

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

Submission Title: CSK related comment and resolution

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Re: []

Abstract: Proposing comment resolution

Purpose: Contribution to IEEE 802.15.7 TG-VLC

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CID 14 (Subclause 12.1, page 249)

Comment

- 1. "Pi, Pj, Pk" in the box of the Figure 133.
- 2. "opticalsource" in the Figure 133

Suggested Remedy

- 1. Slanted font : Pi, Pj, Pk
- 2. Insert the blank space between "optical" and "source"

Resolution/instruction to editor

- Accept

CID 60 (Subclause 12.4, page 250)

Comment

- We decided to change band plan in last SB. So, we have to reflect it to CSK band table and figure.

Suggested Remedy

- Change table 105, table 107, figure 135, figure 142, figure 144 based on new band plan.
- **Figure 143 also need update**

Resolution/instruction to editor

- Refer next slide

Resolution/instruction to editor

❖ Resolution/instruction to editor

■ Change table 105 with next table

Band (nm)	Color Code	Center (nm)	(x , y)
380-478	000	429	(0.169, 0.007)
478-540	001	509	(0.011, 0.733)
540-588	010	564	(0.402, 0.597)
588-633	011	611	(0.669, 0.331)
633-679	100	656	(0.729, 0.271)
679-726	101	703	(0.734, 0.265)
726-780	110	753	(0.734, 0.265)

