Amended

Exhibit 11

Exhibit 11
Claim 15 of U.S. Patent No. 10,9

U.S. Patent No. 10,965,512: Claim 15(a)

"15. An orthogonal frequency division multiple access (OFDMA)-compatible mobile station that uses subcarriers in a fr
a time domain, the OFDMA-compatible mobile station comprising:"

15. An orthogonal frequency division multiple access (OFDMA)-compatible mobile station that uses subcarriers in a frequency domain and time slots in a time domain, the OFDMA-compatible mobile station comprising:	VW's Accused Products include vehicles equipped with components and/or to 4G/LTE networks and services, including services sold and provided by V To the extent the preamble is considered a limitation, VW's Accused Produc the '512 patent. *E.g.,* For clarity, release 8 of the 36 series 3GPP specifications was frozen in Dece was used as the basis for the first wave of LTE equipment. The LTE marketp releases from Release 8 through Release 17. Though for ease of review relea cited below, the same or functionally identical content exists in each corresp The LTE specification (starting at Series 36, Release 8) supports user equipn eNodeBs.

U.S. Patent No. 10,965,512: Claim 15(a)

"15. An orthogonal frequency division multiple access (OFDMA)-compatible mobile station that uses subcarriers in a fr
a time domain, the OFDMA-compatible mobile station comprising:"

4 Overall architecture

The E-UTRAN consists of eNBs, providing the E-UTRA user plane (PDCP/RLC/MAC/P
protocol terminations towards the UE. The eNBs are interconnected with each other by m
eNBs are also connected by means of the S1 interface to the EPC (Evolved Packet Core),
(Mobility Management Entity) by means of the S1-MME and to the Serving Gateway (S-
The S1 interface supports a many-to-many relation between MMEs / Serving Gateways a

The E-UTRAN architecture is illustrated in Figure 4 below.

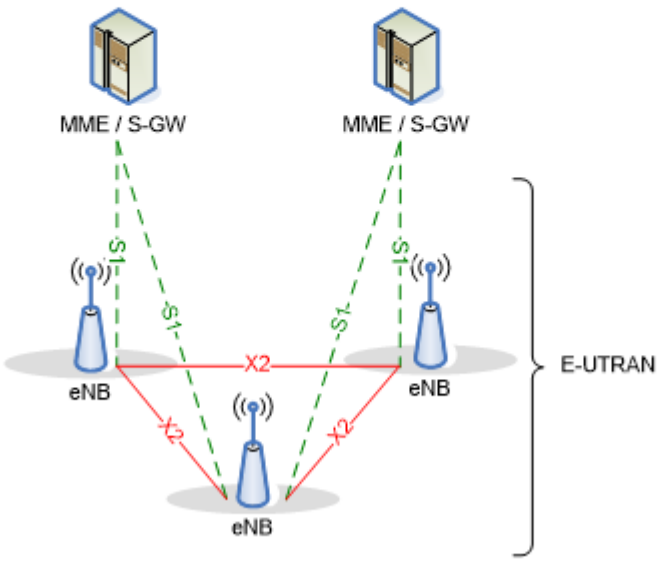

Figure 4-1: Overall Architecture

See e.g., 3GPP TS 36.300 V8.12.0 at pg. 15.

LTE uses OFDMA in the downlink transmission.

U.S. Patent No. 10,965,512: Claim 15(a)

"15. An orthogonal frequency division multiple access (OFDMA)-compatible mobile station that uses subcarriers in a fr
a time domain, the OFDMA-compatible mobile station comprising:"

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.
spacing is $\Delta f = 15$ kHz. 12 consecutive sub-carriers during one slot correspond to one dow
frequency domain, the number of resource blocks, N_{RB}, can range from $N_{RB\text{-}min} = 6$ to $N_{RB\text{-}$

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

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

- Normal cyclic prefix: $T_{CP} = 160 \times Ts$ (OFDM symbol #0), $T_{CP} = 144 \times Ts$ (OFDM sy
- Extended cyclic prefix: $T_{CP\text{-}e} = 512 \times Ts$ (OFDM symbol #0 to OFDM symbol #5)

  where $T_s = 1/(2048 \times \Delta f)$

In case of 7.5 kHz sub-carrier spacing, there is only a single cyclic prefix length $T_{CP\text{-}low}$ = 1
OFDM symbols per slot.

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

Each frame structure has time slots. For example, Frame structure type 1 for

4.1 Frame structure type 1

Frame structure type 1 is applicable to both full duplex and half duplex FDD. Each radio fr
$T_f = 307200 \cdot T_s = 10$ ms long and consists of 20 slots of length $T_{slot} = 15360 \cdot T_s = 0.5$ ms ,
subframe is defined as two consecutive slots where subframe i consists of slots $2i$ and $2i+$

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.