

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HYUNDAI MOTOR AMERICA,  
Petitioner,

v.

STRATOSAUDIO, INC.,  
Patent Owner.

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IPR2021-01303  
Patent 8,688,028 B2

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Before JUSTIN T. ARBES, HYUN J. JUNG, and KEVIN C. TROCK,  
*Administrative Patent Judges.*

ARBES, *Administrative Patent Judge.*

JUDGMENT  
Final Written Decision  
Determining All Challenged Claims Unpatentable  
*35 U.S.C. § 318(a)*

I. INTRODUCTION

*A. Background and Summary*

Petitioner Hyundai Motor America filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 11–20 of U.S. Patent No. 8,688,028 B2 (Ex. 1001, “the ’028 patent”) pursuant to 35 U.S.C. § 311(a).

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On January 26, 2022, we instituted an *inter partes* review as to all challenged claims on all grounds of unpatentability asserted in the Petition. Paper 9 (“Decision on Institution” or “Dec. on Inst.”). Patent Owner StratosAudio, Inc. filed a Patent Owner Response (Paper 18, “PO Resp.”), Petitioner filed a Reply (Paper 22, “Reply”), and Patent Owner filed a Sur-Reply (Paper 27, “Sur-Reply”). With our authorization provided by email, the parties also filed supplemental briefs addressing certain briefing submitted in related district court litigation. *See* Papers 33 (“Pet. Supp. Br.”), 34 (“PO Supp. Br.”); Exs. 1031, 1032.

A combined oral hearing with Case IPR2021-01305 was held on October 24, 2022, and a transcript of the hearing is included in the record (Paper 38, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 11–20 of the ’028 patent are unpatentable.

### *B. Related Matters*

The parties indicate that the ’028 patent is the subject of the following pending district court cases: *StratosAudio, Inc. v. Volkswagen Group of America, Inc.*, Case No. 2:22-cv-10524 (E.D. Mich.), and *StratosAudio, Inc. v. Hyundai Motor America*, Case No. 2:22-cv-01712 (C.D. Cal.). *See* Pet. 2–3; Paper 5, 1; Paper 32, 1. Petitioner filed a petition challenging claims of a patent related to the ’028 patent in Case IPR2021-01305 (instituted), and petitions challenging claims of other patents asserted in one or more of the district court cases in Cases IPR2021-01267 (instituted) and IPR2021-01371 (instituted). Volkswagen Group of America, Inc.

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(“Volkswagen”) filed a petition challenging claims 11, 14–16, and 18 of the ’028 patent in Case IPR2021-00716 (instituted, “the Volkswagen IPR”)<sup>1</sup> and petitions challenging claims of other patents asserted in one or more of the district court cases in IPR2021-00712 (instituted), IPR2021-00717 (denied), IPR2021-00718 (denied), IPR2021-00719 (denied), IPR2021-00720 (instituted), and IPR2021-00721 (instituted). Various parties filed petitions and motions for joinder to certain of the instituted proceedings, which were granted, in Cases IPR2022-00203, IPR2022-00204, IPR2022-00205, and IPR2022-00224.

