

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FORD MOTOR COMPANY,
Petitioner,

v.

AUTOCONNECT HOLDINGS, LLC
Patent Owner.

U.S. Patent No. 9,147,297 to Ricci

Case No.: IPR2026-00172

**PETITION FOR *INTER PARTES* REVIEW
UNDER 35 U.S.C. § 311 *ET SEQ.* AND 37 C.F.R. § 42.100 *ET SEQ.*
(U.S. PATENT NO. 9,147,297)**

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List of Exhibits

Exhibit No.	Description
1001	U.S. Patent No. 9,147,297 (“the ’297 Patent”)
1002	U.S. Patent No. 9,147,297 Certified File History (“the ’297 Patent File History”)
1003	Expert Declaration of Dr. Scott Andrews
1004	Dr. Scott Andrews Curriculum Vitae
1005	Complaint, <i>AutoConnect Holdings LLC v. Ford Motor Company</i> , Case No. 1:24-cv-01327-JCG (D. Del) (Dec. 6, 2024)
1006-1009	<i>Intentionally left blank</i>
1010	U.S. Patent No. 8,768,539 B1 to Clement (“Clement”)
1011	U.S. Patent No. 7,388,466 B2 to Ghabra (“Ghabra”)
1012	U.S. Patent Application Pub. No. 2012/0092129 A1 to Lickfelt (“Lickfelt”)
1013	U.S. Patent Application Pub. No. 2011/0093153 A1 to Moinzadeh (“Moinzadeh”)
1014	<i>Intentionally left blank</i>
1015	U.S. Patent No. 7,783,699 B2 to Rasin (“Rasin”)
1016-1021	<i>Intentionally left blank</i>
1022	U.S. Patent Application Pub. No. 2007/0143482 A1 to Zanchi (“Zanchi”)
1023	U.S. Patent No. 9,224,289 B2 to Demeniuk (“Demeniuk”)
1024-1026	<i>Intentionally left blank</i>
1027	U.S. Patent Application Pub. No. 2011/0106375 A1 to Sundaram (“Sundaram”)
1028-1049	<i>Intentionally left blank</i>
1050	Bosch Handbook, (Automotive Handbook October 2004 6 th Edition) (“Bosch”)
1051	IEEE Dictionary, (IEEE 100 The Authoritative Dictionary of IEEE Standards Terms 2000 7 th Edition) (“IEEE Dictionary”)
1052	“Specification of The Bluetooth System” (June 30, 2010). Version 4.0 (Volumes 0-6) Available at https://www.bluetooth.com/specifications/specs/core-specification-4-0/ (Accessed June 27, 2025) (“Bluetooth Specification”)

Exhibit No.	Description
1053	Hossain et al., “A Comprehensive Study of Bluetooth Signal Parameters for Localization,” 2007 IEEE 18 th International Symposium on Person, Indoor and Mobile Radio Communications Available at https://www.ieeeexplore.ieee.org/document/4394215 (“Hossain”)
1054-1056	<i>Intentionally left blank</i>
1057	Allen, Leslie “Ford launches parental control technologies,” October 7, 2008. Available at https://www.autonews.com/article/20081007/ZZZ_SPECIAL/310079921/ford-launches-parental-control-technologies/ (Accessed June 24, 2025) (“Auto News”)
1058-1062	<i>Intentionally left blank</i>
1063	Saltzstein, William E. “Bluetooth: The Future of Wireless Medical Technology?” February 1, 2002. Available at https://www.mddionline.com/new-technologies/bluetooth-the-future-of-wireless-medical-technology- (Accessed June 30, 2025) (“MDDI”)
1064	<i>Intentionally left blank</i>
1065	SUSE LINUX – Administration Guide. Published by SUSE LINUX AG, 2004. (“Linux”)
1066-1074	<i>Intentionally left blank</i>
1075	Turing, A. M. “On Computable Numbers with an Application to the Entscheidungsproblem” November 12, 1936. (“Turing”)
1076	Ganesan, Deepak “Chapter 4, The Von Neumann Model” April 25, 2012. Available at https://web.archive.org/web/20120425083227/http://none.cs.umass.edu/~dganesan/courses/fall09/handouts/Chapter4.pdf (Accessed September 15, 2025) (“Ganesan”)
1077	Von Neumann, John “First Draft of a Report on the EDVAC” June 30, 1945. (“Von Neumann”)
1078	Intel “The Story of the Intel 4004.” Available at https://web.archive.org/web/20121003001757/https://www.intel.com/content/www/us/en/history/museum-story-of-intel-4004.html (Accessed September 22, 2025) (“Intel 4004”)
1079	Intel MCS-4 Micro Computer Set Data Sheet, November 1971. (“MCS-4”)