Resolution/instruction to editor

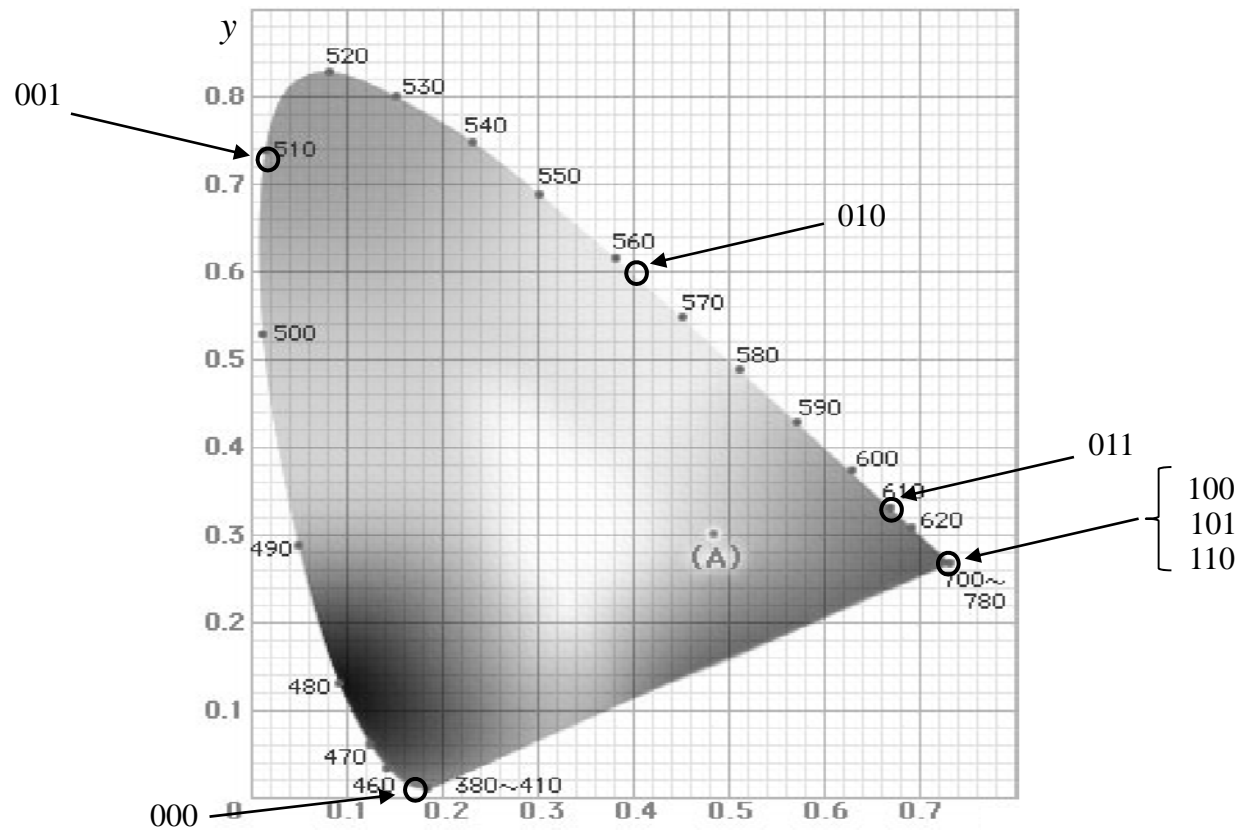
❖ Resolution/instruction to editor

■ Change table 107 with next table

Center of band (x,y)	xy coordinates values of symbols		
	4CSK [data] – (xp,yp)	8CSK [data] – (xp,yp)	16CSK [data] – (xp,yp)
(0.734 0.265)	[0 0] --> (0.402 0.597)	[0 0 0] --> (0.324 0.400)	[0 0 0 0] --> (0.402 0.597)
(0.402 0.597)	[0 1] --> (0.435 0.290)	[0 0 1] --> (0.297 0.200)	[0 0 0 1] --> (0.413 0.495)
(0.169 0.007)	[1 0] --> (0.169 0.007)	[0 1 0] --> (0.579 0.329)	[0 0 1 0] --> (0.335 0.298)
	[1 1] --> (0.734 0.265)	[0 1 1] --> (0.452 0.136)	[0 0 1 1] --> (0.324 0.400)
		[1 0 0] --> (0.402 0.597)	[0 1 0 0] --> (0.623 0.376)
		[1 0 1] --> (0.169 0.007)	[0 1 0 1] --> (0.513 0.486)
		[1 1 0] --> (0.513 0.486)	[0 1 1 0] --> (0.435 0.290)
		[1 1 1] --> (0.734 0.265)	[0 1 1 1] --> (0.524 0.384)
			[1 0 0 0] --> (0.734 0.265)
			[1 0 0 1] --> (0.169 0.007)
			[1 0 1 0] --> (0.247 0.204)
			[1 0 1 1] --> (0.258 0.101)
			[1 1 0 0] --> (0.546 0.179)
			[1 1 0 1] --> (0.634 0.273)
			[1 1 1 0] --> (0.546 0.179)
			[1 1 1 1] --> (0.357 0.093)

