INSTRUCTIONS: Please use this form to enter your comments. When complete please submit with your vote as described in the Letter Ballot Notific

Name / Affiliation - These fields are required.

Email / Phone # - please enter a valid email address and contact telephone number. The editors may use these to contact you if there are questions

***Category* - This field is optional but if you leave blank, the system will automatically populate with General. If you enter Technical or Editorial, pleas**

***Page/Sub-clause/Line Number* - These fields are optional, but inclusion is strongly encouraged. If you wish to reference multiple pages, provide the**

***Comment/Proposed Change* - These fields are required. Enter your comment and proposed change in these fields, respectively. Use plain text char invalidates the comment.**

***Must be Satisfied?* - This field is required. Enter Yes or No and spell out completely. If you vote "No" (Disapprove), the data will be associated with vote from other comments that you may wish to submit. Only those comments that have a "Yes" in the "Must be Satisfied" box will be considered as**

CID	Name	Affiliation	Email	Phone #	Category	Clause	Sub-Clause	Page	Line #	Comment
1	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	3	3.2	2	27	PRF is already defined in the base standard
22	Laurent Ouvry	CEA-Leti	laurent.ouvry@cea.fr	+33438789388	Technical		4.4.1	4	4	It is unclear why a new PHY in the 2.4GHz band is needed, especially when 15.4f is an amendment to 15.4-2006 where a PHY is already available.
19	Clint Chaplin	Samsung Electronics	clint.chaplin@gmail.com	+1-408-768-0827	Editorial			4	26	"Change5.1.3.1 Association"
2	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	5	5.1.6.1	5	33	Technically this change is unnecessary, since CSMA-CA requires CCA one method of which is ALOHA which says the channel is always clear, (this is how is 4a UWB ALOHA gets allowed).

3	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	5	5.1.6.1	5	36	Technically this change is unnecessary, since the CCA ALOHA of the RFD-TX device will always report a clear channel, ie the CSMA-CA won't fail.
4	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	5	5.1.6.1	5	36	Why mention RFD-RX (an RX only device) in a paragraph about transmission?
5	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	5	5.1.6.1	5	42	Security procedures are already optional, so no need to say again that they are optional
6	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	6	6.2.17.2	8	1	In the CalTx_RMARKER_Offset description it says "For the UWB-LRP UWB PHYthe LSB of a time value...", the first "UWB-" not correct. Also there should be a space between "PHY" and "the".
7	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	6	6.3.1	8	25	Coding parameter, I think was for MSK but as the MSK PHY does not mention coding, I suspect this is not required any more.
8	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	6	6.3.1	9	3	Table 46 row for "Coding" relates to MSK. However the MSK PHY does not mention coding, so I suspect this is not required any more.
9	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	6	6.3.1	9	3	Table 46 "Coding" description ends with the sentence "This parameter does not apply to the UWB PHY." but as it is only for MSK PHY, it should not apply to all other PHY.
10	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	6	6.3.2	10	4	In RangingCounterStart description in Table 47 the hex value should be written begining with "0x", not just "x".
11	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	8	8.1.2	12	9	The word PHY should follow "LRP UWB" on this line.
21	Timothy Harrington	Zebra Technologies	tharrington@zebra.com	408-309-2503	Editorial	8.1.2.6	Table 68a	13	7	Incorrect Frequency for channel 1 and 2, the frequenmcies are correct in clauses and sub clauses 17.XXX
12	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	9	9.2	15	4	0.815ms should have space between number and units.

13	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	9	9.3	15	8	In sentence beginning "For the LRP UWB PHYthe LSB"... Need to add space betweem "PHY" and "the", and the 2 to power of minus 20 needs to be kept on a single line to make it readable.
14	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	17	17.1.2.1	23	13	The sentence "These four chips (1 symbol of pulses) of are removed in the PHY before the received pulse (Viterbi) decoding that of the user data" does not read correctly.
15	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	17	17.2.1.1	24	15	"1MHz" needs space between number and units
16	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	17	17.2.1.3	25	5	"2MHz" needs space between number and units
17	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	17	17.5	28	10	"1MHz" needs space between number and units
18	Billy Verso	DecaWave Limited	billy.verso@decawave.com	+353-87-2337323	Editorial	17	17.5	28	11	"2MHz" needs space between number and units
23	Laurent Ouvry	CEA-Leti	laurent.ouvry@cea.fr	+33438789388	Technical		17.6.3	29	5	The minimum bandwidth of 400 MHz at 10dB is smaller than the 500 MHz band after FCC part 15 rules except part 15.250 which is not applicable to all proposed channels
24	Laurent Ouvry	CEA-Leti	laurent.ouvry@cea.fr	+33438789388	Technical		17.6.3	29	7	The band plan is loose and the effect on other IEEE devices can vary a lot.

26	Huan-Bang Li	NICT	lee@nict.go.jp	81-468475104	TR		17.6.3	29	7	In Table 17.10, none of the three PSD masks satisfy Japanese and Korean regulations. The low end frequency of the PSD mask of Band 2 starts from 7121.92 MHz which is out of the regulated PSD mask of 7.25 GHz in Japan and is also out of the range of regulated PSD mask of 7.2 GHz in Korea. Also, the minimum bandwidth of 400 MHz does not satisfy the Japanese and Korean regulation rules. As an international standard, it should be satisfy the regulations of Asian countries such as Japan and Korea.
25	Laurent Ouvry	CEA-Leti	laurent.ouvry@cea.fr	+33438789388	Technical		17.7	30	3	There is no required sensitivity, nor max input power, nor adjacent channel protection requirements
20	Clint Chaplin	Samsung Electronics	clint.chaplin@gmail.com	+1-408-768-0827	Editorial			37	13	"E.1.5 Change Management of crystal offsets"

cation

relating to your comment. This information will NOT be made public.

se spell out completely.

details in the comment field. Please specify Table / Figure References in the comment field in addition to the Page and Line Number.

acters only. If you use any characters entered with "Ctrl" or "Alt" keys; or if you use symbols of any kind, if may result in an error which

your "No" (Disapprove) vote. This categorization is used to differentiate those comments submitted as part of your "No" (Disapprove) s part of your negative vote.

