Base station hand-off mechanism for cellular communication system

The technology described in this listing relates in general to cellular communication systems, and is particularly directed to a new and improved communication control mechanism for controlling the hand-off of frequency channels through which communications are conducted between base stations of adjacent cells and a mobile transceiver as the mobile transceiver moves between those cells. The system described employs a channel hand-off communication control mechanism that uses the very channels that are employed for communications between base stations of adjacent cells and a mobile transceiver as the mobile transceiver moves between those cells, to locate the mobile transceiver relative to the base stations, so that the acquiring base station may readily place a narrowbeam channel on the mobile transceiver at hand-off. Each base station employs a phased array antenna, which allows the base station to controllably define its antenna coverage pattern with respect to any mobile transceiver, so as to minimize interference from one or more other transceivers, and thereby reduce frequency reuse distance.