

Exhibit A

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Paper 7
Entered: June 16, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VOLKSWAGEN GROUP OF AMERICA, INC.,
Petitioner,

v.

NEO WIRELESS LLC,
Patent Owner.

IPR2023-00086
Patent 10,833,908 B2

Before HYUN J. JUNG, MATTHEWS. MEYERS, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

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I. INTRODUCTION

A. *Background and Summary*

Volkswagen Group of America, Inc. (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–30 (the “challenged claims”) of U.S. Patent 10,833,908 B2 (Ex. 1001, the “’908 patent”). Paper 2 (“Petition” or “Pet.”). Neo Wireless LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Preliminary Response” or “Prelim. Resp.”).

An *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018). We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). Having considered the arguments and evidence presented by Petitioner and Patent Owner, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on at least one of the challenged claims of the ’908 patent. Accordingly, we do not institute an *inter partes* review of the challenged claims.

B. *Real Parties in Interest*

The parties identify themselves as the real parties in interest. Pet. 2; Paper 4, 1. Petitioner further states that Volkswagen Group of America, Inc. “is a subsidiary of Volkswagen AG.” Pet. 2.

C. *Related Proceedings*

The parties identify, as matters involving or related to the ’908 patent, *In re: Neo Wireless, LLC Patent Litigation, 2-22-md-03034* (E.D. Mich.)

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(“the NEO Wireless litigation”) and *Neo Wireless LLC v. Volkswagen Group of America, Inc. et al.*, 2-22-cv-11404 (E.D. Mich.). Pet. 3; Paper 4, 1–2.

The parties also identify other district court proceedings involving the ’908 patent, both current and former, including *Neo Wireless, LLC v. Volkswagen Group of America, Inc. et al.*, 1-22-cv-00076 (E.D. Tenn.) (terminated June 14, 2022). Pet. 2–3; Paper 4, 1–3.

D. The ’908 Patent

The ’908 patent is titled “Channel Probing Signal for a Broadband Communication System.” Ex. 1001, code (54). The ’908 patent explains that “[a] direct Sequence Spread Spectrum (DSSS) system is inherently capable of supporting multi-cell and multi-user access applications through the use of orthogonal spreading codes,” but notes that “a DSSS system using orthogonal spreading codes, may suffer severely from the loss of orthogonality in a broadband environment due to multi-path propagation effects, which results in low spectral efficiency.” *Id.* at 1:32–35, 1:38–42. The ’908 patent also explains that a Multi-Carrier (“MC”) “system such as an Orthogonal Frequency Division Multiplexing (OFDM) system is capable of supporting broadband applications with higher spectral efficiency” and “mitigates the adverse effects of multi-path propagation in wireless environments by using cyclic prefixes to extend the signal period as the data is multiplexed on orthogonal sub-carriers.” *Id.* at 1:45–51. The ’908 patent states, however, that “MC systems are vulnerable while operating in multi-user and multi-cell environments.” *Id.* at 1:56–58.

In view of the above, the ’908 patent sets forth “[a] broadband wireless communication system where both the Multi-Carrier (MC) and direct Sequence Spread Spectrum (DSSS) signals are intentionally overlaid

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together in both time and frequency domains.” Ex. 1001, 2:42–45. The ’908 patent explains that “[t]he MC signal is used to carry broadband data signal for its high spectral efficiency, while the DSSS signal is used for special purpose processing, such as initial random access, channel probing, and short messaging.” *Id.* at 2:47–51.

The ’908 patent describes an embodiment in which “a DSSS signal and a MC signal [are] fully overlaid or partially overlaid with an MC symbol or slot boundary in the time domain.” Ex. 1001, 7:45–47. Figure 13 of the ’908 patent is reproduced below.

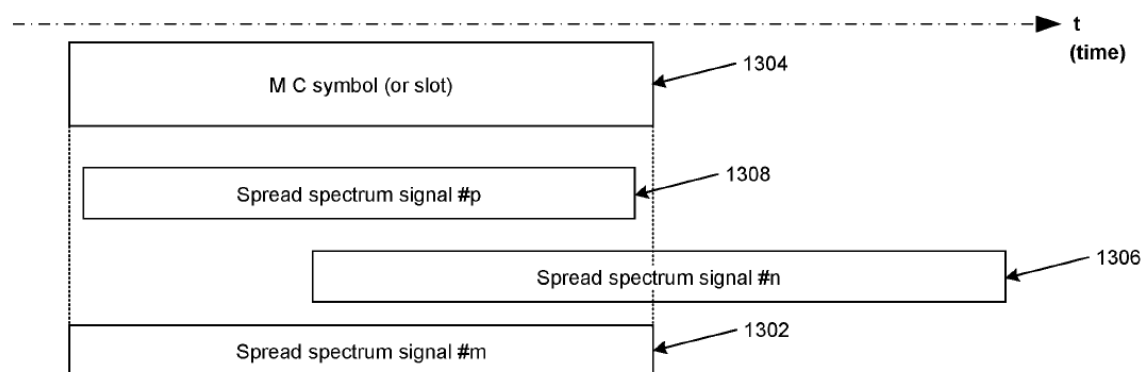


FIG. 13

Figure 13 shows DSSS signal 1302 that fully overlaps with MC symbol 1304 in the time domain and DSSS signal 1306 that overlaps with MC symbol 1304 only partially. *Id.* at 7:47–53. The ’908 patent further describes an embodiment in which guard periods are added to DSSS signal 1308 to “ensure that a well-designed DSSS sequence (with low PAR in frequency domain) causes little interference with the MC subcarriers even when there is time misalignment in a DSSS signal relative to the OFDM symbol period.” *Id.* at 8:7–11.

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