Resolution/instruction to editor

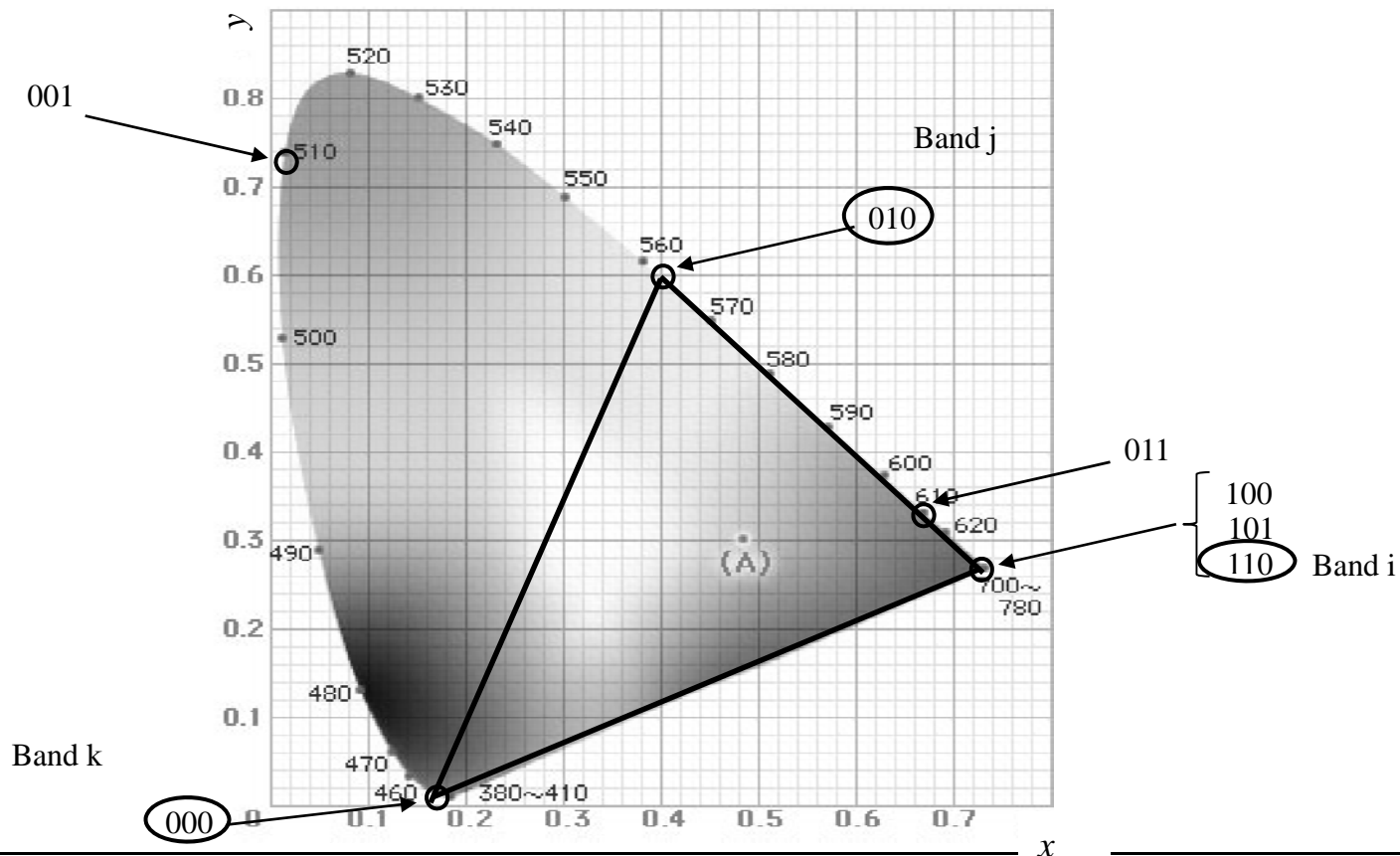
- ❖ Resolution/instruction to editor
 - Change Figure 135 with next figure



