

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HYUNDAI MOTOR AMERICA,
Petitioner

v.

STRATOSAUDIO INC.,
Patent Owner.

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 8,166,081**

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LIST OF EXHIBITS¹

Ex-1001	U.S. Patent No. 8,166,081 B2, issued Apr. 24, 2012 (“’081 Patent”)
Ex-1002	Declaration of Dr. Kevin Almeroth
Ex-1003	Curriculum Vitae of Dr. Kevin Almeroth
Ex-1004	Prosecution History of U.S. Patent No. 8,166,081
Ex-1005	U.S. Patent No. 5,303,393 A, issued Apr. 12, 1994 (“Noreen”)
Ex-1006	U.S. Patent No. 6,628,928 B1, issued Sept. 30, 2003 (“Crosby”)
Ex-1007	WO Publication No. 2002/067447 A2, published Aug 29, 2002 (“Ellis-2002”)
Ex-1008	U.S. Patent Publication No. 2005/0227611 A1, published Oct. 13, 2005 (“Ellis-2005”)
Ex-1009	Email from Albright Clerk, dated May 4, 2021
Ex-1010	[INTENTIONALLY LEFT BLANK]
Ex-1011	[INTENTIONALLY LEFT BLANK]
Ex-1012	[INTENTIONALLY LEFT BLANK]
Ex-1013	[INTENTIONALLY LEFT BLANK]
Ex-1014	[INTENTIONALLY LEFT BLANK]
Ex-1015	[INTENTIONALLY LEFT BLANK]
Ex-1016	[INTENTIONALLY LEFT BLANK]
Ex-1017	[INTENTIONALLY LEFT BLANK]
Ex-1018	[INTENTIONALLY LEFT BLANK]

¹ Four-digit pin citations that begin with 0 are to the page stamps added by Hyundai in the bottom right corner of the exhibits. All other pin citations are to original page, column, paragraph, and/or line numbers.

Ex-1019	[INTENTIONALLY LEFT BLANK]
Ex-1020	Plaintiff's Preliminary Infringement Contentions, dated May 13, 2021, including Claim Chart for '081 Patent ("Infringement Contentions")
Ex-1021	Petitioner's Stipulation Letter to Patent Owner, dated July 16, 2021
Ex-1022	U.S. Patent No. 5,948,061 A, issued Sept. 7, 1999 ("Merriman")
Ex-1023	U.S. Patent No. 5,778,181 A, issued July 7, 1998 ("Hidary")

I. INTRODUCTION

Hyundai Motor America (“Petitioner”) requests *inter partes* review (“IPR”) of Claims 9-11, 15, and 23 of U.S. Patent No. 8,166,081 (“the ’081 Patent”) (Ex-1001), currently assigned to StratosAudio, Inc. (“Patent Owner”).

The ’081 Patent relates to systems “configured to associate a secondary media signal” (for example, an advertisement) “to a primary media signal (for example, a radio broadcast).” Particularly, the patent includes a receiver system that is capable of presenting concurrently multiple discrete media content on output modules such as a speaker and display. Unique identifiers can be implemented as part of a database that allows for the storage and/or retrieval of the identifier and/or its associated data, and for reports to be generated relating to the performance of various aspects of the system by the unique identifiers. These embodiments of the ’081 Patent, such as combining multiple media content, concurrently presenting the same to a user, and using unique identifiers to retrieve associated data, were well-known in the art. The ’081 Patent attempts to claim simple combinations of these prior art components.

The prior art in this Petition demonstrates that Claims 9-11, 15, and 23 of the ’081 Patent involved well-known design choices in the art of media enhancement technology. This prior art also shows that a POSITA understood how to use these

design choices to address well-known interactive streaming and/or targeted content issues in media enhancement technologies. Ex-1002² ¶¶44-51; Exs-1022-1023.

This Petition presents grounds of unpatentability not addressed, and not cumulative to those addressed, during patent prosecution, as discussed further in Section XII below. The grounds presented in this Petition are more than reasonably likely to prevail and this Petition should be granted.

II. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

Real Parties-in-Interest: Petitioner identifies the following real parties-in-interest: Hyundai Motor America and Hyundai Motor Company.

Related Matters: Patent Owner has asserted the '081 Patent against Petitioner in *StratosAudio Inc. v. Hyundai Motor America*, No. 6:20-cv-01125-ADA (W.D. Tex.). The '081 Patent has also been asserted by Patent Owner against (1) Volkswagen Group of America, Inc. in *StratosAudio, Inc. v. Volkswagen Group of America, Inc.*, No. 6:20-cv-1131; (2) Mazda Motor of America, Inc. in *StratosAudio, Inc. v. Mazda Motor of America, Inc.*, No. 6:20-cv-01126; (3) Subaru of America, Inc. in *StratosAudio, Inc. v. Subaru of America, Inc.*, No. 6:20-cv-01128; and (4) Volvo Cars of North America, LLC and Volvo Cars USA, LLC in *StratosAudio, Inc. v. Volvo Cars of North America, LLC*, No. 6:20-cv-01129, all

² The Petition is supported by a declaration from Dr. Kevin Almeroth, an expert in computer science, networked multimedia systems, streaming media, and enhanced multimedia-based applications. *Id.* ¶¶1-30; Ex-1003.

of which are pending in the United States District Court for the Western District of Texas. Moreover, Petitioner Volkswagen Group of America, Inc. filed a petition for *inter partes* review of the '081 Patent in *Volkswagen Group of America, Inc. v. StratosAudio, Inc.*, IPR2021-00721 (PTAB Apr. 16, 2021) (“the 721 IPR”).

Lead and Back-Up Counsel:

- Lead Counsel: Ryan K. Yagura (Reg. No. 47,191), O’Melveny & Myers LLP, 400 South Hope Street, 18th Floor, Los Angeles, CA 90071 (Telephone: 213-430-6000; E-Mail: ryagura@omm.com).
- Backup Counsel: Nicholas J. Whilt (Reg. No. 72,081), O’Melveny & Myers LLP, 400 South Hope Street, 18th Floor, Los Angeles, CA 90071 (Telephone: 213-430-6000; E-Mail: nwhilt@omm.com); Caitlin P. Hogan (Reg. No. 61,515), O’Melveny & Myers LLP, 7 Times Square, Times Square Tower, New York, NY 10036 (Telephone: 212-326-2000; E-Mail: chogan@omm.com); Clarence A. Rowland (Reg. No. 73,775), O’Melveny & Myers LLP, 400 South Hope Street, 18th Floor, Los Angeles, CA 90071 (Telephone: 213-430-6000; E-Mail: crowland@omm.com).

Service Information: Petitioner consents to electronic service by email to StratosAudioHyundaiOMM@omm.com. Please address all postal and hand-delivery correspondence to lead counsel at O’Melveny & Myers LLP, 400 South

Hope Street, 18th Floor, Los Angeles, CA 90071, with courtesy copies to the email address identified above.

III. FEE AUTHORIZATION

Pursuant to 37 C.F.R. § 42.15(a) and § 42.103(a), the PTO is authorized to charge any and all fees to Deposit Account No. LA500639.

IV. GROUNDS FOR STANDING

Petitioner certifies that the '081 Patent is available for IPR, this Petition is timely filed, and Petitioner is not barred or estopped from requesting IPR on the grounds presented.

V. PRECISE RELIEF REQUESTED

Petitioner requests cancellation of Claims 9-11, 15, and 23 of the '081 Patent under 35 U.S.C. § 103 on the following grounds:

- **Grounds 1 and 2:** Claims 9, 15, and 23 are rendered obvious by U.S. Patent No. 5,303,393 (“Noreen”) alone and/or Noreen in view of U.S. Patent No. 6,628,928 (“Crosby”);
- **Ground 3:** Claims 10 and 11 are rendered obvious by Noreen in view of Crosby and WO Publication No. 2002/067447 (“Ellis-2002”);
- **Grounds 4 and 5:** Claims 9-11, 15, and 23 are rendered obvious by U.S. Patent Publication No. 2005/0227611 (“Ellis-2005”) alone and/or Ellis-2005 in view of Crosby. *See also* Ex-1002 ¶¶35-39, 43.

VI. THE CHALLENGED PATENT

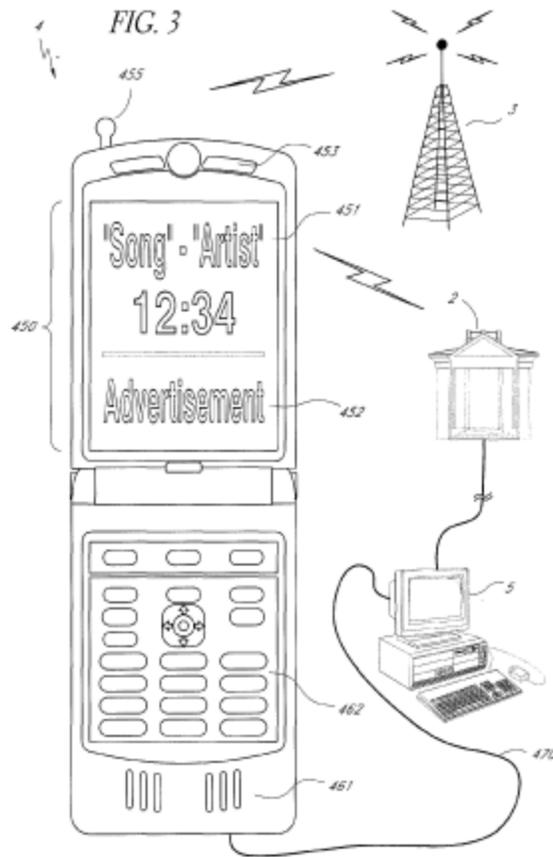
The '081 Patent generally relates to “systems and methods for associating an advertising media signal with another media signal.” Ex-1001, 1:19-20. The '081 Patent describes one embodiment wherein “a radio station transmits a song that is received by a user-enabled device, such as a cellular phone with a radio.” *Id.* 3:27-29.

For the reasons set forth below, however, the claims are directed to well-known and predictable prior art elements in media enhancement systems as reflected, for example, in independent Claim 9. The dependent claims simply add minor functional or structural variations.

9. A system for combining multiple media comprising:
- a first receiver module configured to receive at least a first media content and data enabling the identification of a specific instance of the first media content from a first broadcast medium;
 - a second receiver module configured to receive at least a second media content and uniquely identifying data specific to at least the second media content, the second media content received discretely from the first media content;
 - an output system configured to present concurrently the first media content and the second media content on an output of the first receiver module or the second receiver module;
 - an input module configured to receive at least a response input responsive to the second media content; and
 - a transmitting module configured to transmit a response message having at least the uniquely identifying data specific to the second media content to a computer server.

As described in Claim 9, the combined device is straightforward. It includes a receiver module to receive the first media content along with data identifying a specific instance of the first media content; and a second receiver module to receive the second media content, discretely from the first media content, along with uniquely identifying data specific to the second media content. It also includes an output system to present the first and second media content concurrently on an output module of the first and second receivers; and an input module to receive a response to the second media content. Based on the response, the transmitting module transmits a message to a computer server including data specific to the second media content.

