Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Clarification Of PRBS Seeds**
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Re:	IEEE 802.16 WG Recirculation Ballot #17a on P802.16-2004/Cor1/D2
Abstract	This contribution is for clarification of renumbering and permutation based on DL_PermBase parameter
Purpose	To incorporate the text modification proposed in this contribution into P802.16-2004/Cor1/D3.
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Clarification Of PRBS Seeds

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1. Problem Statement

The seed description of ranging code PRBS and the diagram are not consistent.

2. Specific text changes

=== Start text changes ====

[Modify the following text to section **8.4.7.3 Ranging codes** in Cor1/D2:]

The PRBS generator shall be initialized by the seed ~~b0...b154~~ b14...b0= 0,0,1,0,1,0,1,1,s0,s1,s2,s3,s4,s5,s6 where s6 is the MSB of the PRBS seed, and s6:s0 = UL_IDcellPermBase, where s6 is the MSB of UL_IDcellPermBase.

[Modify Figure 243 in Cor1/D2:]
Replace "MSB" In the diagram with "LSB", and "LSB" with "MSB".

~~[Modify the following text:]~~
~~***Change the third and fourth paragraphs as indicated:***~~

~~For example, the first 144 bit code obtained by clocking the PN generator as specified, withUL_IDcellPermBase = 0, the first code shall be 011110000011111...0011000001000 1... The next rangingcode is produced by taking the output of the 145th to 288th 121th to 264th clock of the PRBS, etc.~~

~~The number of available codes is 256, numbered 0..255. Each BS uses a subgroup of these codes, where thesubgroup is defined by a number S, 0 ≤ S ≤ 255. The group of codes will be between S and ((S+N+M+L)mod 256).~~

~~—The first N codes produced are for initial-ranging. For example, for the default case of two subchan-nels in the ranging channel, clock the PRBS 120144 120 _ (S mod 256) times to 120144 120 _ ((S + N -1) mod 256) - 1 + 144 times.~~

~~—The next M codes produced are for periodic-ranging. For example, for the default case of two sub-channels in the ranging channel, clock the PRBS 120144 120 _ ((N + S) mod 256) times to 120144 120 _ ((N+ M + S -1) mod 256) - 1 + 144 times.~~

~~—The next L codes produced are for bandwidth-requests. For example, for the default case of two sub-channels in the ranging channel, clock the PRBS 120144 120 _ ((N + M + S) mod 256) times to 120144 120_ ((N + M + L + S -1) mod 256) - 1 + 144 times.~~

[Modify Figure 204 **in IEEE802.16-2004**:]
Replace "MSB" In the diagram with "LSB", and "LSB" with "MSB".

[Modify Figure 262 **in IEEE802.16-2004**:]
Replace "MSB" In the diagram with "LSB", and "LSB" with "MSB".

[Modify **8.4.9.4.1 Permutation definition in IEEE802.16-2004**:]
Replace "b10" with "b0"
Replace "b9" with "b1"
Replace "b8" with "b2"
Replace "b7" with "b3"

Replace “b6” with “b4”
Replace “b4” with “b6”
Replace “b3” with “b7”
Replace “b2” with “b8”
Replace “b1” with “b9”
Replace “b0” with “b10” in the section text.

[Modify Figure 260 **in IEEE802.16-2004**:]
Replace “MSB” In the diagram with “LSB”, and “LSB” with “MSB”.

[Modify Figure 261 **in IEEE802.16-2004**:]
Replace “MSB” In the diagram with “LSB”, and “LSB” with “MSB” **ONLY** in the bottom registers.
Replace “b14” with “b0”
Replace “b13” with “b1”
Replace “b12” with “b2”
Replace “b11” with “b3”
Replace “b10” with “b4”
Replace “b9” with “b5”
Replace “b8” with “b6”
Replace “b7” with “b7”
Replace “b6” with “b8”
Replace “b5” with “b9”
Replace “b4” with “b10”
Replace “b3” with “b11”
Replace “b2” with “b12”
Replace “b1” with “b13”
Replace “b0” with “b14”
No changes on the upper two register arrays and the notations.

[Modify Figure 197 **in IEEE802.16-2004**:]
Replace “MSB” In the diagram with “LSB”, and “LSB” with “MSB”.

[Modify Figure 198 and Figure 199 **in IEEE802.16-2004**:]
Replace “MSB” In the diagram with “LSB”, and “LSB” with “MSB” **ONLY** in the bottom registers.
Replace “b14” with “b0”
Replace “b13” with “b1”
Replace “b12” with “b2”
Replace “b11” with “b3”
Replace “b8” with “b6”
Replace “b7” with “b7”
Replace “b5” with “b9”
Replace “b4” with “b10”
Replace “b3” with “b11”
Replace “b2” with “b12”
Replace “b1” with “b13”
Replace “b0” with “b14”
No changes on the upper three register arrays and the notations.

=== End text changes ====

3. References

[1] IEEE 802.16-2004
[2] P80216_Cor1_D2