### *C. The ’028 Patent*

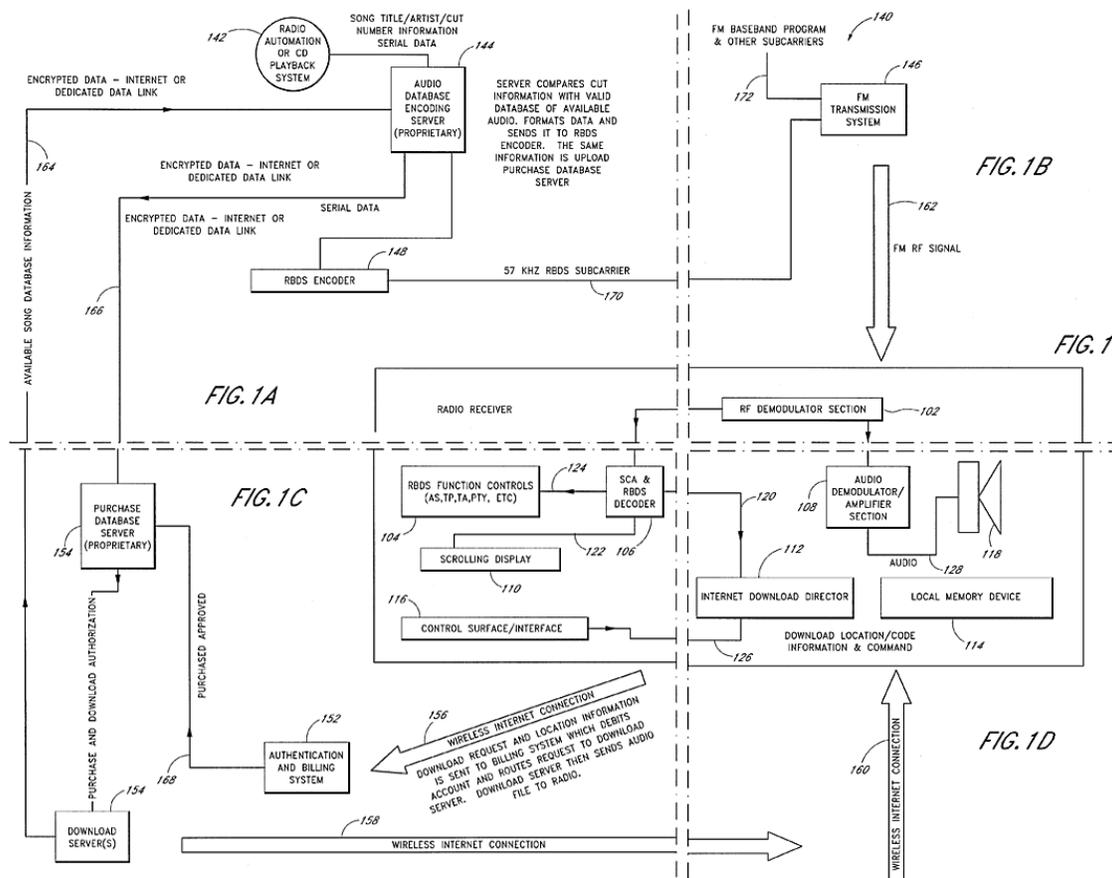
The ’028 patent discloses “[a] broadcast response system [that] provides, e.g., a radio broadcast listener with the ability to obtain media content such as music or speech while listening to the radio.” Ex. 1001, code (57). “From the early days of FM broadcast transmission, stations have included ancillary signals such as background music or reading services for the blind along with a main carrier signal.” *Id.* at col. 1, ll. 26–28. “The most current and widely used data transmission standard is the United States Radio Broadcast Data Systems (‘RBDS’) standard” in which a system “broadcast[s] a variety of program-related information,” such as station “call letters, station format, traffic alerts and scrolling text messages,” on a “subcarrier of a standard FM broadcast channel.” *Id.* at col. 1, ll. 32–53.

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<sup>1</sup> The Volkswagen IPR involves different prior art from the references asserted in this proceeding. In a concurrently entered final written decision in the Volkswagen IPR, we determine that Volkswagen has shown by a preponderance of the evidence that claims 11, 14–16, and 18 of the ’028 patent are unpatentable.

The '028 patent states that “[b]roadcasters using the RBDS standard can distribute information to a large number of users,” but “the standard does not allow individual users to respond to the broadcast information.” *Id.* at col. 2, ll. 26–29. For example, a user listening to the radio may like a particular song that he or she would like to purchase, but “must write down or remember the identifying information and then go to a store or online retailer to purchase the media.” *Id.* at col. 2, ll. 30–37. The '028 patent purportedly solves that problem by allowing the user to respond to the broadcast and purchase media content. *Id.* at col. 2, ll. 53–58.

The '028 patent includes Figures 1A–D, which are reproduced together below.



Figures 1A–D depict radio station 140, radio receiver 100, and various other devices. *Id.* at col. 4, ll. 22–25. Radio automation or CD playback system

142 “extract[s] information about songs or a radio program” from various sources and provides playlist information to Automatic Purchase System (APS) server 144, which matches the extracted information with information in a database of audio files available to download. *Id.* at col. 5, ll. 41–52. If such a file is available, APS server 144 provides download information to RBDS/RDS encoder 148. *Id.* at col. 5, ll. 52–55. RBDS/RDS encoder 148 then “transmits the RBDS/RDS information using the 57 khz RBDS/RDS subcarrier 170 to the FM transmission system 146. The RBDS/RDS subcarrier signal 170 is mixed by the FM transmission system 146 with the FM baseband program signal 172 and any other subcarriers.” *Id.* at col. 5, ll. 57–62. “The FM transmission system 146 then transmits an FM [radio frequency (RF)] signal 162 which is received by the radio receiver 100.” *Id.* at col. 5, ll. 62–63.

The ’028 patent describes various types of information that can be provided to the radio user using the data subcarrier signal, such as a song title, artist, album name, purchase price of the song, and IP address for the location where the digital version of the song is stored. *Id.* at col. 3, ll. 39–45, col. 5, ll. 4–13, 48–49. A “reference number” representing the information stored in a lookup table accessed by APS server 144 “can also be employed for ease of implementation.” *Id.* at col. 3, ll. 42–48.

RF demodulator section 102 “splits the [received FM RF signal] into an audio signal and a data signal.” *Id.* at col. 4, ll. 39–43. Audio demodulator amplifier section 108 receives the audio signal and converts it to audio signal 128 that can be output on speaker 118. *Id.* at col. 4, ll. 35–38, 53–54. RBDS/RDS decoder 106 receives the data signal and processes it to display information to the user on scrolling display 110. *Id.* at col. 4, ll. 39–47, col. 4, l. 66–col. 5, l. 3.

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