WIRELESS COMMUNICATION SYSTEM WITH SELECTIVELY SIZED DATA TRANSPORT BLOCKS

ABSTRACT

A CDMA telecommunication system utilizes a plurality of protocol layers including a physical layer and a medium access control (MAC) layer such that the MAC layer provides data to the physical layer via plurality of transport channels (TrCHs). Each TrCH is associated with a set of logical channels. The physical layer receives blocks of data for transport such that the transport blocks (TBs) includes a MAC header and logical channel data for a selected logical channel associated with a given TrCH. Each TB has one of a selected limited finite number of TB bit sizes. The logical channel data for each TB has a bit size evenly divisible by a selected integer N greater than three (3). The MAC header for each TB has a bit size such that the MAC header bit size plus the logical channel data bit size equals one of the TB bit sizes. A fixed MAC header bit size is associated with each logical channel for a given TrCH and is selected such that each fixed MAC header bit size equals M modulo N where M is an integer greater than 0 and less than N, i.e. each MAC header for a given TrCH has a bit offset equal to M.

Figure 4