Resolution/instruction to editor

❖ Resolution/instruction to editor

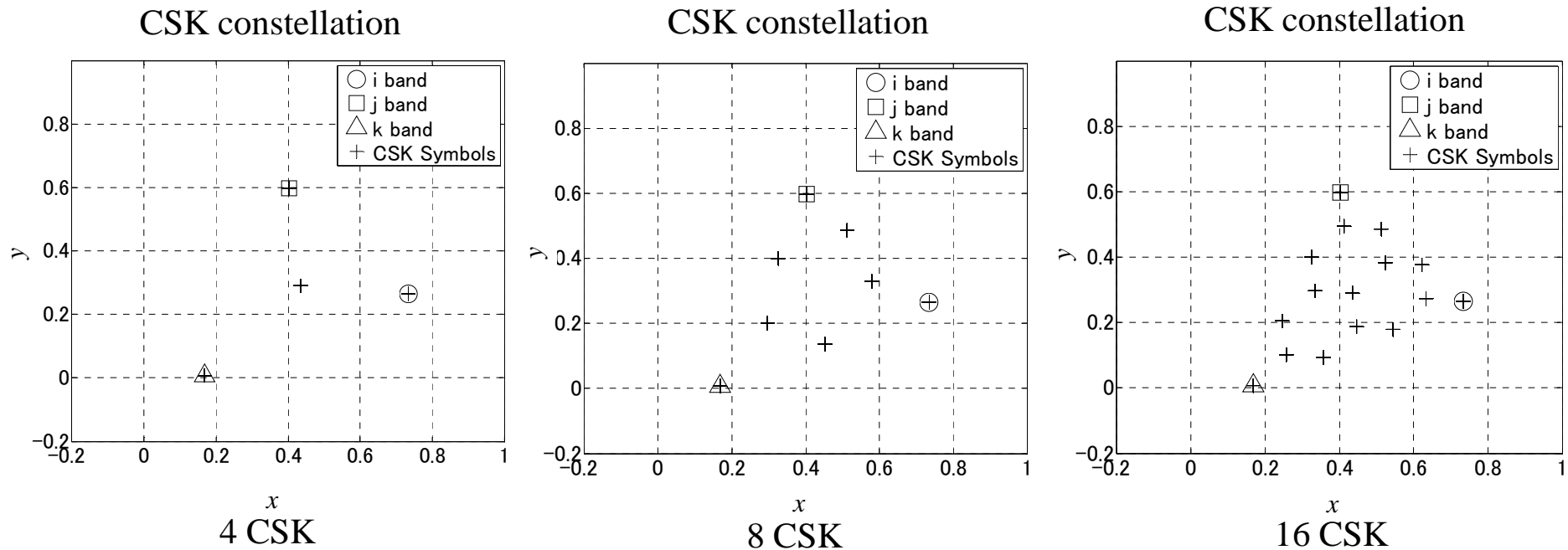
■ Change Figure 142 with next figure



Resolution/instruction to editor

❖ Resolution/instruction to editor

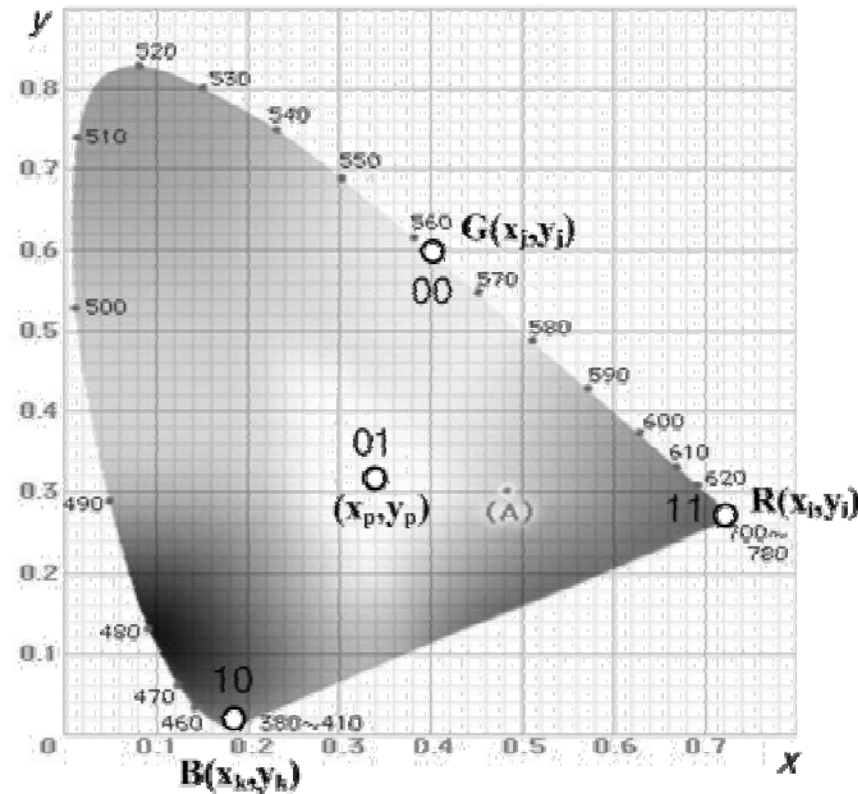
■ Change Figure 143 with next table



Resolution/instruction to editor

❖ Resolution/instruction to editor

■ Change Figure 144 with next table



CID 273 (Subclause 12.4, page 250)

