

ABSTRACT

BASE STATION DEVICE, MOBILE STATION AND
WIRELESS COMMUNICATION SYSTEM, AND COMMUNICATION CONTROL
5 METHOD

One of sequence groups each specifying
reference signal sequences for respective radio resource
bandwidths is assigned to a base station and a different
10 one of the sequence groups is assigned to a neighboring
cell. The base station includes a scheduler configured
to allocate radio resources; a reporting unit configured
to report the allocated radio resources and a cyclic
shift amount to a mobile station; and a demodulating
15 unit configured to demodulate a signal received from the
mobile station based on one of the reference signal
sequences corresponding to one of the radio resource
bandwidths and the cyclic shift amount. Cell reuse is
applied to the reference signal sequences to be
20 transmitted using one resource unit, and sequence
hopping where different ones of the reference signal
sequences are assigned to consecutive subframes is
applied to the reference signal sequences to be
transmitted using a bandwidth greater than one resource
25 unit.

Fig.6