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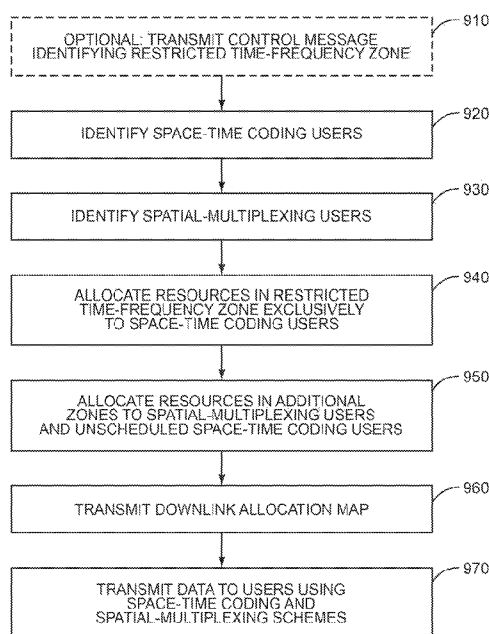


FIG. 9

(57) Abstract: Methods and apparatus for allocating time-frequency resources to mobile terminals in a wireless communications system in which time-frequency resources may be selectively used according to a first multiple-input multiple-output (MIMO) transmission scheme or a second MIMO transmission scheme that differs from the first MIMO transmission scheme. An exemplary method comprises, for at least a first scheduling instance, identifying a first group of mobile terminals corresponding to the first MIMO transmission scheme and a second group of mobile terminals corresponding to the second MIMO transmission scheme, allocating time-frequency resources in a first pre-determined time-frequency zone exclusively to mobile terminals belonging to the first group, and allocating time-frequency resources in one or more additional pre-determined time-frequency zones to one or more mobile terminals belonging to the second group. This method may be implemented in a base station of a WiMAX system, for example.