

ABSTRACT

MOBILE STATION, BASE STATION, COMMUNICATION
SYSTEM, AND COMMUNICATION METHOD

A disclosed communication system includes multiple mobile stations and a base station. The mobile
5 station maps a pilot channel comprising a CAZAC code to a signal including multiple frequency components arranged at regular intervals in a given frequency band, and transmits a transmission signal including the signal according to scheduling information. The mobile station
10 performs the mapping such that its transmission signal and transmission signals of other mobile stations using different frequency bands become orthogonal to each other on a frequency axis. The base station calculates the correlation between a received signal and a pilot
15 channel replica, performs channel estimation, and demodulates the received signal based on the result of channel estimation. The base station generates the pilot channel replica by mapping a pilot channel comprising a CAZAC code to a signal including multiple frequency
20 components arranged at regular intervals in a given frequency band.

FIG. 1