

A reference signal management (RSM) program executing on a mobile device detects multiple reference signals, allocates those reference signals into groups, and performs reference signal management functions using information conveyed in the reference signals. The RSM program detects both broadband and narrowband reference signals and maintains updated groups of reference signals that are transmitted from access points with independent configurations or different radio technologies. Battery power of the mobile device is efficiently used to manage reference signals in heterogeneous network environments by preventing unnecessary handoffs, overhead downloads, access probes and new registrations. Reference signals are managed from both synchronous and asynchronous sectors and in idle mode as well as in connected state mode. The RSM program performs functions such as managing handoffs between access points, managing an idle mode of the mobile device, managing an active group of the detected reference signals, and collecting overhead parameters for the mobile device.