In figure 3, the user primary device 4 according to one embodiment of the '081 Patent is shown.



The patent explains that when a first media signal, such as a radio program, is received by primary device 4 “through a receiver 455 and/or wire data connection 470, the contents of first media signal 111 can be presented along with related information to the user on primary device 4.” *Id.* 18:57-63.

Further, the primary device “display panel 450 can show information relating to the radio program being played, and the information can be acquired from an associated media signal 112 and/or from the media association system 2.” *Id.* 19:13-17. As illustrated in figure 3, “the upper portion of the display panel 451 can comprise textual information corresponding to the music being played on the

radio,” e.g., “the name of the artist, title of the song or media content, and/or time remaining in the song or media content.” *Id.* 19:17-22. The lower panel 452 can display an advertisement signal 113, which “can comprise any sort of media” that “can be provided as a static image, scrolling images, text, overlaid audio, interactive media, video, and/or other forms of media.” *Id.* 19:45-52. Broadcast receiving system 140 “is configured to receive a user selection or user input.” *Id.* 32:38-39. After receiving a user selection or input, broadcast receiving system 140 is configured “to transmit to the broadcast response and business system 1101 at least the unique event identifier 115 and/or a user identifier.” *Id.* 32:39-44.

As explained in detail below, the '081 Patent's claims would have been obvious in view of the prior art. Ex-1002 ¶¶44, 53-56, 61.

VII. PATENT PROSECUTION HISTORY

The '081 Patent file history is submitted as Ex-1004. The application leading to the '081 Patent application, 12/366,535, was filed on February 5, 2009. It claims priority to provisional application, 61/026,449, filed on February 5, 2008.

On April 1, 2011, the Examiner issued a non-final rejection, stating that the then-pending claims were anticipated by Manganaris (U.S. Patent No. 7,299,194) under 35 U.S.C. § 102(e). Ex-1004, 152-160. On September 30, 2011, Applicant canceled 8 claims, amended 9 claims, and added 9 new claims to overcome the Examiner's rejection. Ex 1004, 174-184. The amendments to independent Claim 9

added, among other things, “data enabling the identification of a specific instance of the first media content”; “uniquely identifying data specific to at least the second media content, the second media content received discretely from the first media content”; “present concurrently ... on an output of the first receiver module or the second receiver module”; “configured to receive ... response input responsive to the second media content”; and “configured to transmit a response message having ... uniquely identifying data specific to the second media content.”

On December 12, 2011, the Examiner issued a notice of allowance, citing Applicant’s claim amendments as the reason for allowance. Ex-1004, 190-197.

On March 8, 2012, Applicant filed an amendment after allowance under 37 C.F.R. § 1.312, which canceled 8 claims, amended 11 claims, and added 4 new claims “to more fully define the Applicant’s invention.” Ex-1004, 239-247. On April 2, 2012, the Examiner considered and entered Applicant’s amendment. Ex-1004, 251-252. On May 1, 2013, a certificate of correction was filed by Applicant to correct typos in the specification and claims. Ex-1004, 263-264; Ex-1002 ¶59.

VIII. LEVEL OF ORDINARY SKILL IN THE ART

One of ordinary skill in the art would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience in the communications or Internet-related

industries, or the equivalent, with additional education substituting for experience and vice versa. Ex-1002 ¶¶34, 40-42.

IX. PRIORITY DATE

In the concurrent litigation, Patent Owner claims priority to the earliest possible priority for the '081 Patent: provisional patent application 61/026,449 filed on February 5, 2008. Ex-1020 at 3. Petitioner thus relies on this date for purposes of the invalidity arguments presented in this petition. In determining what constitutes prior art, this Petition applies pre-AIA 35 U.S.C. § 102. All prior art references asserted in this petition are U.S. patents or WO or U.S. patent publications that were issued or published more than one year before the earliest possible priority date of the '081 Patent, and are thus prior art under § 102(b). Ex-1002 ¶52.

X. CLAIM CONSTRUCTION

Petitioner interprets the claims of the '081 Patent according to the *Phillips* claim construction standard. *See* 37 C.F.R. § 42.100(b). Only terms subject to a legitimate dispute need to be construed for the purposes of IPR. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). Terms not expressly construed should be given their plain and ordinary meaning.

Petitioner does not believe that any term requires explicit construction to resolve the issues presented in this Petition.³ Ex-1002 ¶¶31-33.

XI. BRIEF DESCRIPTION OF THE APPLIED PRIOR ART REFERENCES

A. Noreen (Ex-1005)

Noreen, titled “Integrated Radio Satellite Response System and Method,” is U.S. Patent No. 5,303,393, issued on April 12, 1994. Noreen qualifies as prior art under at least 35 U.S.C. § 102(b), based on its issue date.

Noreen discloses a radio response system configured to “simultaneously receive two channels: a time division multiplex (TDM) data channel and an assignable channel.” Ex-1005, 6:3-5. Media content transmitted over the TDM data channel includes, e.g., “stock updates, sports reports, travel advisories, and emergency alerts,” whereas media content transmitted over the assignable channel includes, e.g., “high quality digital program data such as music.” *Id.* 6:13-15, 9:65-10:1. The two channels use independent demodulators and decoders to generate discrete TDM-data and assignable-data signals that are concurrently outputted to a

³ Claim construction disclosures have only just started in the district court, with the parties identifying terms for construction one day before this filing. Petitioner respectfully reserves the right to revisit claim construction depending on any potential claim construction(s) proposed in district court or in response to Patent Owner’s arguments as necessary. Petitioner will request leave to submit the district court’s claim construction order as soon as it becomes available.

visual display, digital interface, handset, or audio amplifier such as a speaker. *Id.* 3:38-56, 8:30-31, 9:41-42, 13:38-42, 14:33-35.

Noreen further discloses that “identification information” is processed from the program signals of the two channels and can be sent on a “subchannel of the program signal[s],” which may include, e.g., “identification of the program signal and particular program to which the user is listening,” “a code identifying the advertisement or solicitation, or any other information which may be used for identifying the program signal and a particular time and/or advertisement to which a user is responding.” *Id.* 12:45-52, 13:21-33.

Moreover, Noreen discloses a user interface having “an input device 416,” which allows a user to order, e.g., a compact disc corresponding to the music played over the assignable channel, by pushing a button. *Id.* 14:38-53. This action generates a “user-data signal” which is a “combination of the identification information and the user-input signal.” *Id.* 13:58-60. The “user-data signal” is transmitted by data-transmitter 404 to processing center 422, which “determines [the] identification information.” *Id.* 12:54-68, 15:9-15. Identification information may include, e.g., “broadcast transmitter 411, the carrier frequency of the program signal, or any other information which would identify the advertisement, solicitation, or other communication inviting a response.” *Id.* 14:61-68. Processing center 422 uses this information “to identify the program signal to which the user

has responded” and process the order or other response. *Id.* 15:15-19, 15:28-34; Ex-1002 ¶¶62-65.

B. Crosby (Ex-1006)

Crosby, titled “Internet-Based Interactive Radio System for Use with Broadcast Radio Stations,” is U.S. Patent No. 6,628,928, issued on September 30, 2003. Crosby qualifies as prior art under at least 35 U.S.C. § 102(b), based on its issue date.

Crosby discloses an “interactive radio system” for a mobile device that allows subscribers to respond to displayed media content. *See, e.g.*, Ex-1006, Abstract. Specifically, the system allows subscribers to “select various advertisements, musical selections or the like while listening to the radio” using input mechanisms on their mobile unit (e.g., “INFO” and “ORDER” buttons) and “review information pertaining to the various program segments that have been selected” at a later time on the Internet, by way of unique program segment identifiers that are associated with specific instances of the media content received by the subscriber and stored in the system. *Id.* 3:59-4:19, 9:14-19, 12:60-66.

Crosby discloses that “[w]hile listening to a radio broadcast,” subscribers may “transmit commands or other responsive signals” to network operations center 110. *Id.* 6:4-9. Network operations center 110 includes program segment identification database 202, depicted in figure 5, which stores “a program segment

ID, the date and time of broadcast of the program segment, and the broadcaster ID for the broadcaster of the segment.” *Id.* 9:14-19.

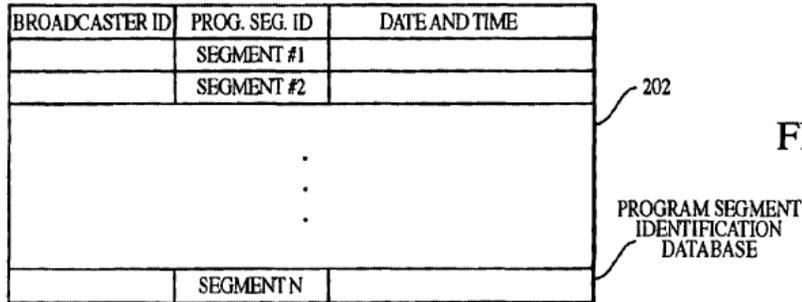


FIG. 5

Once the selected program segment is identified, the “program segment ID” is forwarded to program segment information unit 212, “which accesses the vendor information database using the program segment ID to extract information” pertinent to the segment, including, e.g., “web site addresses associated with the vendor as well as the names of goods or services offered by the vendor” such as song names and performers. *Id.* 10:7-15. This information as well as the date and time of day of the broadcast are forwarded to “subscriber interface unit 214, which also receives the subscriber ID” by way of a “subscriber identifier signal received by receiver 206.” *Id.* 10:15-20, 10:31-35. The feedback unit “then provides the vendor information to the subscriber either within a web page accessible by the subscriber and/or within individual e-mail messages transmitted directly to an e-mail account of the subscriber.” *Id.* 10:20-24; Ex-1002 ¶¶66-69.

C. Ellis-2002 (Ex-1007)

Ellis-2002, titled “Enhanced Radio Systems and Methods,” is WO Patent Publication No. 2002/067447, published on August 29, 2002. Ellis-2002 qualifies as prior art under at least 35 U.S.C. § 102(b), based on its publication date.

Ellis-2002 discloses “enhanced radio reception and processing features, utilizing multiple radio receivers, digital storage of radio content,” “listener profiles, and two-way communication features.” Ex-1007, 1:9-12. Specifically, Ellis-2002 discloses “[m]ultiple receivers 4206” that “may simultaneously receive the multiple radio stations 4204, and store them digitally into buffers 4208 in computer digital storage device 4209.” *Id.* 14:6-8. Moreover, “the output of digital radio receivers 110, may be stored in memory 120.” *Id.* 15:25-26.

Ellis-2002 also states that the system allows users to limit the media content outputted by the receivers based on certain criterion, e.g., the system may “store a user rating for the item” indicating “whether the user likes or dislikes the item” and “be configured to skip over undesirable content.” *Id.* 7:11-12, 34:6-8; *see also id.* 35:16-18. Further, “a parent may define a group in a child’s” enhanced radio system “based on an unacceptable parental advisory level, and the system may be configured to skip over all content in that group.” *Id.* 35:18-20; Ex-1002 ¶¶70-72.