Exhibit No.	Description
1080	Erickson, Kelvin T. “Programmable logic controllers,” <i>IEEE Potentials</i> , Institute of Electrical and Electronics Engineers (IEEE), February/March 1996. (“Erickson”)
1081	U.S. Patent No. 9,224,289 B2 to Demeniuk File History (“Demeniuk Patent File History”)
1082-1105	<i>Intentionally left blank</i>
1106	U.S. Patent No. 9,147,297 Maintenance Fee Payment Records
1107-1109	<i>Intentionally left blank</i>
1110	Flextronics “Flex celebrates 10 years of maintaining Ford’s prestigious Q1 quality certification in Guadalajara, Mexico” (Posted April 2, 2024) Available at https://flex.com/resources/10-years-of-maintaining-fords-q1-quality-certification , accessed November 7, 2025)
1111	<i>Intentionally left blank</i>
1112	Scheduling Order, <i>AutoConnect Holdings LLC v. Ford Motor Company</i> , Case No. 1:24-cv-01327-JCG (D. Del) (“Scheduling Order”)
1113-1116	<i>Intentionally left blank</i>
1117	Zetter, Mark “Ford and Flextronics automotive EMS, Venture Outsource” February 2010 (Available at https://ventureoutsource.com/contract-manufacturing/industry-pulse/ford-and-flextronics-automotive-ems , accessed November 18, 2025) (“Ford Flextronics EMS”)
1118	Schröter, Anke “Ford partners with Flextronics, evertiq.com”, February 12, 2010, (Available at https://evertiq.com/news/16197? , accessed November 18, 2025) (“Ford Flextronics 2010”)
1119	“Which Ford vehicles are compatible with Apple CarPlay?” (Available at https://www.ford.com/support/how-tos/sync/getting-started-with-sync/which-vehicles-are-compatible-with-apple-carplay/ Accessed November 18, 2025) (“Ford AppleCarPlay”)

Mandatory Notices under 37 C.F.R. § 42.8

Real Party-In-Interest - 37 C.F.R. § 42.8(b)(1)

Petitioner certifies that Ford Motor Company (“Petitioner”) is the real party-in-interest.

Related Matters - 37 C.F.R. § 42.8(b)(2)

Petitioner identifies the following related judicial matter: *AutoConnect Holdings, LLC v. Ford Motor Company*, 1:24-cv-01327-JCG (D. Del) (pending) filed December 6, 2024. U.S. Patent No. 9,147,297 is being asserted in this proceeding, along with twelve other patents: U.S. 9,020,491; U.S. 9,020,697; U.S. 9,082,239; U.S. 9,098,367; U.S. 9,116,786; U.S. 9,123,186; U.S. 9,140,560; U.S. 9,147,296; U.S. 9,173,100; U.S. 9,290,153; U.S. 10,862,764; and U.S. 11,163,931.

Petitioner is also aware that U.S. Patent No. 9,147,297 is being asserted in *AutoConnect Holdings LLC v. General Motors LLC*, 2-24-cv-00877 (EDTX) (pending) filed October 30, 2024.

Petitioner filed IPR2025-01342 challenging U.S. 9,020,697, IPR2025-01383 challenging U.S. 9,290,153, IPR2025-01524 challenging U.S. 9,123,186, IPR2026-00002 challenging U.S. 9,147,296, and IPR2026-00171, being filed concurrently, challenging U.S. 9,082,239.

Lead and Back-Up Counsel - 37 C.F.R. § 42.8(b)(3)

The Petitioner identifies the following lead and back-up counsel:

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Pursuant to 37 C.F.R. § 42.10(b), an appropriate Power of Attorney is filed concurrently herewith.

Service Information - 37 C.F.R. § 42.8(b)(4)

Service information for lead and back-up counsel is provided in the designation of lead and back-up counsel above. Petitioner hereby consents to service by email at the following email address: FPGP0154IPR@brookskushman.com.

Fees - 37 C.F.R. § 42.15(a)

The filing fees associated with this Petition are being charged to Deposit Account 06-1510. The Board is authorized to charge any additional fees or credit any refunds pertaining to this Petition to Deposit Account 06-1510.

