# DESCRIPTION

## Title of Invention

~~WIRELESS TRANSMITTER AND REFERENCE SIGNAL TRANSMISSION METHOD~~APPARATUSES, METHODS, AND INTEGRATED CIRCUITS FOR TRANSMITTING AND RECEIVING REFERENCE SIGNALS

## Technical Field

[0001] The present invention relates to a radio transmission apparatus and a reference signal transmission method.

## Background Art

[0002] For an uplink channel of LTE-Advanced, which is an evolved version of 3rd generation partnership project long-term evolution (3GPP LTE), using both contiguous frequency transmission and non-contiguous frequency transmission is under consideration (see Non-Patent Literature 1). That is, in communication from each radio communication terminal apparatus (hereinafter referred to as "terminal") to a radio communication base station apparatus (hereinafter referred to as "base station"), contiguous frequency transmission and non-contiguous frequency transmission are switched.

[0003] Contiguous frequency transmission is a method of transmitting a data signal and a reference signal (RS) by allocating such signals to contiguous frequency bands. For example, as shown in FIG.1, in contiguous frequency transmission, a data signal and a reference signal are allocated to contiguous transmission bands. In contiguous frequency transmission, a base station allocates contiguous frequency bands