D. Ellis-2005 (Ex-1008)

Ellis-2005, titled “Music Information System for Obtaining Information on a Second Music Program While a First Music Program is Played,” is U.S. Patent Publication No. 2005/0227611, published on October 13, 2005. Ellis-2005 qualifies as prior art under at least 35 U.S.C. § 102(b), based on its publication date.

Ellis-2005 discloses “interactive music information systems that use two tuners for obtaining in-band data.” Ex-1008 ¶2. Specifically, Ellis-2005’s system “provides users with the opportunity to listen to one music channel while viewing music information for another.” *Id.* ¶5; *see also* Fig. 10 (step 430). Music information may include, e.g., “track information, title information, artist information, graphics, web links, ordering information or other information related to the music programming carried on the music channel.” *Id.* ¶8. Further, Ellis-2005 states that information for each track “is transmitted in packets on the digital television channel” which “contain packet identifiers (‘PIDs’) identifying the track that each packet belongs to.” *Id.* ¶41.

In figure 3, Ellis-2005 provides an “illustrative arrangement for user music equipment” and “devices it may include” (*id.* ¶42):

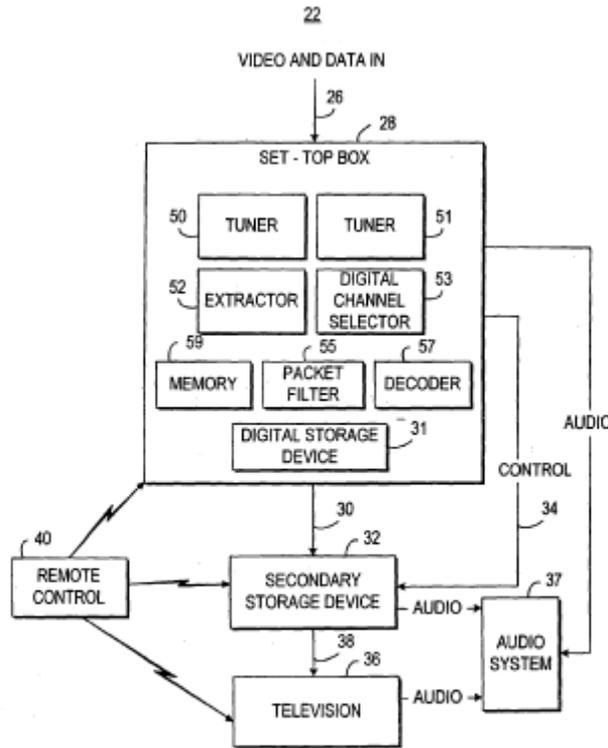


FIG. 3

As explained at ¶¶42-52, “tuner 50 of set-top box 28 may be tuned to a desired” channel. *Id.* ¶42. User music equipment 22 also may “have a second tuner, tuner 51,” at least partially controlled “by the interactive music application for obtaining in-band data.” *Id.* ¶43.

Ellis-2005 discloses that the user may be provided “an opportunity to purchase music merchandise (e.g., an album, record, CD, concert tickets, etc.) ... associated with a music program,” identified, e.g., “by identifiers, graphics, or other information included in an in-band data stream on a music channel.” *Id.* ¶87; *see also id.* Fig. 8; Ex-1002 ¶¶73-76.

XII. THE BOARD SHOULD NOT EXERCISE ITS DISCRETION UNDER § 325(d) TO DENY HEARING THESE INVALIDITY ISSUES FOR THE FIRST TIME IN THIS PETITION

In considering its discretion under § 325(d), “the Board uses the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential).

On the first prong of the *Advanced Bionics* analysis, the Board has held that where “neither [the combination references] nor similar prior art was before the examiner ... the prosecution history does not include any overlapping arguments directed to this prior art.” *Godbersen-Smith Constr. Co. d/b/a/ Gomaco Corp. v. Guntert & Zimmerman Const. Div., Inc.* IPR2021-00050, Paper 24 at 19-21 (PTAB May 7, 2021). And in such a case, where the first prong of *Advanced Bionics* is not met, the Board “need not address part two of the analysis.” *Id.* at 21.

Here, the first *Advanced Bionics* prong is not met. Three of the four references relied upon in this petition (i.e., Crosby, Ellis-2002, and Ellis-2005) were not before the Examiner. Nor were any similar disclosures or teachings

discussed by the Examiner. Ex-1002 ¶57. For example, as to the independent claims, no prior art reference that was before the examiner discloses explicitly the uniquely identifying data of Crosby. Nor do any prior art references that were before the Examiner make disclosures cumulative to Ellis-2002 and Ellis-2005. Accordingly, none of the grounds or arguments based on these disclosures were previously presented to the Examiner, yet they are directly material to patentability. Because the first *Advanced Bionics* prong is not met, the Board need not move to the second prong. *See, e.g., Oticon Med. AB v. Cochlear Ltd.*, IPR2019-00975, Paper 15 at 20 (PTAB Oct. 16, 2019) (precedential) (declining to exercise discretion when “new, noncumulative prior art [is] asserted in the Petition”).

Even assuming the Board were to reach it, however, the second *Advanced Bionics* prong makes clear that institution should not be denied under § 325(d) because it was material error to overlook Noreen, cited in IDS’s by Applicant. *See Advanced Bionics*, Paper 6 at 8 n.9 (explaining that certain of the factors laid out by the Board in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential), may be particularly useful for determining, in the second prong, whether the examiner “erred”). Specifically, “[a]n example of a material error may include misapprehending or overlooking specific teachings of the relevant prior art where those teachings impact

patentability of the challenged claims.” *Id.* at 8 n.9. “For example, if the record of the Office’s previous consideration of the art is not well developed or silent, then a petitioner may show the Office erred by overlooking something persuasive under factors (e) and (f).” *Id.* at 10. *Becton, Dickinson* factors (e) and (f) are: “(e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.” *Id.* at 9 n.10.

Here, the Examiner erred by overlooking the clear and unambiguous teachings of Noreen. Ex-1002 ¶58. Noreen was included along with 106 other references, but the Examiner did not make any statements about any one of the references submitted in the IDS, other than stating that they were “considered by the examiner.” Ex-1004, 127, 154. As explained in detail in Section XIII.A, Noreen *alone* (or in combination with other prior art not of record) renders obvious the challenged independent Claim 9.⁴ As just one example, Applicant’s claim amendments, which resulted in allowance, added the limitations regarding: data identifying a specific instance of the first media content, uniquely identifying data

⁴ Note that if the Board agrees that Noreen alone (Ground 1) teaches independent Claim 9, then it was clearly overlooked, but if the combination of Noreen and Crosby (Ground 2) is required for unpatentability, then the first prong of *Advanced Bionics* should not be considered met, as set forth above, because Crosby was not presented to the Office.

specific to the secondary media content, discretely receiving the second media content from the first media content, presenting the first and second media contents concurrently on an output of the first and second receiver modules, receiving a response input regarding the second media content, and transmitting a message having uniquely identifying data specific to the second media content. Ex-1004, 175-180. Moreover, Claim 23 was added after allowance. Ex-1004, 244. All of these limitations, added to avoid the Manganaris prior art, are plainly taught by Noreen. *See infra* Section XIII.A. Ex-1002 ¶59.

The record is silent on the Examiner’s view of Noreen. Because Noreen at least renders obvious all elements of independent Claim 9, including elements added to distinguish the prior art, it was an error for the Examiner to have overlooked Noreen’s teachings. *Advanced Bionics*, Paper 6 at 10 (if record not well developed or silent on material prior art, error can be shown by “something persuasive”); *see also, e.g., Dish Network LLC v. Sound View Innovations, LLC*, IPR2020-01041, Paper 13 at 21 (PTAB Jan. 19, 2021) (“Because the Examiner did not assert that [IDS cited art] teaches those features in examining claim 13, based on the record before us, Petitioner has sufficiently shown Examiner error by pointing out specific teachings of the prior art that the Examiner overlooked.”); *DraftKings Inc. v. Interactive Games LLC*, IPR2020-01110, Paper 10 at 15-18 (PTAB Jan, 6, 2021); *Med-El Elektromedizinische Geräte Ges.M.B.H. v. Advanced*

Bionics AG, IPR2020-01016, Paper 13 at 27-33 (PTAB Dec. 8, 2020);

Weatherford U.S., L.P. v. Enventure Global Tech., Inc., IPR2020-01684, Paper 16 at 19 (PTAB Apr. 14, 2021) (“Petitioner’s arguments and evidence persuade us that there was an oversight regarding amended claimed features made to distinguish over [the prior art] ... Petitioner demonstrates material error, and we decline to exercise discretion to deny institution under 35 U.S.C. § 325(d).”).

At bottom, the significance of the 107 references in an IDS on which the record is silent is substantially outweighed by the clear and unambiguous disclosures of Noreen demonstrating the obviousness of the challenged claims, as set forth below in detail. Ex-1002 ¶¶60. Further, the combination of Noreen and Crosby and the alternative grounds based on Ellis-2005 could not have been considered because they were not presented to the Office. In view of the foregoing, the Board should not exercise its discretion under § 325(d) to deny institution.

XIII. DETAILED EXPLANATION OF THE UNPATENTABILITY GROUNDS

The '081 Patent contains 24 claims, of which four are independent. Independent Claim 9, challenged here, is directed to a system. Similarly, the challenged dependent claims, Claims 10-11, 15, and 23, have corresponding system claim limitations. As explained below, an element-by-element analysis of the challenged claims demonstrates that Claims 9-11, 15, and 23 are disclosed or taught by the prior art. Ex-1002 ¶¶77.

A. Grounds 1 and 2: Claims 9, 15, and 23 are rendered obvious by Noreen (Ex-1005) (Ground 1) or Noreen in view of Crosby (Ex-1006) (Ground 2).

1. A POSITA would have been motivated to combine the teachings of Noreen and Crosby, and would have had a reasonable expectation of success in doing so.

As the reference summaries above and detailed claim analyses below demonstrate, Noreen discloses nearly all of the limitations of Claims 9, 15, and 23. As set forth in detail below when discussing relevant limitations, a POSITA would have been motivated to combine the relevant teachings of Noreen and Crosby, and would have a reasonable expectation of success in doing so, because both relate to mobile audio receivers for concurrently receiving multimedia at a mobile user and allowing the user to make selections. *See* Ex-1005, Abstract; Ex-1006, Abstract; Ex-1002 ¶¶78-83.

