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(71) Applicant (for all designated States except US): **INTER-DIGITAL TECHNOLOGY CORPORATION** [US/US];
3411 Silverside Road, Concord Plaza, Suite 105, Hagley Building, Wilmington, DE 19810 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHANDRA, Arty** [IN/US]; 31 Jeffrey Place, Manhasset Hills, NY 11040

(US). **WANG, Jin** [CN/US]; 34 Fairlawn Drive, Central Islip, NY 11722 (US). **TERRY, Stephen, E.** [US/US]; 15 Summit Avenue, Northport, NY 11768 (US).

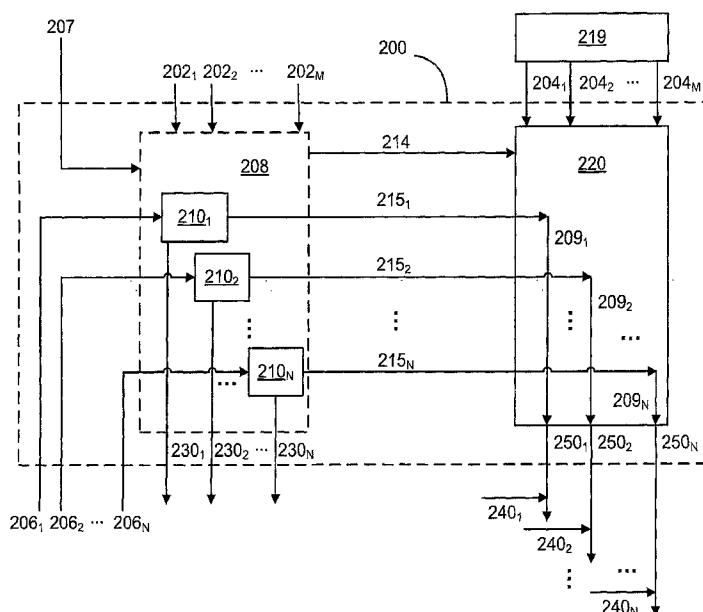
(74) Agent: **BALLARINI, Robert, J.**; Volpe And Koenig, P.C., United Plaza, Suite 1600, 30 S. 17th Street, Philadelphia, PA 19103 (US).

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(54) Title: QUALITY OF SERVICE BASED RESOURCE DETERMINATION AND ALLOCATION APPARATUS AND PROCEDURE IN HIGH SPEED PACKET ACCESS EVOLUTION AND LONG TERM EVOLUTION SYSTEMS



(57) Abstract: A wireless transmit receive unit (WTRU) and method are provided that process communication data in a hierarchy of processing layers including a physical (PHY) layer, a medium access control (MAC) layer and higher layers. A MAC layer transport format selection device defines an assignment of higher layer transmission data to parallel data streams based on data characteristics received from higher layers and physical resource information received from the PHY layer. The transport format selection device also generates transport format parameters for each data stream. A multiplexer component multiplexes the transmission data onto the parallel data streams in transport blocks in accordance with the data stream assignment and the respective transport format parameters generated by the transport format selection device and outputs the selectively multiplexed transmission data to the PHY layer for transmission over respective physical resource partitions. Preferably, the transport format selection device also generates physical transmission attributes such as modulation and coding rate (MCR), number of subframes per transmission time interval (TTI), duration of TTI, transmission power and hybrid automatic repeat request (HARQ) parameters.



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