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(71) Applicant *(for all designated States except US)*: **QUALCOMM INCORPORATED** [US/US]; Attn: International Ip Administration, 5775 Morehouse Drive, San Diego, California 92121 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **LUO, Tao** [CA/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).

(74) Agent: **PATEL, Milan, I.**; Attn: International IP Administration, 5775 Morehouse Drive, San Diego, Califonia 92121 (US).

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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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(54) **Title:** ASSIGNMENT OF PRIMARY AND SECONDARY SYNCHRONIZATION CODE SEQUENCES TO CELLS IN A WIRELESS COMMUNICATION SYSTEM

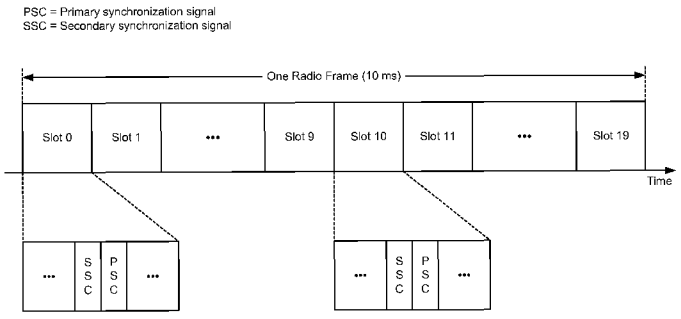

FIG. 2

(57) **Abstract:** Techniques for assigning primary synchronization code (PSC) sequences and secondary synchronization code (SSC) sequences to cells in a wireless communication system are described. At least one PSC sequence and multiple SSC sequences may be used for multiple cells in a Node B. In one design, the available SSC sequences in the system may be arranged into groups, with each group including M different SSC sequences. Additional groups of M SSC sequences may be formed with different permutations (e.g., different cyclic shifts) of each group of M SSC sequences. In one design, three SSC sequences $SSC(G_1)$, $SSC(G_2)$ and $SSC(G_3)$ may be used for three cells in one Node B. A first permutation including $SSC(G_3)$, $SSC(G_1)$ and $SSC(G_2)$ may be used for three cells in another Node B. A second permutation including $SSC(G_2)$, $SSC(G_3)$ and $SSC(G_1)$ may be used for three cells in yet another Node B.

WO 2008/144746 A1