2. Independent Claim 9

a. Element 9[pre]: A system for combining multiple media comprising:

Noreen alone discloses and teaches the preamble of Claim 9, to the extent it is limiting. Ex-1002 ¶84. Noreen discloses “a radio response system” that combines multiple media, such as a data channel to report stock updates and sport reports (first media) and music channel for presenting audio (second media) using receiver means (e.g., AM/FM or digital receivers) at the user’s mobile terminal to receive the program signals. Ex-1005, 2:41-44, 5:9, 6:14-15, 9:64-10:1, 13:35-39.

b. Element 9[a]: a first receiver module configured to receive at least a first media content and data enabling the identification of a specific instance of the first media content from a first broadcast medium;

Noreen alone discloses and teaches Element 9[a]. Ex-1002 ¶85. Noreen discloses multiple receivers to receive channel transmissions broadcast to all or individual mobile devices. Ex-1005, 5:65-67, 2:41-44 (“At a mobile terminal, receiver means receives the program signal. The receiver means may use an AM receiver, an FM receiver, a digital receiver, receiving terrestrial or satellite broadcasts.”), 6:5-9 (“**Both TDM and assignable channel transmissions broadcast** to all mobiles; **coding** in the transmissions and in the **receivers** allows portions of broadcasts to be addressed to all ... or to individual mobiles.” (emphases added)). Noreen discloses a TDM data channel that transmits data broadcasts (i.e., “packet data and paging messages” (*id.* 6:11-12)), 24 hours a day, including, e.g., “stock updates, sport reports, travel advisories and emergency alerts” (*id.* 9:68-10:1), and “digital audio channels” (*id.* 11:15-21), which are received by a first receiver means at the mobile station. *Id.* 6:3-9. The TDM receiver receiving a data broadcast with, e.g., paging messages, stock updates, sports reports, and travel advisories, is a first receiver module receiving a first media content from a first broadcast medium. *Id.* 13:40-41.

Noreen also discloses or teaches “data enabling the identification of a specific instance” of the content. The identification of content on the TDM channel

is provided on “a time slot in a time division multiplexed signal.” Ex-1005, 2:63-64. As a specific example, Noreen discloses “alphanumeric and voice paging” and one-way and two-way communications. Ex-1005, 2:3-6, 6:6-12. These communications can be directed to “all mobiles, to groups of mobiles or to individual mobiles.” *Id.* 6:8-9. Individual mobile receivers can respond to specific alphanumeric messages (i.e., specific instances) using an optional keyboard to achieve two-way communications on the TDM channel. *Id.* 6:17-22, Fig. 2. A POSITA would understand the goal of the identification to be to identify particular content targeted to a user at a particular time to be received at a particular time (within TDM) and on a particular sub-channel as a way of identifying a specific instance of the media content. Ex-1002 ¶86.

- c. Element 9[b]: a second receiver module configured to receive at least a second media content and uniquely identifying data specific to at least the second media content, the second media content received discretely from the first media content;**

Noreen alone or in view of Crosby discloses and teaches Element 9[b].
Ex-1002 ¶¶87-88.

(Ground 1) In addition to the TDM channel, Noreen discloses an assignable channel that transmits, e.g., “high quality digital program data such as music” (Ex-1005, 6:12-15), as well as “[d]igital audio, facsimile and high rate data broadcast, telephone and voice dispatch transmitters and voice pages” (*id.* 10:15-19) (second

media content), which are received by a second receiver means at the mobile station. *Id.* 2:41-44, 5:65-67, 6:3-9. The assignable channel receiver receiving, e.g., high-quality music programs, is a second receiver module receiving a second media content.

Noreen also discloses “uniquely identifying data specific to the second media content,” in the form of “identification information” processed from the program signal of the assignable channel. *Id.* 12:45-48. The “identification information can be sent on a subchannel of the program signal” (*id.* 12:49-52), and may include, e.g., “identification of the program signal and ***particular program to which the user is listening***” (*id.* 13:23-26 (emphasis added)), “a code identifying the advertisement or solicitation, or any other information which may be used ***for identifying the program signal and a particular time and/or advertisement*** to which a user is responding.” *Id.* 13:21-33 (emphasis added). A POSITA would have understood these descriptions of identification information, including particular program and particular time, to uniquely identify data specific to the second media content. Ex 1002 ¶¶89-90.

Additionally, Noreen discloses that “the second media content [is] received discretely from the first media content.” For example, Noreen discloses that the TDM data channel (first media content) and assignable channel (second media content) use independent demodulators and decoders to generate discrete TDM-

data and assignable-data signals that are concurrently outputted to a visual display, digital interface, handset, or audio amplifier such as a speaker. Ex-1005, 6:64-67 (“[T]he received [satellite] signal [is converted] to two IF signals: an assignable-IF signal and a TDM-IF signal.”); *see also id.* 3:38-56, 8:30-31, 9:41-42, 10:15-16, 13:38-42, 14:33-35.

(Ground 2) To the extent the “unique identification” is not disclosed or taught by Noreen alone, such unique identification would have been obvious in further view of Crosby. Crosby’s system allows subscribers to “select various advertisements, musical selections or the like while listening to the radio” and “review information pertaining to the various program segments that have been selected” at a later time on the Internet, by way of unique program segment identifiers, which include “a program segment ID, the date and time of broadcast of the program segment, and the broadcaster ID for the broadcaster of the segment.” Ex-1006, 3:59-63, 9:14-19. A POSITA would have recognized this identification data to uniquely identify content. Ex-1002 ¶91.

Moreover, a POSITA would have been motivated to incorporate Crosby’s teaching of a program segment ID and other information necessary to uniquely identify a program segment, and time and date of broadcast of the program segment, as advantageous to Noreen’s teaching and suggestion to use any other data which may be used “to identify the program signal to which the user has

responded.” Ex-1005, 15:28-34. As suggested by Noreen and as would have been understood by a POSITA, tracking a particular advertising instance would have allowed more accurate tracking of particular advertisements within advertising campaigns and to understand which of the advertisements prompted the best response. Providing additional information would have ensured identification of the exact instance of the program segment and ensured accurate fulfillment of the user’s selection. A POSITA would have had a reasonable expectation of success in using Crosby’s unique identification of each instance because Noreen is already providing at least some program identification information (if not identification of a specific instance) and would only have required the addition of, for example, a time and date stamp to implement Crosby’s unique identification system of each program instance. Ex-1002 ¶92.

d. Element 9[c]: an output system configured to present concurrently the first media content and the second media content on an output of the first receiver module or the second receiver module;

Noreen alone discloses and teaches Element 9[c]. Ex-1002 ¶93. As discussed above with respect to Elements 9[a] and 9[b], Noreen discloses first and second receiver means, which receive a first media content (e.g., paging, sport reports, weather alerts) and a second media content (e.g., high quality music), respectively. “The basic configuration may provide ... quality program material through standard vehicle radio speakers, and display of paging or other messages.”

Ex-1005, 6:29-32; *see also id.*, 12:28-33 (“The interface means may be a speaker [or handset (*id.* 9:38-42)] when the program signal includes audio information [i.e., output of the second receiver], or visual display when the program signal includes video information” or “message signals” (*id.* 8:60-61) [i.e., output of the first receiver]). Moreover, Noreen states that the mobile device “simultaneously receive[s]” the TDM data channel (first media content) and assignable channel (second media content). *Id.* 6:3-9. Thus, Noreen’s system is configured to concurrently present, e.g., paging messages (first media content) on the TDM data channel through a display (output of first receiver) and music (second media content) on the assignable data channel through a speaker or handset (output of second receiver).

e. Element 9[d]: an input module configured to receive at least a response input responsive to the second media content; and

Noreen alone discloses and teaches Element 9[d]. Ex-1002 ¶94. Noreen discloses that the “interface means also has an input transducer [input module], such as a microphone, push buttons or a touch screen” that allows a user to “respond to a program signal verbally, such as by speaking through a microphone, or physically, such as by pushing a push button or touching a touch screen.” Ex-1005, 2:47-52. For example, the music (second media content) that was “most recently played and sent over the [assignable channel] program signal” may “be

offered for sale on a compact disc.” *Id.* 14:41-44. The user in this scenario “has the option of ordering the compact disc by inputting a user-input signal using input device 416,” which can be generated by the user speaking an “ORDER” voice command into the microphone or pushing an appropriate “push button” or “touch screen” of the display. *Id.* 14:44-53; Ex-1002 ¶94.

f. Element 9[e]: a transmitting module configured to transmit a response message having at least the uniquely identifying data specific to the second media content to a computer server.

Noreen alone or in view of Crosby discloses and teaches Element 9[e]. Ex-1002 ¶¶95-96. Noreen discloses “a transmitting module” for transmitting “a response message having at least the uniquely identifying data specific to the second media content to a computer server.” As discussed above, Noreen discloses an interface means (input device 416), which allows a user to order, e.g., a compact disc corresponding to the music (second media content) played over the assignable channel, by pushing a button. Ex-1005, 14:38-53. This action generates a “user-data signal” (response message) which is a “combination of the identification information and the user-input signal.” *Id.* 13:58-60. The “user-data signal” is transmitted by data-transmitter 404 (transmitting module) on mobile terminal 401 to processing center 422 (computer server), which “demodulates the user-data signal from the transmitted-data signal,” “processes information” from it, and “determines [the] identification information.” *Id.* 12:61-68, 15:9-15.

“[T]he uniquely identifying data specific to the second media” has its antecedent basis in the same limitation of Element 9[b]. As explained above, the identification information transmitted in the response message is “uniquely identifying data specific to the second media.”

(Ground 1) Identification information includes, e.g., “identification of the advertisement which offered the compact disc” for sale, “broadcast transmitter 411, the carrier frequency of the program signal, or any other information which would identify the advertisement, solicitation, or other communication inviting a response.” *Id.* 14:61-68. Processing center 422 uses this information “to identify the program signal to which the user has responded” and process the order or other response. *Id.* 15:15-19, 15:28-34. A POSITA would have understood the “identification information” to uniquely identify data specific to the second media content as explained above with respect to Element 9[b]. Ex 1002 ¶97.

(Ground 2) To the extent the “unique identification” is not disclosed or taught by Noreen alone, such unique identification would have been obvious in further view of Crosby for the same reasons discussed above with respect to Element 9[b]. In short, Crosby provides for unique program segment identifiers, which include “a program segment ID, the date and time of broadcast of the program segment, and the broadcaster ID for the broadcaster of the segment.” Ex-1006, 3:59-4:19, 9:14-19. A POSITA would have been motivated to incorporate

Crosby's teaching of a program segment ID and other information necessary to uniquely identify a program segment, and time and date of broadcast of the program segment, as advantageous to Noreen's teaching and suggestion to use any other data which may be used "to identify the program signal to which the user has responded" to ensure accurate identification and fulfillment of the user's selection. Ex-1005, 15:28-34; Ex-1002 ¶¶98-99.

3. Dependent Claims 15 and 23

- a. **Claim 15: The system of claim 9, wherein, in response to receiving the response message, the computer server is configured to correlate the response message to the second media content with the specific instance of the first media content.**

Noreen alone discloses and teaches Claim 15. Ex-1002 ¶100. As discussed above, Noreen alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

Noreen discloses a "computer server" configured to "correlate the response message to the second media content with the specific instance of the first media content" in response to receiving the response message. As discussed above, Noreen discloses an interface means (input device 416), which allows a user to order, e.g., a compact disc corresponding to the music (second media content) played over the assignable channel, by pushing a button. Ex-1005, 14:38-53. This action generates a "user-data signal" (response message) which is a "combination

of the identification information and the user-input signal.” *Id.* 13:58-60. The “user-data signal” is transmitted by data-transmitter 404 on mobile terminal 401 to processing center 422 (computer server), which “demodulates the user-data signal from the transmitted-data signal,” “processes information” from it, and “determines [the] identification information.” *Id.* 12:61-68, 15:9-15. Processing center 422 uses this information “to identify the program signal to which the user has responded *by reference to other information on content of program signal broadcast at various times, locations, and frequencies*” and process the order or other response. *Id.* 15:15-19, 15:28-34 (emphasis added). A POSITA would have understood the “other information ... broadcast at various times, location, and frequencies” to refer to, e.g., the specific instance of the first media content. Ex 1002 ¶101.

b. Claim 23: The system of claim 9, wherein the response message includes data that enables identification of a responder.