I. Introduction

The Petitioner Ford Motor Company (“Ford”) respectfully requests *inter partes* review of claims 1-20 (the “Challenged Claims”) of U.S. Patent No. 9,147,297 (“the ’297 Patent”; attached as Ex. 1001). The supporting Declaration of Scott Andrews is attached as Ex. 1003.

The ’297 Patent is directed to customization of vehicle controls based on user profiles, and more specifically prioritizing control of an infotainment system with respect to multiple users. (Ex. 1001, Abstract, Claims 1-20.) Prior to the earliest priority date of the ’297 Patent, however, vehicles were well-known to include customized vehicle controls based on user profiles. The underlying technology for implementing such systems was similarly well-known. (Ex. 1003, ¶¶87-113; Exs. 1010-1013, 1015, 1050-1053, 1057, 1063, 1065, 1075-1080.) Grounds 1-3 below establish that the prior art described these concepts in detail, e.g., Zanchi (Ex. 1022) and Demeniuk (Ex. 1023) each disclose prioritizing control of an infotainment system with respect to multiple users.

The litigation filed by Patent Owner (AutoConnect Holdings, LLC or “AutoConnect”) is in its early pleadings stage, and trial is scheduled for October 2027, long after the projected final decision here. (Ex. 1112, 29.) Although the ’297 Patent issued over ten years ago – it has not been in force the entire time because Patent Owner allowed it to lapse for over three years. (Ex. 1106) Additionally,

Petitioner had settled expectations it would not be asserted because, *inter alia*, the original patent owner supplies the accused product to Petitioner (*see* Exs. 1110, 1117, 1118, 1119), and the current Patent Owner made no use of the '297 Patent before contacting Petitioner in December 2023. (Ex. 1002, 669-707; Ex. 1005, 9.)

II. Grounds for Standing Requirements under 37 C.F.R. § 42.104

A. Grounds for Standing - 37 C.F.R. § 42.104(a)

Petitioner certifies that the '297 Patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR.

B. Challenged Claims - 37 C.F.R. § 42.104(b)(1)

Petitioner requests *inter partes* review for claims 1–20 of the '297 Patent and requests that the Patent Trial and Appeal Board (“PTAB”) find those claims as unpatentable.

C. Prior Art Relied Upon

The earliest effective filing date of the '297 Patent is April 15, 2013¹, which is after March 16, 2013; thus, AIA applies. (Ex. 1001, Cover). IPR is requested in view of the following references:

- Zanco - U.S. 2007/0143482 A1 (Ex. 1022) published June 21, 2007, prior art under 35 U.S.C. §§ 102(a)(1) and 102(a)(2).

¹ Petitioner does **not** concede the '297 Patent is entitled to this priority date.

- Sundaram - U.S. 2011/0106375 A1 (Ex. 1027) published May 5, 2011, prior art under 35 U.S.C. §§ 102(a)(1) and 102(a)(2).
- Demeniuk - U.S. 9,224,289 B2 (Ex. 1023) filed March 15, 2013, prior art under 35 U.S.C. § 102(a)(2). (Ex. 1003, ¶¶114-116.)

D. Grounds of Challenge – 37 C.F.R. § 42.104(b)(2)

The grounds of unpatentability presented are as follows:

Ground	Basis	References	Claims Challenged
1	§ 103	Zancho	1-2, 4-10, and 12-20
2	§ 103	Zancho and Sundaram	3 and 11
3	§ 103	Demeniuk and Zancho	1–20

There is a reasonable likelihood that at least one Challenged Claim is unpatentable as explained herein. Petitioner requests review of the Challenged Claims, and judgment finding them unpatentable.