Comment

- Missing article

Suggested Remedy

- Replace "The 3 vertices of CSK" with "The 3 vertices of the CSK"

Resolution/instruction to editor

- Accept

CID 15 (Subclause 12.4, page 251)

Comment

- Table 105

Suggested Remedy

- Remake the Table 105 as per the updated band plan in order to keep the consistency for bandplan between Table 75 (page 213) and Table 105.

Resolution/instruction to editor

- See CID 60

CID 16 (Subclause 12.4, page 251)

Comment

- Figure 135

Suggested Remedy

- Redraw the Figure 135 as per the updated bandplan

Resolution/instruction to editor

- See CID 60

CID 227 (Subclause 12.4, page 251)

Comment

- The band limits in Table 105 do not agree with those in Table 78.

Suggested Remedy

- Change the band limits in Table 105 according to Table 78. Calculate consistent values for the center wavelengths and the corresponding (x,y) coordinates. Also, move the center wavelengths in Figure 135 accordingly. The same is true for Figure 142.

Resolution/instruction to editor

- See CID 60

CID 230 (Subclause 12.5.1, page 252)

Comment

- Reference [B17] is based on an outdated version of Table 78

Suggested Remedy

- Adjust all values in reference [B17] and let the reference point to this corrected document.

Resolution/instruction to editor

- [B17] A. Yokoi, et. al., “More description about CSK constellation”, September 2010, IEEE 802.15 contribution 15-10-0724-00-0007, <https://mentor.ieee.org/802.15/dcn/10/15-10-0724-00-0007-csk-constellation-in-all-color-band-combinations.pdf>
- Waiting for Yokoi’s response

CID 275 (Subclause 12.6, page 254)

Comment

- Typo in Figure 140

Suggested Remedy

- Replace "[o 0 0]" with "[0 0 0]"

Resolution/instruction to editor

- Principle
- Instruction to Editor
 - Replace [o 0 1] with [0 0 1]

CID 228 (Subclause 12.7, page 255)

Comment

- The (x,y) coordinates in Table 107 are based on the values in Table 105. However, since Table 105 states wrong band limits –and thus (x,y) coordinates for the band centers, the same is true for Table 107.

Suggested Remedy

- Recalculate all (x,y) coordinates in Table 107 based on a corrected Table 105.

Resolution/instruction to editor

- See CID 60

CID 277 (Subclause 12.7, page 256)

Comment

- Missing article

Suggested Remedy

- Replace "CSK constellation" with "The CSK constellation"

Resolution/instruction to editor

- Accept

CID 17 (Subclause 12.7, page 256)

Comment

- Figure 142

Suggested Remedy

- Redraw the Figure 142 as per the updated bandplan.

Resolution/instruction to editor

- See CID 60

CID 18 (Subclause 12.7, page 256)

Comment

- Table 107

Suggested Remedy

- Remake the Table 107 as per the updated bandplan.

Resolution/instruction to editor

- See CID 60

CID 19 (Subclause 12.8, page 257)

Comment

- Figure 144

Suggested Remedy

- Redraw the Figure 144 as per the updated bandplan.

Resolution/instruction to editor

- See CID 60

CID 20 (Subclause 12.9, page 258)

Comment

- 1. "Pi, Pj, Pk" in the box of the Figure 145.
- 2. "opticalsource" in the Figure 145

Suggested Remedy

- 1. Slanted font : Pi, Pj, Pk
- 2. Insert the blank space between "optical" and "source"

Resolution/instruction to editor

- Accept