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(54) **INSERTING VIRTUAL CARRIER IN  
CONVENTIONAL OFDM HOST CARRIER IN  
COMMUNICATIONS SYSTEM**

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(57) **ABSTRACT**

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May 24, 2021, now Pat. No. 11,616,610, which is a  
continuation of application No. 15/890,869, filed on  
Feb. 7, 2018, now Pat. No. 11,018,814, which is a  
continuation of application No. 15/056,635, filed on  
Feb. 29, 2016, now Pat. No. 9,912,450, which is a  
continuation of application No. 13/983,642, filed on  
Sep. 25, 2013, now Pat. No. 9,307,559, filed as  
application No. PCT/GB2012/050214 on Feb. 1,  
2012.

A mobile telecommunications system including mobile terminals of first type and second type configured to transmit uplink data to a network over a radio interface using plural sub-carriers. The mobile terminals of first type configured to transmit uplink data on a first group of the sub-carriers over a first bandwidth and the mobile terminals of second type configured to transmit uplink data on a second group of the sub-carriers within the first group of sub-carrier over a second bandwidth smaller than the first bandwidth. The mobile terminals of first type transmit random access request messages to a base station of the network requesting uplink radio resources on a first random access channel. The mobile terminals of second type transmit random access request messages to the base station of the network requesting uplink radio resources on a second random access channel on sub-carriers within the second sub-carrier group.