III. Person of Ordinary Skill in the Art (POSA)

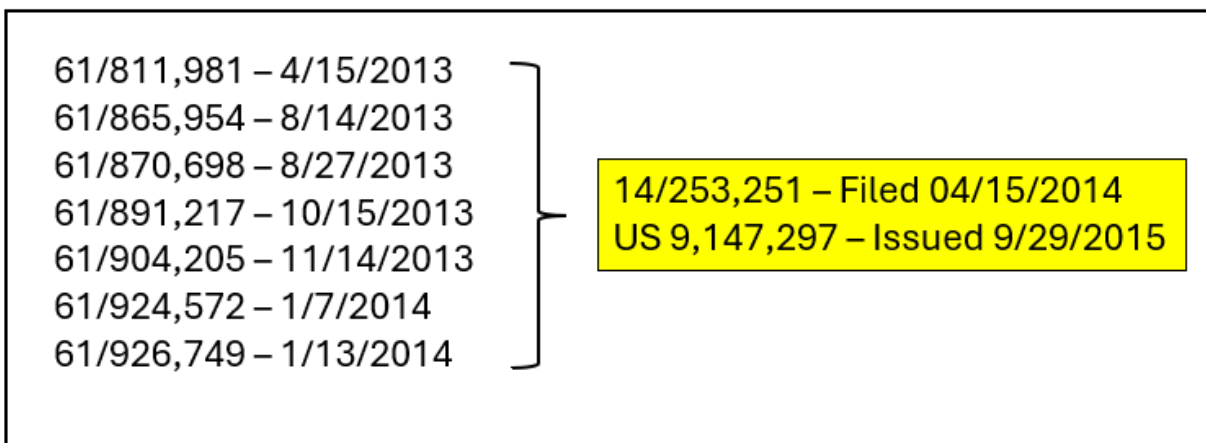
A person of ordinary skill in the art (POSA) of the '297 Patent would have had, as of April 15, 2013, a Bachelor's degree in Electrical Engineering, Mechanical Engineering, or an equivalent degree with at least two years of experience in

communication systems, vehicle sensor systems, electronic user interface systems, or related technologies. Additional industry experience could make up for less education and vice versa. (Ex. 1003, ¶¶46-47.) Petitioner's expert, Scott Andrews, qualifies as a POSA for the '297 Patent. (*Id.*, ¶¶ 1-49; Ex. 1004.)

IV. The Challenged '297 Patent

A. Priority Claim

The '297 Patent matured from U.S. Application 14/253,251 filed April 15, 2014 and claims priority to seven provisional patent applications including the earliest filed U.S. provisional patent application 61/811,981 filed April 15, 2013. (Ex. 1001, Cover.) A graphic of the '297 Patent Family is provided below, with the '297 Patent highlighted in yellow. (Ex. 1003, ¶¶50-51, 74; Ex. 1001, cover.)



The '297 Patent Family

B. Overview of the '297 Patent

The '297 Patent is directed to prioritizing control of an infotainment system

with respect to multiple users. (Ex. 1001, Abstract, claims 1-20.) The '297 Patent discloses a “vehicle control system 204 [that] may communicate with a device or user interface 212, 248” that “may be operable to receive user input[.]” (Ex. 1001, 16:53-55; Ex. 1003, ¶¶52-56.)

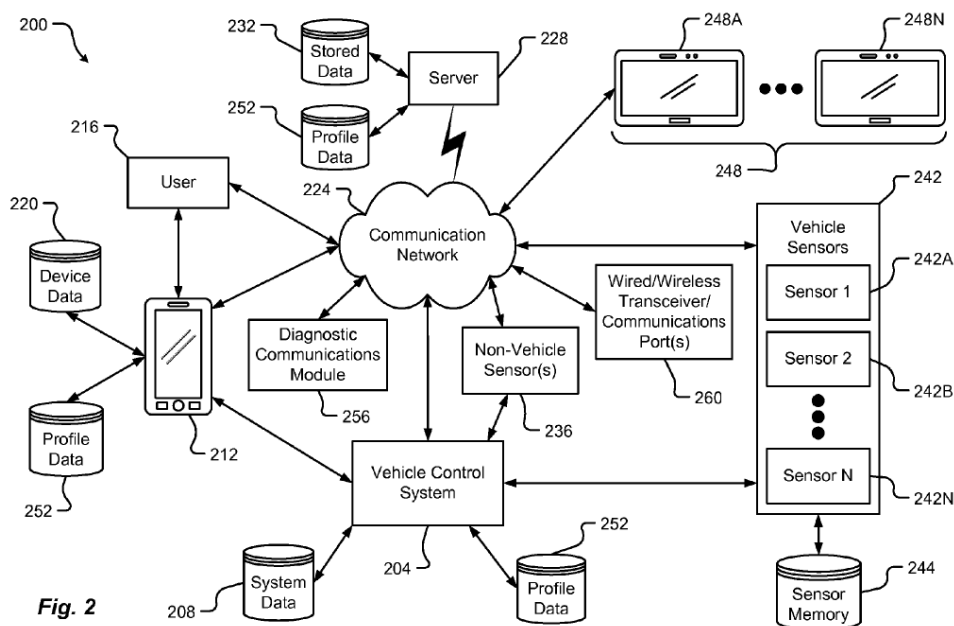


Fig. 2

Ex. 1001, Fig. 2

The '297 Patent further discloses “a profile identification module [that] can detect one or more infotainment system 870 that has been registered with a device 212 and/or user 216.” “The detection of an available infotainment system 870 may be provided via device discovery on a network (e.g., wired and/or wireless).” (Ex. 1001, 89:59-67; Ex. 1003, ¶¶57-65.)

