to describe the actual dimming method according to the operating modes.

CIDs related to 6.9.6

1. CIDs from 538 to 562 are related to 6.9.6.
2. CIDs of 552 and 558 require that 6.9.6.4 will be merged into 5.5.3.1.2.
3. CIDs of 560 and 562 require the title and text of 6.9.6.4 will be changed.
4. CID of 95b require that 6.9.6 will be reorganized as a whole.
5. So, I would like to suggest an idea, which means option D, to resolve the above comments.

Option D (6.9.6)

6.9.6 Dimming

6.9.6.1 Dimming on Data Transmission Time

6.9.6.1.1 OOK-mode Dimming

6.9.6.1.2 VPM-mode Dimming

6.9.6.1.3 CSK-mode Dimming

6.9.6.2 Dimming on Idle Time

- The title of 6.9.6 is changed into “dimming” because 6.9.6 mainly describes only dimming.
- We can know easily the dimming method on each mode by this renovation.
- Option D distinguish the dimming on data transmission time from the dimming on idle time, respectively.

Option D (6.9.6) – cont.

6.9.6 Dimming

6.9.6.1 Dimming on Data Transmission Time

6.9.6.1.1 OOK-mode Dimming

6.9.6.1.2 VPM-mode Dimming

6.9.6.1.3 CSK-mode Dimming

6.9.6.2 Dimming on Idle Time

- The dimming method in document 10/0159/r2 is applied to OOK-mode dimming.
- 6.9.6.2 describes that 6(or 5) technologies shown in option A can be used selectively for dimming on idle time.
- We had better delete 6.9.6.4 (PHY type independent dimming) in D1 draft because it belongs to the dimming method described in new 6.9.6.2 and 5.5.3.2.

Summary

Option A – Option D

Option B – Option D

Option C – Option D

- Options A and D
 - Renovation of 5.5.3 and 6.9.6.
 - Delete 5.5.4.

- Options B and D
 - Delete 5.5.3 and 5.5.4.
 - Renovation of 6.9.6.
 - Easy

- Options C and D
 - Move 5.5.3 into Annex after its renovation like option A.
 - Delete 5.5.4.
 - Renovation of 6.9.6