Noreen alone or in view of Crosby discloses and teaches Claim 23. Ex-1002 ¶102. As discussed above, Noreen alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

(Ground 1) Further, as discussed above, Noreen discloses that a “user-data signal” (response message), is generated when a user presses, e.g., an “ORDER” button on the interface means to order music (second media content). Ex-1005,

13:53-58. The user-data signal is a “combination of the identification information and the user-input signal.” *Id.* 13:58-60. The processing center 422 “demodulates the user-data signal from the transmitted-data signal,” “processes information” from it, “determines [the] identification information,” and uses this information “to identify the program signal to which the user has responded” and process the order or other response. *Id.* 12:61-68, 15:9-15, 15:28-34. To place an order, the user either inputs a credit card number or “a user’s credit card number may be stored at the processing center.” *Id.* 15:43-46. A POSITA would understand that the user-input signal is data that enables the system to identify the responder (user) so that it bills the correct credit card number stored at the processing center. Ex 1002 ¶103.

(Ground 2) Crosby also explicitly discloses that the “response message includes data that enables identification of a responder.” For example, Crosby discloses “subscriber interface unit 214” that “receives the subscriber ID for the subscriber of the mobile unit.” Ex-1006, 10:17-18. Subscriber interface unit 214 can access “subscriber database 205, which provides the subscriber name and password and the e-mail for the subscriber” and “process[es] purchase transactions directly on behalf of the subscriber using the stored credit card number for the subscriber.” *Id.* 10:24-29. Moreover, Crosby discloses that “the network operations center maintains an e-mail address associated with the subscriber ID and transmits e-mail messages containing information corresponding to program segments

selected by the subscriber via the designated e-mail address,” e.g., in response to “INFO” or “ORDER” commands. *Id.* 7:57-61, 13:3-19.

A POSITA would have been motivated to incorporate Crosby’s teaching of additional information to accurately identify a responder/customer. Noreen already motivated the need to identify a responder/customer since a POSITA would have understood it would have been common sense that a responder/customer would need to be accurately identified in order to successfully complete order fulfillment and billing. A POSITA would have had a reasonable expectation of success in using Crosby’s particular type of information in a transaction since Noreen already describes providing at least some, if not sufficient identifying information, as discussed for Element 9[b], and the combination would have only required the addition of the type of information disclosed in Crosby as part of Noreen’s transaction. Ex 1002 ¶¶104-105.

B. Ground 3: Claims 10 and 11 are rendered obvious by Noreen (Ex-1005) in view of Crosby (Ex-1006) and Ellis-2002 (Ex-1007).

1. A POSITA would have been motivated to combine the teachings of Noreen, Crosby, and Ellis-2002, and would have had a reasonable expectation of success in doing so.

As the reference summaries above and detailed claim analyses below demonstrate, Noreen in view of Crosby teaches or suggests all of the limitations of Claims 10-11. As set forth below, a POSITA would have been motivated to combine additional relevant teachings of Ellis-2002, and would have a reasonable

expectation of success in doing so, because it too relates to concurrently receiving multimedia at a mobile user and allowing the user to make selections. Ex-1007, Abstract; Ex-1002 ¶¶106-111.

2. Dependent Claims 10-11

- a. **Claim 10: The system of claim 9 further comprising an output selection module configured to limit the output of the first and second media content based on a criterion.**

Noreen in view of Crosby and Ellis-2002 discloses and teaches Claim 10. Ex-1002 ¶112. As discussed above, Noreen alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

Moreover, Noreen teaches or suggests “an output selection module configured to limit the output of the first and second media content based on a criterion.” As discussed above, Noreen provides at least audio output to speakers and a display for viewing video content, paging and other messages. Ex-1005, 6:29-32. Among other things, the receiver can limit output of messages to groups of mobiles or to individual mobiles. *Id.* 6:5-9. A user may also not want to receive “stock updates,” but might want to be informed of “travel advisories and emergency alerts.” *Id.* 9:68-10:1. Noreen discloses that user “[c]ommands may be programmed for controlling the mobile terminal” and, e.g., “when spoken into the microphone, are recognized and generate a user-input signal.” *Id.* 12:39-42. Based on these disclosures, a POSITA would have understood that commands typically

associated with audio and display systems can be used to mute or disable a video display, or otherwise “limit the first and second media content” to customize the user’s experience. Ex-1002 ¶¶113-114.

Such control is explicitly disclosed by Ellis-2002, which “allows a radio listener to better control the audio content she hears.” Ex-1007, 2:13-14. Ellis-2002 discloses an enhanced radio system that allows users to “store a user rating for the item” indicating “whether the user likes or dislikes the item” and is “configured to skip over undesirable content.” Ex-1007, 7:11-12, 34:6-8; *see also id.* 35:16-18. “[W]hen the system recognizes an item of content that the user does not like, it may automatically skip over that content.” *Id.* 31:33-34; *see also id.* 35:18-20 (“[B]ased on an unacceptable parental advisory level, ... the system may be configured to skip over all content in that group.”).

A POSITA would have been motivated to use control features such as those described in Ellis-2002, or even simpler ones, in the Noreen and Crosby combination to customize the user’s listening and viewing experience. Ex-1002 ¶115. Among other things, simply choosing which audio content or messages to receive in Noreen (or whether to receive any audio or messages at all) would have been an obvious design choice. The particular choice was especially motivated in view of Ellis-2002’s suggestion to allow a listener to better control the content. *Id.* A POSITA would have had a reasonable expectation of success because limitations

on content that is output to a listener or viewer on a mobile terminal, as described in Ellis-2002, using well-known controls, software and hardware, would have been implemented with predictable results, as exemplified by Ellis-2002. *Id.*

b. Claim 11: The system of claim 9 further comprising a computer storage device configured to store at least one of the first and second media content.

Noreen in view of Crosby and Ellis-2002 discloses and teaches Claim 11. Ex-1002 ¶116. As discussed above, Noreen alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

Moreover, Noreen teaches or suggests “a computer storage device configured to store at least one of the first and second media content.” *Id.* For example, Noreen discloses that “[t]he data processing and controller stores data as needed.” Ex-1005, 8:60-61. Further, Noreen states that the control means may “output[] the message signals to memory.” *Id.* 3:66-67. A POSITA would have understood that the data processing and controller or memory element could be a computer storage device and that the first and/or second media content could be stored “as needed,” to enhance the user’s experience. Ex-1002 ¶117.

Ellis-2002 also explicitly discloses “a computer storage device configured to store at least one of the first and second media content.” Specifically, Ellis-2002 discloses “[m]ultiple receivers 4206” that “may simultaneously receive the multiple radio stations 4204, and store them digitally into buffers 4208 in computer

digital storage device 4209.” Ex-1007, 14:6-8. Moreover, Ellis-2002 discloses that “the output of digital radio receivers 110, may be stored in memory 120.” *Id.* 15:25-26; Ex-1002 ¶118.

A POSITA would have been motivated to use storage features such as those described in Ellis-2002, in the Noreen and Crosby combination to provide for additional features including “PAUSE” or “SKIP-BACK.” Ex-1007, 22:1-2, 22:11-12, Fig. 9 (910, 930). These types of features were commonplace in playback applications and would have been equally obvious features in a mobile system with Noreen’s audio and messaging capabilities. In this particular context, a POSITA would have been motivated to provide such functionality, consistent with how the functionality was typically offered in playback applications, so that, e.g., songs or messages were not missed. Ex-1002 ¶119. A POSITA would have had a reasonable expectation of success because limitations on content that is output to a listener or viewer on a mobile terminal, as described in Ellis-2002, using well-known controls, software and hardware would have been well understood to a POSITA, and would have been implemented with predictable results, as exemplified in, and taught by Ellis-2002. *Id.*

C. Grounds 4 and 5: Claims 9-11, 15, and 23 are rendered obvious by Ellis-2005 (Ex-1008) alone (Ground 4) or Ellis-2005 in view of Crosby (Ex-1006) (Ground 5).

1. A POSITA would have been motivated to combine the teachings of Ellis-2005 and Crosby, and would have had a reasonable expectation of success in doing so.

As the reference summaries above and detailed claim analyses below demonstrate, Ellis-2005 alone or in view of Crosby discloses and teaches all of the limitations of Claims 9-11, 15, and 23. As set forth in detail below when discussing relevant limitations, a POSITA would have been motivated to combine the relevant teachings of Ellis-2005 and Crosby, and would have a reasonable expectation of success in doing so, because both relate to interactive radio systems for receiving multimedia at a mobile or television user and allowing the user to make selections. Ex-1006, Abstract; Ex-1008, Abstract; Ex-1002 ¶¶120-125.

2. Independent Claim 9

a. Element 9[pre]: A system for combining multiple media comprising:

Ellis-2005 alone discloses and teaches the preamble of Claim 9, to the extent it is limiting. Ex-1002 ¶¶126-127. Ellis-2005 discloses a system, distribution equipment 21, that combines multiple media, such as music channels for presenting audio, such as music (first media) and information, such as text and graphics (second media), by using in-band sideband signals or out-of-band digital signals, for transmission to the user. Ex-1008 ¶¶26, 31, Figs. 2a, 2b.

At user equipment 22, different tuners receive the multiple media and present it to the user. For example, when a user is tuned to a first tuner, listening to music, and “indicates a desire to view music information” for another channel, the music application “directs a second tuner” to tune to obtain “the in-band music information from that channel” and display it to the user. Ex-1008 ¶8. Music information includes, e.g., “track information, title information, artist information, graphics, web links, ordering information or other information related to the music programming carried on the music channel.” *Id.*

- b. Element 9[a]: a first receiver module configured to receive at least a first media content and data enabling the identification of a specific instance of the first media content from a first broadcast medium;**

Ellis-2005 alone or in view of Crosby discloses and teaches Element 9[a]. Ex-1002 ¶128. As shown in figures 3 and 4, Ellis-2005 discloses user equipment 22 having “a first receiver module,” tuner 50, which receives “a first media content” including television video, audio, and data identifying the television content (e.g., program guide information):

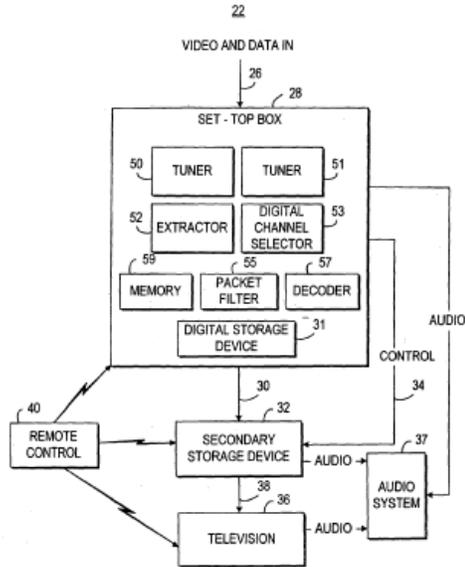


FIG. 3

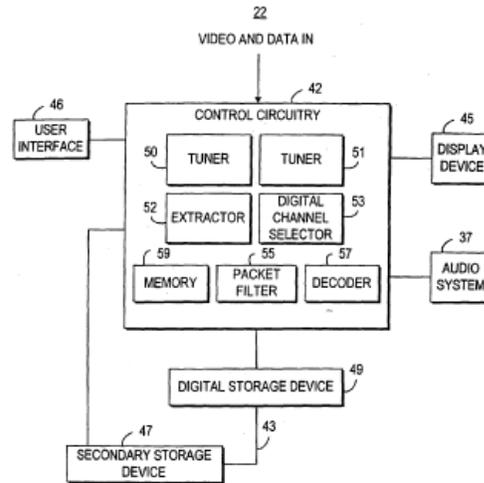


FIG. 4

See also, e.g., Ex-1008 ¶42 (User music equipment 22 “may receive **video, audio and data** from distribution facility 16 (FIG. 1) at input 26. During normal television viewing, **tuner 50** of set-top box 28 may be tuned to a desired television channel based on inputs from the user on remote control 40.” (emphases added)).

