

Amended

Exhibit 10

Exhibit 10

Claim 7 of U.S. Patent No. 10,44

"7. A mobile device in a wireless packet system using a frame structure of multiple frames for transmission, each frame comprising a plurality of time intervals, each time interval comprising a plurality of orthogonal frequency division multiplexing (OFDM) symbols, and each OFDM symbol comprising a plurality of frequency subcarriers, the mobile device configured to"

See e.g., 3GPP TS 36.300 V8.12.0 at pg. 23.

The LTE downlink uses orthogonal frequency division multiplexing (OFDM). In the downlink, OFDM symbols are transmitted.

5.1 Downlink Transmission Scheme

5.1.1 Basic transmission scheme based on OFDM

The downlink transmission scheme is based on conventional OFDM using a cyclic prefix. The sub-carrier spacing is $\Delta f = 15$ kHz. 12 consecutive sub-carriers during one slot correspond to one downlink resource block. In the frequency domain, the number of resource blocks, N_{RB} , can range from $N_{RB-min} = 6$ to N_{RB-max} .

In addition there is also a reduced sub-carrier spacing $\Delta f_{low} = 7.5$ kHz, only for MBMS-dedicated channels.

In the case of 15 kHz sub-carrier spacing there are two cyclic-prefix lengths, corresponding to normal and extended cyclic prefix OFDM symbols per slot respectively.

- Normal cyclic prefix: $T_{CP} = 160 \times T_s$ (OFDM symbol #0), $T_{CP} = 144 \times T_s$ (OFDM symbol #1-11)

See e.g., 3GPP TS 36.300 V8.12.0 at pg. 25.

A subframe contains two slots, and in each slot multiple OFDM symbols are transmitted. Each OFDM symbol includes a plurality of subcarriers.

6.2 Slot structure and physical resource elements

6.2.1 Resource grid

The transmitted signal in each slot is described by a resource grid of $N_{RB}^{DL} N_{sc}^{RB}$ subcarriers and N_{symb}^{DL} OFDM symbols.

The resource grid structure is illustrated in Figure 6.2.2-1. The quantity N_{RB}^{DL} depends on the downlink bandwidth configured in the cell and shall fulfil

$$N_{RB}^{min,DL} \leq N_{RB}^{DL} \leq N_{RB}^{max,DL}$$

where $N_{RB}^{min,DL} = 6$ and $N_{RB}^{max,DL} = 110$ are the smallest and largest downlink bandwidth, respectively, in the current version of this specification.

U.S. Patent No. 10,447,450: Claim 7(a)

"7. A mobile device in a wireless packet system using a frame structure of multiple frames for transmission, each frame comprising a plurality of time intervals, each time interval comprising a plurality of orthogonal frequency division multiplexing (OFDM) symbols, and each OFDM symbol comprising a plurality of frequency subcarriers, the mobile device configured to"

	<i>See e.g.</i> , 3GPP TS 36.211 V8.9.0 at pg. 45.
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