### Amended

Exhibit 10



Case 2:22-md-03034-TGB ECF No. 29-11, PageID.631 Filed 07/20/22 Page 2 of

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

### Case 2:22-md-03034-TGB, ECF No. 29-11 Page D 632 Filed 07/20/22 Page 3 of 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 intervals, each time interval comprising a plurality of orthogonal frequency division multiplexing (OFDM) symbols, and explanating plurality of frequency subcarriers, the mobile device configured to"

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 containing a plurality of frequency subcarriers, the mobile device configured to:

Honda's Accused Products include vehicles equipped with components and/to 4G/LTE networks and services, including services sold and provided by H

To the extent the preamble is considered a limitation, Honda's Accused Proof the '450 patent. *E.g.*,

For clarity, release 8 of the 36 series 3GPP specifications was frozen in Deceused as the basis for the first wave of LTE equipment. The LTE marketplace releases from Release 8 through Release 17. Though for ease of review released telebolomy, the same or functionally identical content exists in each correspondent.

### 5 Physical Layer for E-UTRA

Downlink and uplink transmissions are organized into radio frames with 10 ms duration. Two radio fra supported:

- Type 1, applicable to FDD,
- Type 2, applicable to TDD.

Frame structure Type 1 is illustrated in Figure 5.1-1. Each 10 ms radio frame is divided into ten equall frames. Each sub-frame consists of two equally sized slots. For FDD, 10 subframes are available for detransmission and 10 subframes are available for uplink transmissions in each 10 ms interval. Uplink are transmissions are separated in the frequency domain.

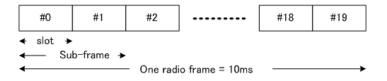


Figure 5.1-1: Frame structure type 1

Frame structure Type 2 is illustrated in Figure 5.1-2. Each 10 ms radio frame consists of two half-frame Each half-frame consists of eight slots of length 0.5 ms and three special fields: DwPTS, GP and UpPD DwPTS and UpPTS is configurable subject to the total length of DwPTS, GP and UpPTS being equal and 10ms switch-point periodicity are supported. Subframe 1 in all configurations and subframe 6 in common switch-point periodicity consist of DwPTS, GP and UpPTS. Subframe 6 in configuration with 1 periodicity consists of DwPTS only. All other subframes consist of two equally sized slots.

For TDD, GP is reserved for downlink to uplink transition. Other Subframes/Fields are assigned for euplink transmission. Uplink and downlink transmissions are separated in the time domain.



### Case 2:22-md-03034-TGB\_\_ECF\_No. 29-11 PageID 633 Filed 07/20/22 Page 4 or 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 intervals, each time interval comprising a plurality of orthogonal frequency division multiplexing (OFDM) symbols, and explurality 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 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 spacing is  $\Delta f = 15$  kHz. 12 consecutive sub-carriers during one slot correspond to one downline frequency domain, the number of resource blocks, N<sub>RB</sub>, can range from N<sub>RB-min</sub> = 6 to N<sub>RB-max</sub>

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

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

Normal cyclic prefix:  $T_{CP} = 160 \times Ts$  (OFDM symbol #0)  $T_{CP} = 144 \times Ts$  (OFDM symbol #0)

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

$$N_{\text{RB}}^{\text{min,DL}} \le N_{\text{RB}}^{\text{DL}} \le N_{\text{RB}}^{\text{max,DL}}$$

where  $N_{RB}^{min,DL} = 6$  and  $N_{RB}^{max,DL} = 110$  are the smallest and largest downlink bandwidth, response to this specification.



### Case 2:22-md-03034-TGB\_ ECF No. 29-11, PageID 634 Filed 07/20/22 Page 5 of 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 intervals, each time interval comprising a plurality of orthogonal frequency division multiplexing (OFDM) symbols, and a plurality of frequency subcarriers, the mobile device configured to"

See e.g., 3GPP TS 36.211 V8.9.0 at pg. 45.



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