

*Amended*

*Exhibit 12*

# Exhibit 12

## Claim 23 of U.S. Patent No. 10,771,111

"23. A mobile device in an Orthogonal Frequency Division Multiplexing (OFDM) communication system, the m

23. A mobile device in an Orthogonal Frequency Division Multiplexing (OFDM) communication system, the mobile device comprising:

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 Prod the '302 patent. *E.g.*,

The LTE specification (Series 36, Release 8) supports user equipment (UE) signal (SRS) procedure.

For clarity, release 8 of the 36 series 3GPP specifications was frozen in Dec used 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 relea cited below, the same or functionally identical content exists in each correspo

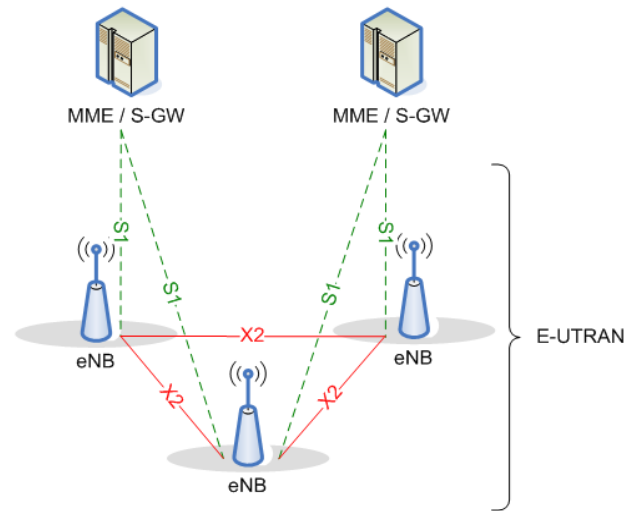
An LTE communication system has user equipments (UEs) transmit to and r

"23. A mobile device in an Orthogonal Frequency Division Multiplexing (OFDM) communication system, the m

## 4 Overall architecture

The E-UTRAN consists of eNBs, providing the E-UTRA user plane (PDCP/RLC/MAC/PHY) and protocol terminations towards the UE. The eNBs are interconnected with each other by means of the X2 interface. eNBs are also connected by means of the S1 interface to the EPC (Evolved Packet Core), more specifically to the Mobility Management Entity (MME) and to the Serving Gateway (S-GW) by means of the S1-MME and S1-MB interfaces respectively. The S1 interface supports a many-to-many relation between MMEs / Serving Gateways and eNBs.

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



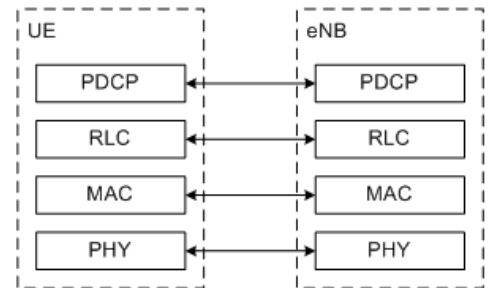
**Figure 4-1: Overall Architecture**

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

"23. A mobile device in an Orthogonal Frequency Division Multiplexing (OFDM) communication system, the m

### 4.3.1 User plane

The figure below shows the protocol stack for the user-plane, where PDCP, RLC and MAC (UE and eNB on the network side) perform the functions listed for the user plane in subclause 6, e.g. ciphering, scheduling, ARQ and HARQ;



**Figure 4.3.1-1: User-plane protocol stack**

See e.g., 3GPP TS 36.300 V8.12.0 at pg. 18.

LTE uses OFDM for both the downlink and the uplink. For the uplink, LTE is referred to a discrete Fourier Transform Spread (DFTS)-OFDM.

### 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  $N_{RB-max}$ .

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

# 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.