Proposed Change	Must Be Satisfied? (enter Yes or No)	Resolution Status	Resolution Detail
remove line	no	Accepted	Delete PRF acronym
Add to the coexistence assurance document more evidences to demonstrate the superiority of the proposed PHYcompared to the 15.4-2006 2.4GHz PHY.	Yes	Rejected	Invalid comment. This text has not changed in the last several revisions. The TG4f MSK PHY is proposed as a narrowband unspread PHY which coexists well other other services by operating on one of multiple frequencies chosen to avoid existing IEEE 802 standards. Refer to the TG4f PAR. TG4f was advised by the 802.15 Technical Editor to exclude adding text that would describe the advantages of each PHY for RFID applications.This comment was previously resolved in LB 63 CIDs 202, 274. In addition the 2.4 GHz band MSK PHY is discussed in Annex L.
"5.1.3.1 Association"	Yes	Accepted	Delete the word "Change"
Remove paragraph	yes	Accepted	Paragraph removed

Remove paragraph	yes	Accepted	Comment refers to wrong paragraph, However, commenter is correct; CCA can't fail for RFD TX device. Paragraph removed
Remove "RFD-RX and"	yes	Revised	Paragraph deleted in resolution of previous comment
Remove paragraph	yes	Rejected	Security is optional, but processing the frame as described in 7.2.1 isn't. The procedure in 7.2.1 allows for the case of devices in which the security is not implemented, but that is handled in that section.
Delete leading "UWB-", and add a space between the words "PHY" and "the".	yes	Accepted	Deleted "UWB" and added space.
Delete line	no	Accepted	Line deleted
Delete row	no	Accepted	Row Deleted
Either delete the sentence or make it more clear.	yes	Revised	Line deleted in resolution of previous comment
Change "x00000000" to "0x00000000"	yes	Accepted	Changed "x00000000" to "0x00000000"
change "LRP UWB" to "LRP UWB PHY"	yes	Accepted	Added the word "PHY"
Change to 6988.8 MHz and 7987.2 MHz respectively	Yes	Accepted	Corrected error
Add space between "0.815" and "ms"	no	Accepted	Added space

Add space betweem "PHY" and "the", make "2^{-20}" appear on a single line, by using a non-line-breaking hyphen or some other means.	yes	Revised	Added space; this corrected problem with line break
Change to "These four chips (1 symbol of pulses) are removed in the PHY before the received pulse (Viterbi) decoding"	yes	Accepted	Deleted extra words so that sentence reads correctly.
change to "1 MHz"	no	Accepted	Added space
change to "2 MHz"	no	Accepted	Added space
change to "1 MHz"	no	Accepted	Added space
change to "2 MHz"	no	Accepted	Added space
Add an explanation about the limitations of using a narrower channel than 500 MHz in the different channels and different regional places	Yes	Rejected	The minimum occupancy mask was chosen in order to force there to be some level of compatibility between different implementations, while allowing freedom to optimize signals for different purposes. It is only a minimum occupancy limit, is relative to peak PSD, and does not specify spectral symmetry. Wider bandwidths can comply with both this standard and regional regulatory requirements. In this manner, implementations with different bandwidths and different roll-offs can interact. It is designed to accommodate relevant regulatory requirements while allowing flexibility. (Also see resolution detail to CID 26 below for additional information regarding this topic)
Improve the coexistence assurance document with an analysis of the effect on 15.4a devices for all kind of 15.4f transmitter configurations (Bandwidth, channel)	Yes	Rejected	Current coexistence document provides explanation regarding coexistence with 15.4a. Channel specific details are not a factor. 15.4f devices are blink mode devices with short, infrequent, packets. Lower PRF and different modulation from 15.4a provide non-interfering coexistence. The maximum PSD limits of the 15.4f channel masks are matched to the maximum PSD limits of appropriate 15.4a bands.

Make the low end frequency of the PSD mask of Band 2 be higher than 7.25 GHz and the minimum bandwith being larger 450 MHz.	Yes	Rejected	The PSD masks provide a minimum and a maximum for each of the bands. The bands allow, but do not guarantee, compliance with all national regulatory rules. They provide the ability to design a compliant device that meets all known regulations with regard to frequency. This includes compliance with Korean and Japanese regulations. The mask upper limits correspond to 15.4a bands, while the lower limits guarantee a minimum level of interoperability (see CID 23 response). The upper limits allow for flexibility in choice of bandwidth, while not precluding compliance with Korean or Japanese regulations. The lower bound of band 2 can be utilized for indoor operation in the US, but a device does not have to reach down to that frequency to be fully compliant with the 4f standard. For example, a device may have a PSD lower bound of 7.2 GHz, or 7.25 GHz and still be fully compliant with the draft standard, and Korean or Japanese regulatory requirements.
Specify some lower bounds on typical receiver performances	Yes	Rejected	There is no reason to specify receiver performance. Some applications require very low receiver performance. Furthermore, 15.4f is intended for blink mode operation, in which adjacent channel operation is unlikely and is not considered to be interfering. A very wide band receiver capable of detecting blink packets on all three bands simultaneously, with non-optimal performance for each, is well within the scope of the 15.4f vision.
"E.1.5 Management of crystal offsets"	Yes	Accepted	Deleted the word "Change".