The '297 Patent discloses a “method 3000” that uses “the collected and/or

stored infotainment information to adjust settings based on the infotainment information (step 3020).” For example, “the infotainment system 870 can alter at least one setting of one or more components of the infotainment system 870 to match information stored in the user profile associated with a user 216.” (Ex. 1001, 90:5-12; Ex. 1003, ¶66.)

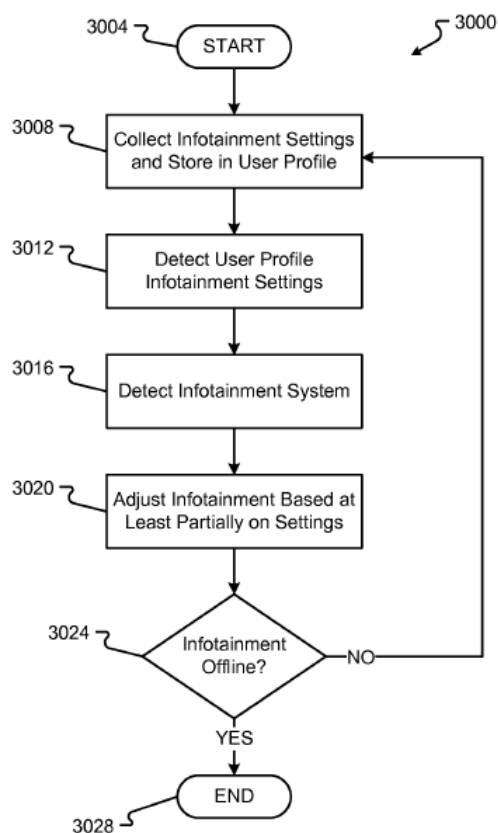


Fig. 30

Ex. 1001, Fig. 30

The '297 Patent also discloses prioritizing control of an infotainment system with respect to multiple users, e.g., “a parent may have a high access priority (e.g., AP1), and a child may have a lower access priority (e.g., AP3) when compared to

the parents access priority.” (Ex. 1001, 90:22-25; Ex. 1003, ¶¶67-73.)

C. Prosecution History

The '297 Patent was filed as U.S. Patent Application No. 14/253,251 on April 15, 2014. (Ex. 1002, 189.) During prosecution the Examiner rejected claims 1-7, 9-17 and 19-20 as anticipated by U.S. 2013/0030645 to Divine and stated that claims 8 and 18 “would be allowable if rewritten in independent form.” (Ex. 1002, 524-529.) Original claims 8 and 18 were directed to prioritizing control of an infotainment system with respect to multiple users:

determining a second access priority of a second user associated with the infotainment system; and

comparing the access priority of the user to the second access priority of the second user, wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.

(Ex. 1002, 141, 143; Ex. 1003, ¶¶74-76.)

Applicant amended the claims to put them in allowable form, and presented new claims 21-24 directed to collecting and storing additional infotainment information. (Ex. 1002, 553-561.) The Examiner then issued a notice of allowance without providing any reasons for allowance. (Ex. 1002, 565-569.) The Examiner

did not have the prior art relied on in this Petition, i.e., Zanco (Ex. 1022), Sundaram (Ex. 1027) or Demeniuk (Ex. 1023). (Ex. 1002, 208-213; Ex. 1003, ¶¶77-81.)

The '297 Patent issued to Flextronics AP, LLC on September 29, 2015. (Ex. 1001, Cover) and lapsed on September 30, 2019 for failure to pay the first maintenance fee. (Ex. 1002, 688.) The Patent Office granted the patent owner's petition to revive the '297 Patent on March 22, 2023, approximately 3.5 years after it lapsed. (Ex. 1002, 692-707; Ex. 1106; Ex. 1003, ¶80.)

V. Claim Construction — 37 C.F.R. § 42.104(B)(3)

Petitioner applies the plain and ordinary meaning of the Challenged Claims to the asserted prior art references in support of all grounds herein.

VI. Unpatentability Grounds

The references below render the claimed subject matter invalid under 35 U.S.C. §103 and the Petitioner therefore has a reasonable likelihood of prevailing as to each of the following grounds of unpatentability. 35 U.S.C. § 314(a); 37 C.F.R. § 42.104(b)(4).