(Ground 4) Ellis-2005 also teaches or suggests “data enabling the identification of a specific instance” of the content. Ex-1002 ¶129. For example, Ellis-2005 discloses that the tuner receives packet identifiers (“PIDs”) with each track, which enable the system to distinguish between different tracks. Ex-1008 ¶41. Moreover, Ellis-2005 discloses that PID maps may also be transmitted in-band to enable the identification of a specific instance of a media content, such as an audio track, by indicating “which PIDs correspond to which digital channels.”

Id. A POSITA would have considered the PIDs as teaching the enabling of identification of specific instances of the content. Ex-1002 ¶129.

(Ground 5) To the extent the “identification of specific instances of a media content” is not disclosed or taught by Ellis-2005 alone, such identification would have been obvious in further view of Crosby. Crosby’s system allows subscribers to “select various advertisements, musical selections or the like while listening to the radio” and “review information pertaining to the various program segments that have been selected” at a later time on the Internet, by way of unique program segment identifiers, which include “a program segment ID, the date and time of broadcast of the program segment, and the broadcaster ID for the broadcaster of the segment.” Ex-1006, 3:59-4:19, 9:14-19. A POSITA would have recognized this identification data to identify specific instances of a media content. Ex-1002 ¶130.

A POSITA would have been motivated to incorporate Crosby’s teaching of a program segment ID and other information necessary to identify a program segment, and time and date of broadcast of the program segment, as advantageous to Ellis-2005’s teaching and suggestion to use “identifiers, graphics, or other information included in an in-band data stream on a music channel.” Ex-1008 ¶87. In part, the motivation to combine Crosby with Ellis-2005 is similar to the motivation to combine Crosby with Noreen (*see* Section XIII.A.2.c). As with Noreen and Crosby, Ellis-2005 and Crosby would have ensured identification of

the exact instance of the program segment and ensured accurate fulfillment of the user's selection. Ex-1002 ¶131. A POSITA would have had a reasonable expectation of success in using Crosby's identification of each instance because Ellis-2005 was already at least providing program identification information (if not identification of a specific instance) and would only have required the addition of a time and date stamp to implement Crosby's unique identification system of each program instance. *Id.*

- c. **Element 9[b]: a second receiver module configured to receive at least a second media content and uniquely identifying data specific to at least the second media content, the second media content received discretely from the first media content;**

Ellis-2005 alone or in view of Crosby discloses and teaches Element 9[b].

Ex-1002 ¶132.

(Ground 4) Ellis-2005 discloses "a second receiver module" to receive "a second media content." For example, Ellis states that "[w]hen a user indicates a desire to view music information" for another channel than the one the first tuner is tuned to, "the music application directs a second tuner," tuner 51, "to tune to the other music channel and obtains the in-band music information from that channel" such as text and graphics. Ex-1008 ¶8 ("music information" included in the in-band data stream includes, e.g., "track information, title information, artist information, graphics, web links, ordering information or other information related

to the music programming carried on the music channel”). Tuner 51 receiving, e.g., music information and graphics, is a second receiver module receiving a second media content.

Ellis-2005 also teaches or suggests “uniquely identifying data specific to the second media content,” in the form of an “identifier” and/or “ordering information” that may be displayed to the user. *Id.* ¶¶60 (tuner 51 receives PIDs for the browsed channel, i.e., second media content), 80 (“the music application may display the music program’s ... identifier”), 8 (“music information” includes, e.g., “ordering information”). For example, the user may be listening to one music program and choose to order “a CD for a music program on another music channel.” Ex-1008 ¶87. In this scenario, a “merchandise request” including “information necessary for ordering the merchandise” may be generated by the system including, e.g., “*a merchandise identifier, a user identifier or account number.*” *Id.* ¶88 (emphasis added). A POSITA would have considered such identifiers to uniquely identify data specific to the second media content. Ex-1002 ¶¶133-134.

Additionally, Ellis-2005 discloses that “the second media content [is] received discretely from the first media content.” Non-limiting examples of receiving discretely in the ’081 Patent include second content data that is time or frequency multiplexed with the first content. Ex-1001, Claims 18-19. Similarly,

Ellis-2005 explains that “each music channel [i.e., first media content] may carry an in-band data stream of the music information [i.e., second media content] for all music channels.” Ex-1008 ¶31 (out-of-band signaling can also be used). An example of in-band transmission is the “vertical blanking interval on a television channel” sideband. *Id.* Such in-band data is then obtained discretely using second tuner 51. *Id.* ¶43; Ex-1002 ¶135.

(Ground 5) To the extent the “uniquely identifying data” specific to a media content is not disclosed or taught by Ellis-2005 alone, such unique identification would have been obvious in further view of Crosby. Crosby’s system allows subscribers to “select various advertisements, musical selections or the like while listening to the radio” and “review information pertaining to the various program segments that have been selected” at a later time on the Internet, by way of unique program segment identifiers, which include “a program segment ID, the date and time of broadcast of the program segment, and the broadcaster ID for the broadcaster of the segment.” Ex-1006, 3:59-4:19, 9:14-19. A POSITA would have recognized this unique identification data to identify specific instances of a media content. Ex-1002 ¶136.

A POSITA would have been motivated to incorporate Crosby’s teaching of a program segment ID and other information necessary to identify a program segment, and time and date of broadcast of the program segment, as advantageous

to Ellis-2005's teaching and suggestion to use "identifiers, graphics, or other information included in an in-band data stream on a music channel." Ex-1008 ¶87. In part, the motivation to combine Crosby with Ellis-2005 is similar to the motivation to combine Crosby with Noreen (*see* Section XIII.A.2.c). As with Noreen and Crosby, Ellis-2005 and Crosby would have ensured identification of the exact instance of the program segment and ensured accurate fulfillment of the user's selection. A POSITA would have had a reasonable expectation of success in using Crosby's identification of each instance because Ellis-2005 was already at least providing program identification information (if not identification of a specific instance) and would only have required the addition of a time and date stamp to implement Crosby's unique identification system of each program instance. Ex-1002 ¶137.

d. Element 9[c]: an output system configured to present concurrently the first media content and the second media content on an output of the first receiver module or the second receiver module;

Ellis-2005 alone discloses and teaches Element 9[c]. Ex-1002 ¶138. As discussed above with respect to Elements 9[a] and 9[b], Ellis-2005 discloses first and second receiver modules, i.e., tuners 50 and 51, which receive a first media content (such as music audio) and a second media content (such as text and graphics relating to music on another channel), respectively. Moreover, Ellis-2005's figure 10 provides a "flowchart of illustrative steps" on how a user can

“listen to a music program carried on one channel while viewing in-band music information for a music program carried on another channel” (Ex-1008 ¶93):

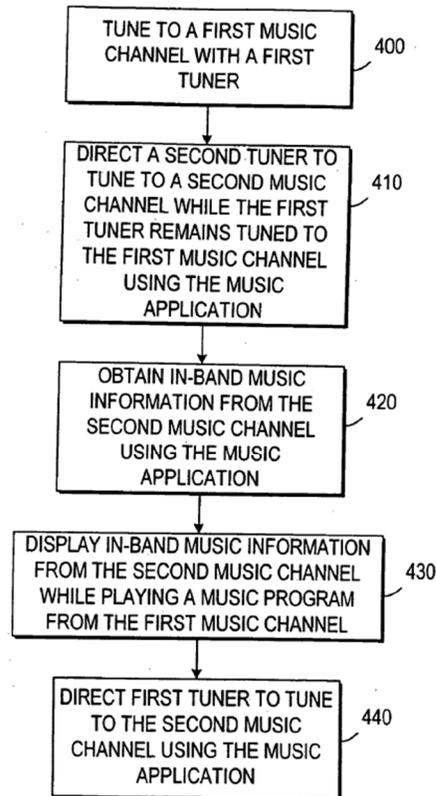


FIG. 10

Step 430 states that the system “display[s] in-band music information from the second music channel while playing a music program from the first music channel.” *Id.* Fig. 10. Thus, Ellis-2005’s system is configured to concurrently present audio with the first tuner and text or graphics with the second tuner.

e. Element 9[d]: an input module configured to receive at least a response input responsive to the second media content; and

Ellis-2005 alone discloses and teaches Element 9[d]. Ex-1002 ¶139. Ellis-2005 discloses that the user may provide input via a remote control 40, responsive to the second media content, by pressing a purchase button to buy the content. Ex-1008 ¶87 (“The user may indicate a desire to purchase merchandise by, for example, pressing a ‘BUY’ key on remote control 40 when tuned to a music channel, when browsing through music program listings, after highlighting a music program listing in a music program listings screen, or when in any other suitable music application display screen.”).

f. Element 9[e]: a transmitting module configured to transmit a response message having at least the uniquely identifying data specific to the second media content to a computer server.

Ellis-2005 alone or in view of Crosby discloses and teaches Element 9[e]. Ex-1002 ¶140. Ellis-2005 teaches or suggests “a transmitting module” for transmitting “a response message having at least the uniquely identifying data specific to the second media content to a computer server.” *Id.* “[T]he uniquely identifying data specific to the second media” has its antecedent basis in the same limitation of Element 9[b]. As explained above, the identification information transmitted in the response message is “uniquely identifying data specific to the second media.”

(Ground 4) For example, Ellis-2005 discloses that the music application may “provide the user with an opportunity to purchase music merchandise ... associated with a music program.” Ex-1008 ¶87. Further, Ellis-2005 discloses that “identifiers” and “ordering information” are transmitted to merchandising facility 10 when a purchase request is made by the user specific to the second media content. *Id.* ¶¶8, 87-88. Ellis-2005 also discloses that a “merchandise request” includes necessary information for making a purchase including, e.g., “a merchandise identifier, a user identifier or account number” and “may be sent from the music application implemented on interactive music application equipment 17 to merchandising facility 10 over communications path 9 (FIG. 1).” *Id.* ¶88. A POSITA would have understood these identifiers to uniquely identify data specific to the second media content as explained above with respect to Element 9[b]. Ex-1002 ¶141.

