

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

Submission Title: [comment CID 802 and proposed resolution]

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Source: [Taehan Bae, Jaeseung Son, Sridhar Rajagopal (*), Richard Roberts(**)] Company [Samsung Electronics Co.,LTD (*), Intel Corporation (**)]

Address [Dong Suwon P.O. Box 105, 416 Maetan-3dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742 Korea (*), Hillsboro, OR 97124 USA (**)]

Voice:[82-31-279-7293], FAX: [82-31-279-5130], E-Mail:[taehan.bae@samsung.com]

Re: []

Abstract: [Proposed resolution about comment CID 802, 709 and helping discussion]

Purpose: [Contribution to IEEE 802.15.7 TG-VLC]

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Comment CID 802, 709 and proposed resolution

2010. 06.24

Samsung Electronics

Technical comment CID 802

❖ From “15-10-0386-00-lb50 sorted combined comments taehan Bae

CID	Clause	Subclause	Page	Line	Comment	SuggestedRemedy	Taehan's suggested remedy
802	7.6.11	.2	222	29	Disagreement with content of this paragraph because it does not take into consideration the possible use of spatial reuse due to highly directional optics.	<p>Modify this text as shown below ...</p> <p>When spatial reuse due to directional optics is not present, and when the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, and when multiple channels are supported by the PHY, The channel hopping shoud can be used. In order to avoid interference and increase system capacity, pre assigned hopping pattern should be adopted.</p>	<p>accept in principle: change one word, "and" to "or".</p> <p>When the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, the channel hopping shoud be used. In order to avoid interference and increase system capacity, pre assigned hopping pattern should be adopted.</p> <p>==></p> <p>When spatial reuse due to directional optics is not present, or when the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, and when multiple channels are supported by the PHY, channel hopping can be used. In order to avoid interference and increase system capacity, pre assigned hopping pattern should be adopted.</p>

❖ “T-CID 802 – work this via email – postpone discussion until next conference call”

❖ From “15-10-0388-01-0007 Concall minutes may10-july10”

Suggested Remedy

Original Text	When the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, the channel hopping should be used. In order to avoid interference and increase system capacity, pre assigned hopping pattern should be adopted	Accept: the - Delete should - change into <u>can</u>
Commentator's remedy	When spatial reuse due to directional optics is not present, and when the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, and when multiple channels are supported by the PHY , channel hopping can be used. In order to avoid interference and increase system capacity, pre assigned hopping pattern should be adopted.	Accept Sentences in red are added by comment.
suggested remedy	If interference is being experienced from an adjacent light then hopping can be used to mitigate it. When spatial reuse due to directional optics is not present, and when the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, and when multiple channels are supported by the PHY , channel hopping <u>can</u> be used. In order to avoid interference and increase system capacity, pre-assigned hopping pattern should be adopted.	Accept: And add more sentences in blue to make it clear

Technical comment CID 709

❖ From sorted combined comments

CID	Name	Clause	Sub clause	Page	Line	Comment	Suggested Remedy
709	R. Roberts	7.3.	16	161	11	Disagreement with content of this paragraph because it does not take into consideration the possible use of spatial reuse due to highly directional optics.	Modify this text as shown below ... When spatial reuse due to directional optics is not present, and when the VLC communication system uses the same time slot between the adjacent light sources or cells with multiple channel communication, and when multiple channels are supported by the PHY, the channel hopping should can be used. In order to avoid interference and increase system capacity, pre assigned hopping pattern should be adopted.

❖ T-CID 802 and 709 have same comment, because two different sub-clause (7.6.11.2 & 7.3.16) has same contents.

❖ Suggestion : accept in principle:

1. rephrase text in sub-clause 7.3.16

The channel hopping command is used for the device or coordinator to send the channel hopping signal for avoiding the interference from an adjacent light sources. Pre-assigned hopping pattern should be adopted.

2. change the name of figure 99.

“Multiple channel assignment command format” → “Channel hopping command format”