A. Ground 1: Claims 1-2, 4-10, and 12-20 are Unpatentable as Obvious Over Zanco

1. Overview of Zanco

Zanco discloses “[s]ystems and methods for handling multiple preferences in a domain.” (Ex. 1022, [0012].) Zanco discloses a controller 100 in the vehicle

domain 30 that “includes a preference handler 112 for determining how to arbitrate or negotiate between various preferences of the users 80.” (Ex. 1022, [0046]; Ex. 1003, ¶¶117, 328.) As illustrated in Figure 5, the users 80 include a first user 81, a second user 82 and a third user 83. (Ex. 1022, [0053].)

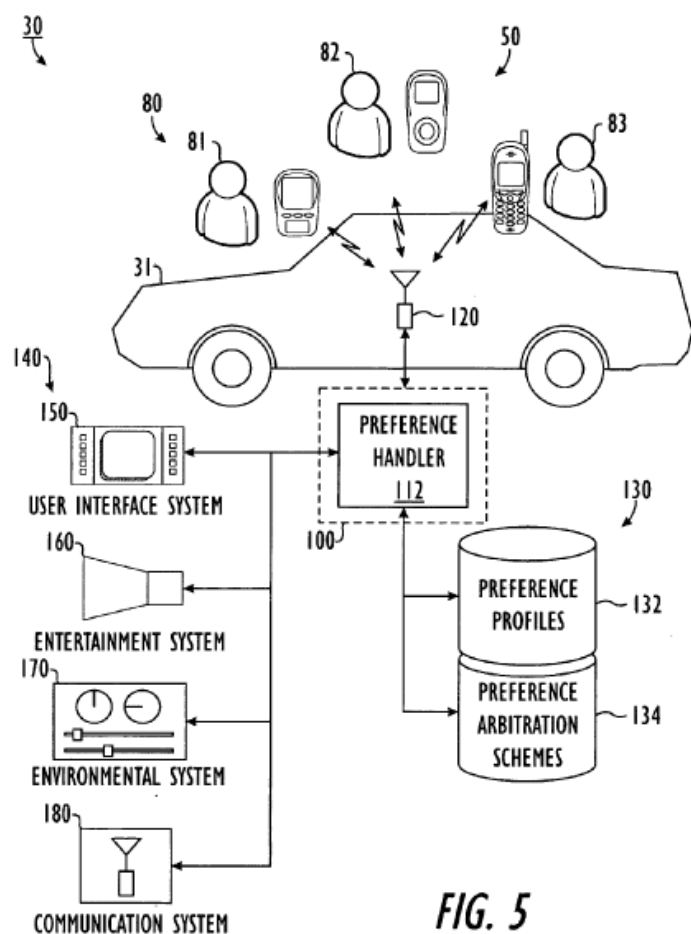


FIG. 5

Ex. 1022, Fig. 5

As explained below, Zanchi discloses, *inter alia*, prioritizing control of an infotainment system with respect to multiple users, which the Examiner identified as allowable subject matter during prosecution. (Ex. 1002, 528, *see also* 141, 143;

Ex. 1003, ¶¶117-125.)

2. Independent Claims 1, 9, and 15²

1[pre]. A method, comprising:³

9[pre]. A non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform a method comprising:

