

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214266 A1

Jun. 27, 2024 (43) **Pub. Date:**

(54) DYNAMIC SWITCHING OF BLUETOOTH LE PHY FOR EXTENDED NON-CONNECTABLE ADVERTISEMENTS

(71) Applicant: FORD GLOBAL TECHNOLOGIES,

LLC, Dearborn, MI (US)

Inventor: Subharthi BANERJEE, San Jose, CA

(US)

(21)Appl. No.: 18/069,434

Filed: Dec. 21, 2022 (22)

Publication Classification

(51) **Int. Cl.**

H04L 41/0816 (2006.01)

H04L 12/40 (2006.01)H04L 12/66 (2006.01) (52) U.S. Cl.

CPC H04L 41/0816 (2013.01); H04L 12/40006 (2013.01); H04L 12/66 (2013.01); H04L

2012/40273 (2013.01)

ABSTRACT

Dynamic switching of BLE PHY is provided. A host vehicle includes a transceiver configured to operate in a first mode in which the transceiver supports communications without forward error correction or in a second mode in which the transceiver provides forward error correction and enhanced non-line-of-sight (NLOS) performance with higher current usage than in the first mode. The host vehicle further includes a TCU, programmed to receive trigger parameters indicative of whether to dynamically switch the modes of the transceiver, responsive to first trigger conditions being met by the trigger parameters, transition the BLE PHY of the transceiver from the first mode to the second mode, and responsive to second trigger conditions being met by the trigger parameters, transition the BLE PHY of the transceiver from the second mode to the first mode.