(Ground 5) To the extent the “unique identification” is not disclosed or taught by Ellis-2005 alone, such unique identification would have been obvious in further view of Crosby for the same reasons discussed above with respect to Element 9[b]. In short, Crosby provides for unique program segment identifiers, which include “a program segment ID, the date and time of broadcast of the program segment, and the broadcaster ID for the broadcaster of the segment.” Ex-1006, 9:14-19.

A POSITA would have been motivated to incorporate Crosby's teaching of a program segment ID and other information necessary to identify a program segment, and time and date of broadcast of the program segment, as advantageous to Ellis-2005's teaching and suggestion to use "identifiers, graphics, or other information included in an in-band data stream on a music channel." Ex-1008 ¶87. In part, the motivation to combine Crosby with Ellis-2005 is similar to the motivation to combine Crosby with Noreen (*see* Section XIII.A.2.f). As with Noreen and Crosby, Ellis-2005 and Crosby would have ensured identification of the exact instance of the program segment and ensured accurate fulfillment of the user's selection. A POSITA would have had a reasonable expectation of success in using Crosby's identification of each instance because Ellis-2005 was already at least providing program identification information (if not identification of a specific instance) and would only have required the addition of a time and date stamp to implement Crosby's unique identification system of each program instance. Ex-1002 ¶¶142-143.

3. Dependent Claims 10-11, 15, and 23

- a. Claim 10: The system of claim 9 further comprising an output selection module configured to limit the output of the first and second media content based on a criterion.**

Ellis-2005 alone discloses and teaches Claim 10. Ex-1002 ¶¶144-145. As discussed above, Ellis-2005 alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

Moreover, Ellis-2005 discloses that the two tuners, tuner 50 and tuner 51, can be adjusted to switch to different channels based on the “favorites” (i.e., criterion) chosen by the user. For example, Ellis-2005 states that “[t]he music application may also provide a user with the opportunity to set and navigate through favorite music channels.” Ex-1008 ¶77. “The user may set a music channel as a favorite by, for example, pressing a ‘FAV’ key on remote control 40 when the user has tuned to the channel,” “highlighted a music program listing displayed in a music program listings screen,” or “from a favorites set-up screen.” *Id.* The user may also “indicate a desire to enter favorites mode by, for example, highlighting the ‘Favorites’ option of main menu screen 100 (FIG. 6), or by pressing a ‘FAV’ key on remote control 40 when in music listings display screen 180.” *Id.* Once in favorites mode, “the music application may obtain only information for favorite music channels and may limit BROWSE display 225 (FIG. 5b) and music program listings screen 180 (FIG. 7a) to displaying music program listings for favorite

music channels if desired.” *Id.*; *see also id.* ¶¶78, 97 (“If in favorites mode, the music application displays music information only for those music channels that have been designated as favorites (step 540)” and “may only retrieve information for favorite channels.”). Thus, Ellis-2005 discloses “an output selection module” that “limit[s] the output of the first and second media content based on a criterion.”

b. Claim 11: The system of claim 9 further comprising a computer storage device configured to store at least one of the first and second media content.

Ellis-2005 alone discloses and teaches Claim 11. Ex-1002 ¶¶146-147. As discussed above, Ellis-2005 alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

Ellis-2005 also discloses that “[s]et-top box 28 may also have digital channel selector 53, packet filter 55, and decoder 57 (or any suitable combination of such components) for obtaining the tracks of a particular digital channel from the signals that have been tuned to by tuners 50 and 51.” Ex-1008 ¶44. Moreover, “[s]et-top box 28 may also have memory 59 for storing the PID map and for temporarily storing in-band information obtained by the music application using a second tuner.” *Id.* “Digital channel selector 53 may obtain the PID map from the in-band data stream, store it in memory 59, and may determine which PIDs correspond to which digital channels.” *Id.* Further, “[i]f desired, the PID map may be preprogrammed into memory 59 of the music application” or “[i]n another

suitable approach, the music application may obtain the PID map from the out-of-band data stream.” *Id.* Ellis-2005 also discloses that “[t]he functions of control circuitry 42” which contains memory 59 “may be provided using the set-top box arrangement of FIG. 3” or “integrated into an advanced television receiver such as a high-definition television (HDTV) receiver, personal computer television (PC/TV), digital or analog radio receiver, or any other such suitable component or combination of components.” *Id.* ¶53. Thus, Ellis-2005 discloses “a computer storage device configured to store at least one of the first and second media content.”

- c. Claim 15: The system of claim 9, wherein, in response to receiving the response message, the computer server is configured to correlate the response message to the second media content with the specific instance of the first media content.**

Ellis-2005 alone discloses and teaches Claim 15. Ex-1002 ¶148. Ellis-2005 alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

Ellis-2005 discloses a “computer server” configured to “correlate the response message to the second media content with the specific instance of the first media content” in response to receiving the response message. For example, Ellis-2005 discloses that the music application may “provide the user with an opportunity to purchase music merchandise ... associated with a music program.”

Ex-1008 ¶87. Further, Ellis-2005 discloses that “identifiers” and “ordering information” are transmitted to merchandising facility 10 when a purchase request is made by the user specific to the second media content. *Id.* ¶¶8, 87-88. Ellis-2005 also discloses that a “merchandise request” includes necessary information for making a purchase including, e.g., “a merchandise identifier, a user identifier or account number” and “may be sent from the music application implemented on interactive music application equipment 17 to merchandising facility 10 over communications path 9 (FIG. 1).” *Id.* ¶88. Additionally, Ellis-2005 states that “[t]he user may, for example, purchase merchandise that is related to the music program that the user is listening to.” *Id.* ¶87. In this situation, a POSITA would have understood the response message for the second media content (i.e., merchandise request relating to the viewed music information) to be correlated with the specific instance of the first media content (i.e., the music program that the user is listening to). Ex 1002 ¶149.

d. Claim 23: The system of claim 9, wherein the response message includes data that enables identification of a responder.

Ellis-2005 alone or in view of Crosby discloses and teaches Claim 23.

Ex-1002 ¶150. As discussed above, Ellis-2005 alone or in view of Crosby discloses and teaches all of the elements of the system of Claim 9.

(Ground 4) Ellis-2005 also discloses that when a user presses the “buy” button to purchase merchandise (e.g., music album or record), a response message is sent that includes a “user identifier.” Ex-1008 ¶88 (“A merchandise request” includes necessary information including, e.g., “*a user identifier or account number*” and “may be sent from the music application implemented on interactive music application equipment 17 to merchandising facility 10 over communications path 9 (FIG. 1).” (emphasis added)). A POSITA would have understood these identifiers to identify the responder. Ex-1002 ¶151.

(Ground 5) Crosby also explicitly discloses that the “response message includes data that enables identification of a responder.” For example, Crosby discloses “subscriber interface unit 214” that “receives the subscriber ID for the subscriber of the mobile unit.” Ex-1006, 10:17-18. Subscriber interface unit 214 can access “subscriber database 205, which provides the subscriber name and password and the e-mail for the subscriber” and “process[es] purchase transactions directly on behalf of the subscriber using the stored credit card number for the subscriber.” *Id.* 10:24-29. Moreover, Crosby discloses that “the network operations center maintains an e-mail address associated with the subscriber ID and transmits e-mail messages containing information corresponding to program segments selected by the subscriber via the designated e-mail address,” e.g., in response to “INFO” or “ORDER” commands. *Id.* 7:57-61.

A POSITA would have been motivated to incorporate Crosby's teaching of additional information to accurately identify a responder/customer. Ellis-2005 already motivated the need to identify a responder/customer since a POSITA would have understood it would have been common sense that a responder/customer would need to be accurately identified in order to successfully complete order fulfillment and billing. A POSITA would have had a reasonable expectation of success in using Crosby's particular type of information in a transaction since Ellis-2005 already describes providing at least some, if not sufficient identifying information and the combination would have only required the addition of the type of information disclosed in Crosby as part of Noreen's transaction. Ex-1002 ¶¶152-153.

XIV. THE BOARD SHOULD NOT USE ITS DISCRETION TO DENY INSTITUTION UNDER *GENERAL PLASTIC*

Petitioner expects that Patent Owner may ask the Board to exercise its discretion to deny institution, despite the strong invalidity showing on the merits, because it is the second petition challenging the '081 Patent. The first petition, the 721 IPR, was recently filed by an unrelated defendant in a different district court case. The Board should decline to do so. As explained below, because Hyundai is an unrelated party that moved expeditiously to file this petition before the patent

owner's deadline to respond in the 721 IPR, the *General Plastic* factors⁵ do not justify, and in fact weigh against, denying Hyundai's petition on this basis.

Under the first *General Plastic* factor, Hyundai has not previously filed a petition directed to the same claims of the same patent. The only other petition, the 721 IPR, was filed by Volkswagen Group of America ("Volkswagen"), a party with no relationship to Hyundai except that it too was served with a complaint alleging infringement of the '081 Patent in a separate district court action. *See* IPR2021-00721, Paper 1 at 1 ("the 721 Pet.") (citing *StratosAudio, Inc. v. Volkswagen Group of America, Inc.*, No. 6:20-cv-1131 (W.D. Tex.)). Because Hyundai is not the same as and has no relationship (let alone a "significant relationship") with Volkswagen, this factor weighs against denial as recent Board decisions make clear. *See Sony Mobile Commc'ns AB v. Ancora Techs., Inc.*, IPR2021-00663, Paper 17 at 10 (PTAB June 10, 2021) (rejecting discretionary denial under *General Plastic* when Sony was unrelated to prior petitioners Apple, HTC, and Samsung); *Netflix, Inc. v. Broadcom Corp.*, IPR2020-01423, Paper 7 at 5-6 (PTAB Mar. 11, 2021) (a prior petition filed by an unrelated petitioner is not a basis for denial of institution). Because the parties are unrelated, other *General*

⁵ *General Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, -58, -59, -60, -61, Paper 19 at 16-17 (PTAB Sept. 6, 2017) (§ II.B.4.i designated precedential). In *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, -63, -84, Paper 11 at 10 (PTAB Apr. 2, 2019) (precedential), the Board applied *General Plastic* to a second petitioner with a "significant relationship" to a first petitioner.

Plastic factors also weigh against denial. For example, as pointed out in *Sony Mobile*, the second, fourth, and fifth *General Plastic* factors, are simply not applicable in the situation where second petitioner Hyundai is not the same party as first petitioner Volkswagen. These factors weigh strongly against denial. *See Sony Mobile*, Paper 17 at 12-15.