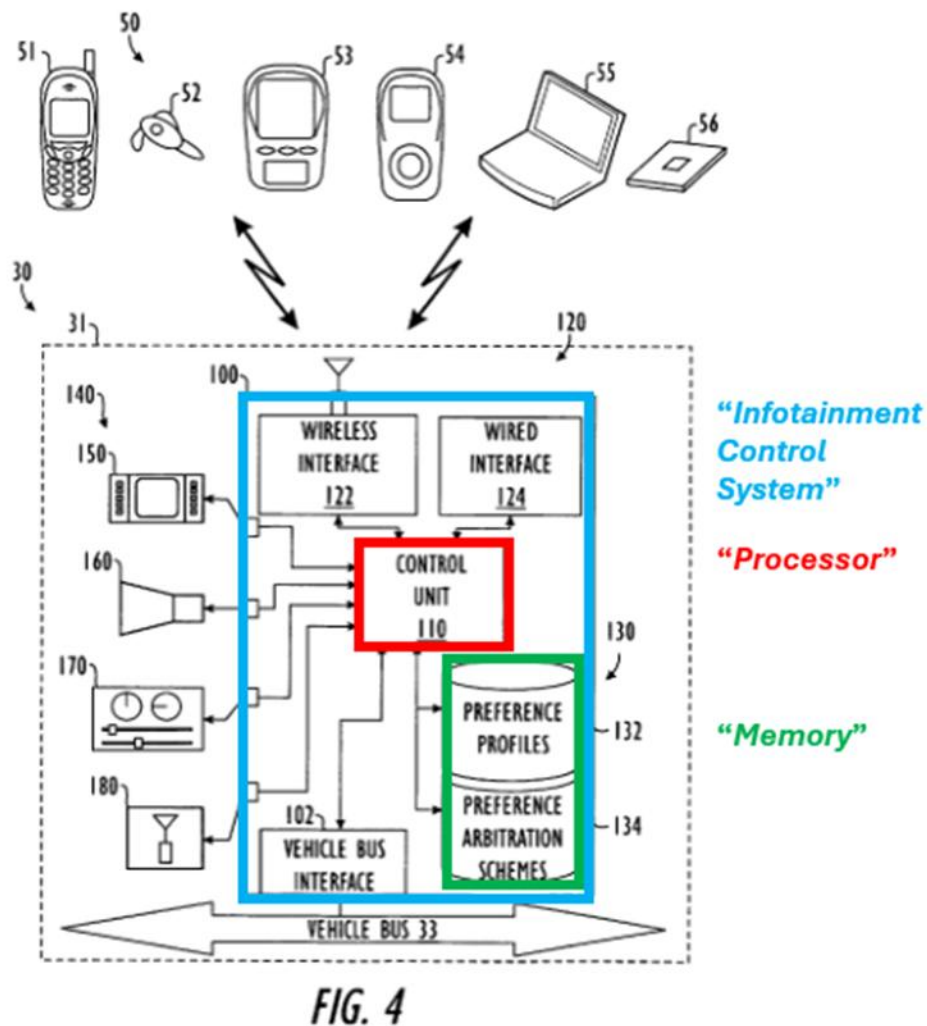
15[pre]. An infotainment control system, comprising: a profile identification module contained in a memory and executed by a processor of the infotainment control system,

Zancho discloses a controller 100 in a vehicle domain 30 that includes “a control unit 110, interfaces 120, and memory 130.” (Ex. 1022, [0008], [0039]; Ex. 1003, ¶326.) “The controller 100 is communicatively connected to one or more vehicle systems 140, such as a user interface or navigation system 150, an entertainment system 160, an environmental system 170, and a communication system 180 in the vehicle 31” and provides an “*infotainment control system.*”⁴ (Ex. 1022, [0040]; Ex. 1003, ¶¶322, 329.)

² Appendix A includes a listing of all challenged claims and Appendix B includes a table comparing claims that are treated together.

³ Petitioner’s analyses of the preambles are not an admission that any are limiting.

⁴ All claim language from the ’297 Patent is italicized for identification purposes.



Ex. 1022, Fig. 4⁵

Zancho discloses that personal devices 50 associated with particular users “interact with the controller 100 using wired or wireless interfaces 122 and 124” and that “[t]he preferences associated with the user of such a device 50 may be ... stored

⁵ All annotations added unless otherwise noted.

locally in memory 130 of the controller 100.” (Ex. 1022, [0044].) Zanco further discloses that “preference profiles 132 for storing user preferences and preference arbitration schemes 134 for handling preferences of multiple users” are “stored in memory 130.” (Ex. 1022, [0045]; Ex. 1003, ¶¶321, 323.)

Zanco further discloses that “[t]he controller 100 includes a preference handler 112 for determining how to arbitrate or negotiate between various preferences of the users 80.” (Ex. 1022, [0046].) “The preference handler 112 ... is preferably embodied in software.” (*Id.*, [0046].) A POSA would have understood that the preference handler 112 software is also stored in the memory 130 so that it can access the user preferences and preference arbitration schemes 134 and is accessible by the controller 100. (Ex. 1003, ¶¶323-327.)

