

Methods and apparatus for providing channel diversity to wireless terminals (WTs) in a manner that reduces the latency between the time a WT encounters satisfactory channel conditions are described. A plurality of communications channels with different physical characteristics are maintained in a cell by a base station (BS). Each WT monitors multiple channels and maintains multiple channel estimates at the same time so that rapid switching between channels is possible. Channel quality information is conveyed from each WT to the BS. The WT or BS selects a channel based on the measured channel quality. By supporting multiple channels and by introducing periodic variations into the channels in various embodiments, the time before a WT encounters a channel with good or acceptable channel conditions is minimized even if the WT does not change location. Multiple antennas are used at the BS to support numerous