The third *General Plastic* factor concerns “whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition.” As an initial matter, this factor is far less of a concern when unrelated parties challenge the same patent. *See Sony Mobile*, Paper 17 at 13. Moreover, Hyundai acted expeditiously to marshal prior art and draft this petition before the deadline for the preliminary response in the 721 IPR, i.e., July 27, 2021, to further minimize concerns regarding timing and efficiency of parallel challenges before the Board. This factor weighs strongly against denial. *See id.*

Finally, the sixth and seventh *General Plastic* factors address concerns of efficiency when there are two or more challenges to the same patent. *See Valve*, Paper 11 at 15 (noting the delay in filing a second petition until after the petition of a closely related party was denied institution). Unlike the situation in *Valve*, however, not only are Hyundai and Volkswagen unrelated, this petition and Volkswagen’s petition were filed relatively close together (before the due date of

the first preliminary response) and, as a result, can be resolved efficiently. For example, considerable efficiencies will be realized because it is likely that the same panel will be addressing similar issues on a similar schedule. *See* PTAB Standard Operating Procedure 1 (Revision 15), § III.G.3.f at 10 (cases involving the same patent assigned to the same panel). At bottom, none of the *General Plastic* factors are implicated by Hyundai's petition and any argument for discretionary denial based thereon should be rejected.

XV. THE BOARD SHOULD NOT USE ITS DISCRETION TO DENY INSTITUTION UNDER *FINTIV*

Petitioner expects that Patent Owner will ask the Board to exercise its discretion to deny institution because of the on-going district court case involving the parties despite the strong invalidity showing on the merits. The Board should decline to do so. As explained below, the six factors set out in *Fintiv/NHK* do not justify denying Hyundai's petition on that basis.

A. Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

Hyundai has not moved to stay the district court proceedings pending IPR, so there is no stay motion that the Court could have acted upon yet. The PTAB has explained that it will not endeavor to speculate on how any such motion would be resolved, before one is filed. *Google, LLC v. Parus Holdings Inc.*, IPR2020-00847, Paper 9 at 12 (PTAB Oct. 21, 2020) ("We, however, decline to engage in what

would amount to a speculative exercise as to how the Texas District Court would apply these [stay] factors to this particular case at some future time, and then give such speculation weight in our overall determination whether to exercise our discretion to institute trial.”); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (same). As the PTAB has explained, this factor is neutral where no stay motion was filed before institution. *See, e.g., Hulu, LLC v. SITO Mobile, Ltd.*, IPR2021-00298, Paper 11 at 10-11 (PTAB May 19, 2021). Accordingly, this factor is neutral.

B. Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision

The district court has set an “estimated” trial date for October 3, 2022. Ex-1009. Putting aside the inherent uncertainty of an “estimated” trial date that is so far off, *Dish Network LLC v. Broadband iTV, Inc.*, IPR2020-01280, Paper 17 at 16 (PTAB Feb. 4, 2021) (“We cannot ignore the fact that the currently scheduled trial date is more than nine months away and much can change during this time”), this timing does not tip in favor of denying the petition in this case. *See also, e.g., Apple Inc. v. Koss Corp.*, IPR2021-00305, Paper 14 at 13 (PTAB June 3, 2021). Namely, an institution decision should be issued in about six months around January 2022, allowing a month for the case to be accorded a filing date. A hearing should be held about nine months later in October 2022, and a final written decision (“FWD”) should be issued in about January 2023 (twelve months after the

institution date). The weight of current PTAB cases makes clear that this timing, where the FWD is due within a few months of any district court trial, weighs only slightly in favor of denial. *See, e.g., Hulu*, Paper 11 at 10-11 (institution; trial set for three months before FWD weighs “marginally in favor” of denial); *Facebook, Inc. v. USC IP P’ship, LP*, IPR2021-00033, Paper 13 (PTAB Apr. 30, 2021) (institution; trial scheduled five months before FWD weighs “slightly” in favor of denial); *Dish Network*, IPR2020-01280, Paper 17 (institution; trial scheduled for three months before FWD weighs “at most, slightly in favor” of denial); *Apple*, IPR2021-00305, Paper 14 at 13 (institution; trial scheduled for two months before FWD weighs “at most, minimally in favor” of denial).

Additionally, Petitioner has filed a motion to dismiss the pending W.D.Tex. district court litigation for improper venue (*StratosAudio Inc. v. Hyundai Motor America*, No. 6:20-cv-01125-ADA, D.I. 12 (W.D. Tex. Feb. 22, 2021)). Petitioner will notify the Board of any Court orders regarding the motion to dismiss.

As such, the trial date weighs only slightly in favor of denial.

C. Investment in the parallel proceeding by the court and the parties

There has been minimal development of the underlying case. Fact discovery has not opened, and the parties have only just begun the claim construction process, identifying terms for construction one day prior to this filing. There have been no substantive orders in the case, and the most cost intensive period in the

district court case will occur after the institution decision. This alone weighs against denial. *See, e.g., Hulu*, Paper 11 at 13 (IPR instituted where “the district court proceeding remains at the early stages, and a significant portion of work still remains to be done in the district court proceeding”).⁶

Additionally, Hyundai filed its petition many months before the statutory deadline to do so, and, significantly, only about two months after being served with preliminary infringement contentions on May 13, 2021. Hyundai’s diligence further weighs against exercising discretion. *Facebook*, Paper 13 at 13 (“As the Board explained in *Fintiv*, it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding.”); *Dish Network*, IPR2020-01280, Paper 17 at 21 (same).

Because the investment in the trial has been minimal and Hyundai acted diligently, this factor weighs against or strongly against discretionary denial, as demonstrated by decisions involving the same time period at issue here. *See, e.g., Dolby Labs., Inc. (Delaware) v. Intertrust Techs. Corp.*, IPR2020-01105, Paper 14 at 15 (PTAB Jan. 5, 2021) (Petitioner “acted diligently and without much delay” when it filed its petition four months after receiving infringement contentions and

⁶ Claim construction has not meaningfully started in this case, but even if claim construction had progressed to the point of an order, the Board has recently noted that short claim construction orders lacking in explanations do not represent significant investment by the trial court. *See Dish Network*, IPR2020-01280, Paper 17 at 18-20.

two months after petitioner served invalidity contentions); *Hulu*, Paper 11 at 13 (IPR instituted where “the evidence shows that Petitioner acted diligently, filing its Petition approximately five months after the complaint was filed and around two months after receiving Patent Owner’s preliminary infringement contentions”).

D. Overlap between issues raised in the petition and in the parallel proceeding

Hyundai stipulates that it will not pursue invalidity against the asserted claims in the district court using any obviousness ground that includes the primary references in this petition. *See* Ex-1021. This stipulation weighs against discretionary denial. The Board has routinely found similar, or even narrower, stipulations sufficient to weight this factor against discretionary denial. *See, e.g., Sand Revolution II, LLC v. Cont’l Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24 at 11-12 (PTAB June 16, 2020) (Informative); *Apple Inc. v. Seven Networks, LLC*, IPR2020-00180, Paper 12 at 15 (PTAB Dec. 18, 2019); *HP Inc. v. Neodron Ltd.*, IPR2020-00459, Paper 17 at 41-42 (PTAB Sept. 14, 2020); *VMWare, Inc. v. Intell. Ventures I, LLC*, IPR2020-00470, Paper 13 at 20 (PTAB Aug. 18, 2020); *Hulu*, Paper 11 at 14-15; *Apple*, IPR2021-00305, Paper 14 at 19-20. Hyundai’s stipulation is broader than the stipulations found persuasive in the cases above and thus should weigh more heavily in favor of institution. *See HP*, Paper 17 at 41-42 (explaining that a broader stipulation would have further strengthened support for institution). Hyundai’s stipulation is also broader than in

other cases because it is not limited to the specific grounds asserted in the petition, but to any obviousness grounds using the primary references from the IPR.

This factor thus weighs against denial.

E. Whether the petitioner and the defendant in the parallel proceeding are the same party

While Hyundai is both Petitioner and litigation defendant, this factor does not outweigh the other factors that weigh against discretionary denial.

F. Other circumstances that impact the Board's exercise of discretion, including the merits

“Other circumstances” here further weigh against discretionary denial. First, the merits of Hyundai’s Petition are especially strong. Two petition references, Noreen and/or Ellis-2005, each alone render obvious all elements of independent Claim 9. To the extent that Noreen or Ellis-2005 do not teach a particular limitation, it would have been obvious to a POSITA to combine Noreen with Crosby and Ellis-2002 and Ellis-2005 with Crosby to achieve those limitations. *See Align Tech., Inc. v. 3Shape A/S*, IPR2020-01087, Paper 15 at 42-43 (PTAB Jan. 20, 2021) (“Strong merits typically favor granting institution.”).

Moreover, Noreen and Ellis-2005 specifically disclose claim elements that were added to distinguish the Manganaris prior art, which was a basis for the Examiner’s only rejection. For example, Applicant’s claim amendments in response to this rejection added the following limitations to independent Claim 9:

“data enabling the identification of a specific instance of the first media content”; “uniquely identifying data specific to at least the second media content, the second media content received discretely from the first media content”; “present concurrently ... on an output of the first receiver module or the second receiver module”; “configured to receive ... response input responsive to the second media content”; and “configured to transmit a response message having ... uniquely identifying data specific to the second media content.” Ex-1004, 174-184. These limitations, added to avoid the asserted prior art, are plainly disclosed by Noreen and Ellis-2005. *See supra* Sections XIII.A-XIII.C above. The fact that Noreen and Ellis-2005 plainly disclose elements added to secure allowance strongly weighs in favor of granting institution. These “other circumstances” weigh against discretionary denial.

Taken together, the *Fintiv/NHK* factors strongly weigh against denial.

XVI. CONCLUSION

The unpatentability grounds presented above are reasonably likely to prevail, *inter partes* review should be instituted, and Claims 9-11, 15, and 23 should be cancelled as unpatentable over the prior art.

Respectfully Submitted,

/s/ Ryan K. Yagura

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner certifies that this petition includes 13,842 words, as measured by Microsoft Word, exclusive of the table of contents, mandatory notices under § 42.8, certificates of service, word count, claim listing, and exhibits.

CERTIFICATE OF SERVICE

The undersigned certifies pursuant to 37 C.F.R. §§ 42.6(e) and 42.105 that on July 16, 2021, a true and correct copy of the Petition for *Inter Partes* Review of U.S. Patent No. 8,166,081 challenging Claims 9-11, 15, and 23 was served via express mail on the Patent Owner at the below correspondence address of record:

Knobbe Martens Olson & Bear LLP
2040 Main Street, 14th Floor
Irvine, CA 92614
Telephone: (949) 760-0404

A courtesy copy was sent to the below counsel via electronic mail:

Charles Larsen
E-Mail: charles.larsen@whitecase.com
Jonathan J. Lamberson
E-Mail: lamberson@whitecase.com
Michael J. Songer
E-Mail: michael.songer@whitecase.com
White & Case LLP
75 State Street, 24th Floor
Boston, MA 02109
Telephone: (617) 979-9300

Corby R. Vowell
E-Mail: vowell@fsclaw.com
Friedman, Suder & Cooke
604 E. 4th Street, Suite 200
Fort Worth, TX 76102
Telephone: (817) 574-7010

Respectfully submitted,

/s/ Ryan K. Yagura

Ryan K. Yagura (Reg. No. 47,191)

E-Mail: ryagura@omm.com

O'Melveny & Myers LLP

400 South Hope Street, 18th Floor

Los Angeles, CA 90071

Telephone: (213) 430-6000

Attorney for Petitioner