
3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CDMA	Code Division Multiple Access
P-CCPCH	Primary Common Control Physical Channel
PN	Pseudo Noise
PSCH	Physical Synchronisation Channel
QPSK	Quadrature Phase Shift Keying
RACH	Random Access Channel
SCH	Synchronisation Channel

7.2 Code Allocation

Three SCH codes are QPSK modulated and transmitted in parallel with the primary synchronization code. The QPSK modulation carries the following information.

- The code group that the base station belongs to (5 bits; Cases 1,2,3)
- The position of the frame within an interleaving period of 20 msec (1 bit, Cases 1,2,3)
- The position of the slot within the frame (1 bit, Cases 2,3)
- SCH transport channel information, e.g. the location of the Primary CCPCH (3 bits, Case 3)

The modulated codes are also constructed such that their cyclic-shifts are unique, i.e. a non-zero cyclic shift less than 2 (Case 1) and 4 (Cases 2 and 3) of any of the sequences is not equivalent to some cyclic shift of any other of the sequences. Also, a non-zero cyclic shift less than 2 (Case 1) and 4 (Cases 2 and 3) of any of the sequences is not equivalent to itself with any other cyclic shift less than 8. The secondary synchronization codes are partitioned into two code sets for Case 1, four code sets for Case 2 and thirty two code sets (possibly overlapping) for Case 3. The set is used to provide the following information:

Case 1:

Table 2: Code Set Allocation for Case 1

Code Set	Code Group
1	0-15
2	16-31

The code group and frame position information is provided by modulating the secondary codes in the code set.

Case 2:

Table 3: Code Set Allocation for Case 2

Code Set	Code Group
1	0-7
2	8-15
3	16-23
4	24-31

The slot timing and frame position information is provided by the comma free property of the code word and the Code group is provided by modulating some of the secondary codes in the code set.

Case 3:

Code set k , $k=1:32$ is associated with Code group $k-1$. The slot information, the frame position information is provided by the comma free property of the code and the SCH transport channel information is provided by modulating some of the codes in the code set.

The following SCH codes are allocated for each code set:

Case 1

Code set 1: C_0, C_1, C_2 .

Code set 2: C_3, C_4, C_5 .

Case 2

Code set 1: C_0, C_1, C_2 .

Code set 2: C_3, C_4, C_5 .

Code set 3: C_6, C_7, C_8 .

Code set 4: C_9, C_{10}, C_{11} .

Case 3

Code set 1: C_0, C_1, C_2 .

Code set 2: C_3, C_4, C_5 .

Code set 3: C_6, C_7, C_8 .

Code set 4: C_9, C_{10}, C_{11} .

Code set 5: C_{12}, C_{13}, C_{14} .

Code set 6: C_0, C_3, C_6 .

Code set 7: C_0, C_4, C_7 .

Code set 8: C_0, C_5, C_8 .

Code set 9: C_0, C_9, C_{12} .

Code set 10: C_0, C_{10}, C_{13} .

Code set 11: C_0, C_{11}, C_{14} .

Code set 12: C_1, C_3, C_7 .

Code set 13: C_1, C_4, C_6 .

Code set 14: C_1, C_5, C_9 .

Code set 15: C_1, C_8, C_{10} .

Code set 16: C_1, C_{11}, C_{12} .

Code set 17: C_1, C_{13}, C_{15} .

Code set 18: C_2, C_3, C_8 .

Code set 19: C_2, C_4, C_9 .

Code set 20: C_2, C_5, C_6 .

Code set 21: C_2, C_7, C_{10} .

Code set 22: C_2, C_{11}, C_{13} .

Code set 23: C_2, C_{12}, C_{15} .

Code set 24: C_3, C_9, C_{13} .

Code set 25: C_3, C_{10}, C_{12} .

Code set 26: C_3, C_{11}, C_{15} .

Code set 27: C_4, C_8, C_{11} .

Code set 28: C_4, C_{10}, C_{14} .

Code set 29: C_5, C_7, C_{11} .

Code set 30: C_5, C_{10}, C_{15} .

Code set 31: C_6, C_9, C_{14} .

Code set 32: C_7, C_9, C_{15} .

The following subsections 7.2.1 to 7.2.3 refer to the three cases of PSCH/P-CCPCH usage as described in [7].