

Exhibit 4

Trials@uspto.gov
571-272-7822

Paper 11
Date: May 5, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MERCEDES-BENZ USA, LLC,
Petitioner,

v.

NEO WIRELESS, LLC,
Patent Owner.

IPR2023-00079
Patent 10,965,512 B2

Before HYUN J. JUNG, CHARLES J. BOUDREAU, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

DECISION

Granting Institution of *Inter Partes* Review

35 U.S.C. § 314

Granting Motion for Joinder

35 U.S.C. § 315(c); 37 C.F.R. § 42.122

IPR2023-00079
Patent 10,965,512 B2

I. INTRODUCTION

A. *Background and Summary*

Mercedes-Benz USA, LLC (“Petitioner” or “Mercedes”) filed a Petition (Paper 1, “Pet.”) requesting institution of an *inter partes* review of claims 1–30 of U.S. Patent No. 10,965,512 B2 (Ex. 1001, “the ’512 patent”). Concurrently, Petitioner filed a Motion for Joinder seeking to be joined as a party to *Volkswagen Group of America, Inc. v. Neo Wireless, LLC*, IPR2022-01539 (“Volkswagen IPR”). Paper 3 (“Motion” or “Mot.”). Neo Wireless LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”) and a Response to Petitioner’s Motion for Joinder (Paper 7 (“Opp.”)). Petitioner subsequently filed a Reply in Support of its Motion for Joinder. Paper 9 (“Mot. Reply”).

Under 35 U.S.C. § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons that follow, we determine that institution of *inter partes* review is warranted on the same grounds instituted in the Volkswagen IPR and grant Petitioner’s Motion for Joinder.

B. *Real Parties in Interest*

Petitioner identifies Mercedes-Benz USA, LLC; Mercedes-Benz Intellectual Property GmbH & Co. KG; and Mercedes-Benz AG as real parties in interest. Pet. 2. Patent Owner identifies only itself as a real party in interest. Paper 5, 1.

C. *Related Matters*

Petitioner lists several civil actions in which Neo Wireless, LLC is the plaintiff and the ’512 patent is involved. Pet. 2–4. Patent Owner lists ten current proceedings involving the challenged patent and nine proceedings

IPR2023-00079
Patent 10,965,512 B2

that, according to Patent Owner, have been terminated. Paper 5, 1–3. The current proceedings include:

In Re: Neo Wireless, LLC Patent Litigation, No. 2:22-md-03034 (E.D. Mich.);

Neo Wireless LLC v. American Honda Motor Co., Inc., No. 2:22-cv-11403 (E.D. Mich.);

Neo Wireless, LLC v. Ford Motor Co., No. 2:22-cv-11402 (E.D. Mich.);

Neo Wireless, LLC v. Tesla Inc., No. 2:22-cv-11408 (E.D. Mich.);

Neo Wireless, LLC v. General Motors Co., No. 2:22-cv-11407 (E.D. Mich.);

Neo Wireless LLC v. Toyota Motor North America, Inc., No. 2:22-cv-11406 (E.D. Mich.);

Neo Wireless, LLC v. Volkswagen Group of America, Inc., No. 2:22-cv-11404 (E.D. Mich.);

Neo Wireless, LLC v. Nissan North America Inc., No. 2:22-cv-11405 (E.D. Mich.);

Neo Wireless, LLC v. Mercedes-Benz USA, LLC, No. 2:22-cv-11769 (E.D. Mich.); and

Neo Wireless, LLC v. FCA US LLC, No. 2:22-cv-11770 (E.D. Mich.).
Id. at 1–2.

Both parties also identify IPR2022-01539. Pet. 4; Paper 5, 2. We additionally note that Ford Motor Company has filed a petition substantially identical to the instant Petition, along with a motion for joinder as a petitioner in IPR2022-01539. IPR2023-00764, Papers 1, 3.

IPR2023-00079
Patent 10,965,512 B2

D. The '512 Patent (Ex. 1001)

The '512 patent issued on March 30, 2021, from an application filed on September 4, 2020, which is a continuation of several previously filed applications, the earliest of which was filed on January 20, 2005. Ex. 1001, codes (22), (45), (63), 1:10–29. The '512 patent also claims priority to a provisional application filed on January 29, 2004. *Id.* at code (60), 1:29–31.

The '512 patent provides “methods to define the transmission formats of the cell-specific and common pilot subcarriers that enable a receiver to perform different system functions.” Ex. 1001, 3:37–40. According to the '512 patent, “signal reception can be improved by manipulating phase values of the pilot subcarriers and by using power control.” *Id.* at 3:43–45.

The '512 patent describes that, for “multi-carrier wireless communications,” such as “orthogonal frequency division multiple access (OFDMA),” “network information provided by a portion of total subcarriers such as pilot subcarriers” facilitates “important system functions such as frequency synchronization and channel estimation.” Ex. 1001, 1:36–38, 3:55–57. The “pilot subcarriers are divided into two different groups according to their functionalities.” *Id.* at 3:10–12. “The first group is called ‘cell-specific pilot subcarriers,’ and will be used by the receiver 104 to extract information unique to each individual cell.” *Id.* at 3:17–19. “The second group is termed ‘common pilot sub-carriers,’ and are designed to possess a set of characteristics common to all base stations of the system.” *Id.* at 3:25–27.

E. Illustrative Claim

The '512 patent includes claims 1–30, all of which Petitioner challenges. Of the challenged claims, claims 1, 8, 15, and 23 are independent. Reproduced below is claim 1.

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.