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## Clarifications to permutations based on IDCell parameter

### 1 Statement of the problem

In sections 8.4.6.1.2.1.1 and 8.4.9.4.1 the IDcell parameter is used for several different permutations, which are not connected or dependent on each other. In addition, the IDcell parameter may sometime be defined by the frame preamble, and some other times by the TD\_Zone\_IE().

### 2 Proposed solution

Clarify for each permutation what is the correct IDCell to use, and at one instance change the parameter name to reduce some of the overloading it carries.

### 3 Specific text changes

[1. On page 619, line 52, modify the text as follows:]

Syntax	Size	Notes
TD_ZONE_IE() {		
Extended DIUC	4 bits	TD/ZONE_SWITCH = 0x01
Length	4 bits	Length = 0x02
Permutation	2 bits	0b00 = PUSC permutation 0b01 = FUSC permutation 0b10 = Optional FUSC permutation 0b11 = Adjcent subcarrier permutation
Use All SC indicator	1 bits	0 = Do not use all subchannels 1 = Use all subchannels
Transmit Diversity	2 bits	0b00 = No transmit diversity 0b01 = STC using 2 antennas 0b10 = STC using 4 antennas 0b11 = FHDC using 2 antennas
Matrix Indicator	2 bits	Antenna STC/FHDC matrix (see 8.4.8) 0b00 = Matrix A 0b01 = Matrix B 0b10 = Matrix C (applicable to 4 antennasonly) 0b11 = <i>Reserved</i>
<del>IDcell</del> DL_PermBase	<del>6</del> 5 bits	
PRBS ID	2 bits	
Reserved	<del>2</del> 9 bits	Shall be set to zero
}		

[1. On page 619, line 52, modify the text as follows:]

"b10..b6 = Five least significant bits of IDcell as indicated by the frame preamble [in the first downlink zone, and DL\\_PermBase following TD\\_Zone\\_IE\(\)](#), ~~except for zones marked by 'Use all SC indicator=1', where these bits shall be set to 1,~~ in the downlink. Five least significant bits of UL\_IDcell in the uplink.

b5..b4 = Set to the segment number + 1 as indicated by the frame preamble [in the first downlink zone, and the 2 bits of PRBS ID as indicated by the TD\\_Zone\\_IE\(\) in the downlink,](#) ~~except for zones marked by 'Use all SC indicator=1', where these bits shall be set to 1. Two most significant bits of UL\_IDcell in the uplink-~~"

[2. On page 567, line 26, modify the text as follows:]

"2) Renumbering the physical clusters into logical clusters using the following formula:  $\text{LogicalCluster} = \text{RenumberingSequence}(\text{PhysicalCluster} + 13 * \text{IDcell} \text{ DL\_PermBase}_i) \bmod 120$ . In the first PUSC zone of the downlink (first downlink zone) the default used ~~IDcell~~ DL\_PermBase is 0. When the 'Use all SC indicator=0' in the DL\_PermBase is replaced with 0.

*[3. On page 567, line 36, modify the text as follows:]*

"4) Allocating carriers to subchannel in each major group is performed by first allocating the pilot carriers within each cluster, and then taking all remaining data carriers within the symbol and using the same procedure described in 8.4.6.1.2.2.2 (with the parameters from Table 308, using the PermutationBase appropriate for each major group, PermutationBase12 for even numbered major groups and PermutationBase8 for odd numbered major groups) to partition the subcarriers into subchannels containing 24 data subcarriers in each symbol. Note that IDcell used for the first PUSC zone is ~~0~~ the preamble IDcell, otherwise a PUSC zone shall use the DL\_PermBase parameter in the TD\_Zone IE()."