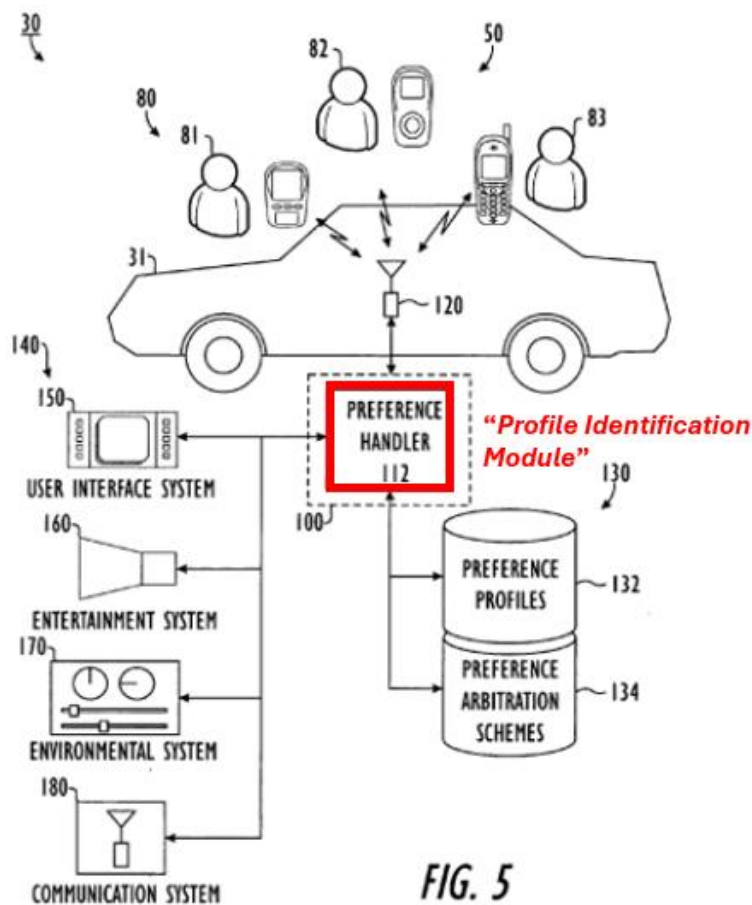
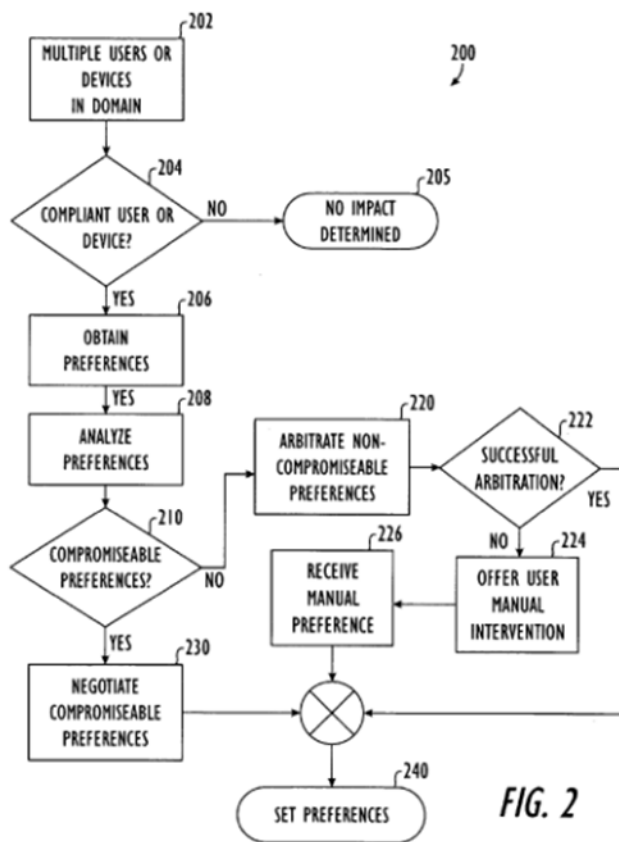


FIG. 5

Ex. 1022, Fig. 5

Zancho further discloses, with reference to Figure 2, “a process 200 ... for handling preferences in a domain” where “the controller ... identif[ies] users by monitoring for active devices associated with users,” determines “whether the user has preferences that are compliant with the preference handling process,” and then obtains the preferences associated with compliant users or devices. (Ex. 1022, [0021]-[0022]; Ex. 1003, ¶¶127-129.)



Ex. 1022, Fig. 2

Zancho describes the preference handling process of Figure 2 as a method. For example, claim 1 requires “[a] preference-handling method, comprising:” (Ex. 1022, Claim 1; Ex. 1003, ¶130.) Accordingly, Zancho discloses a “*method*.” (Ex. 1003, ¶131.)

A POSA would have understood that the memory 130 is a “*non-transitory computer readable medium*” because it stores the preference handler software 112, preference profiles 132, and arbitration schemes 134 that are accessible by the controller 100. (Ex. 1003, ¶¶289-295.) A POSA would have also understood that the control unit 110 includes a “*processor*” because the control unit 110 is connected to

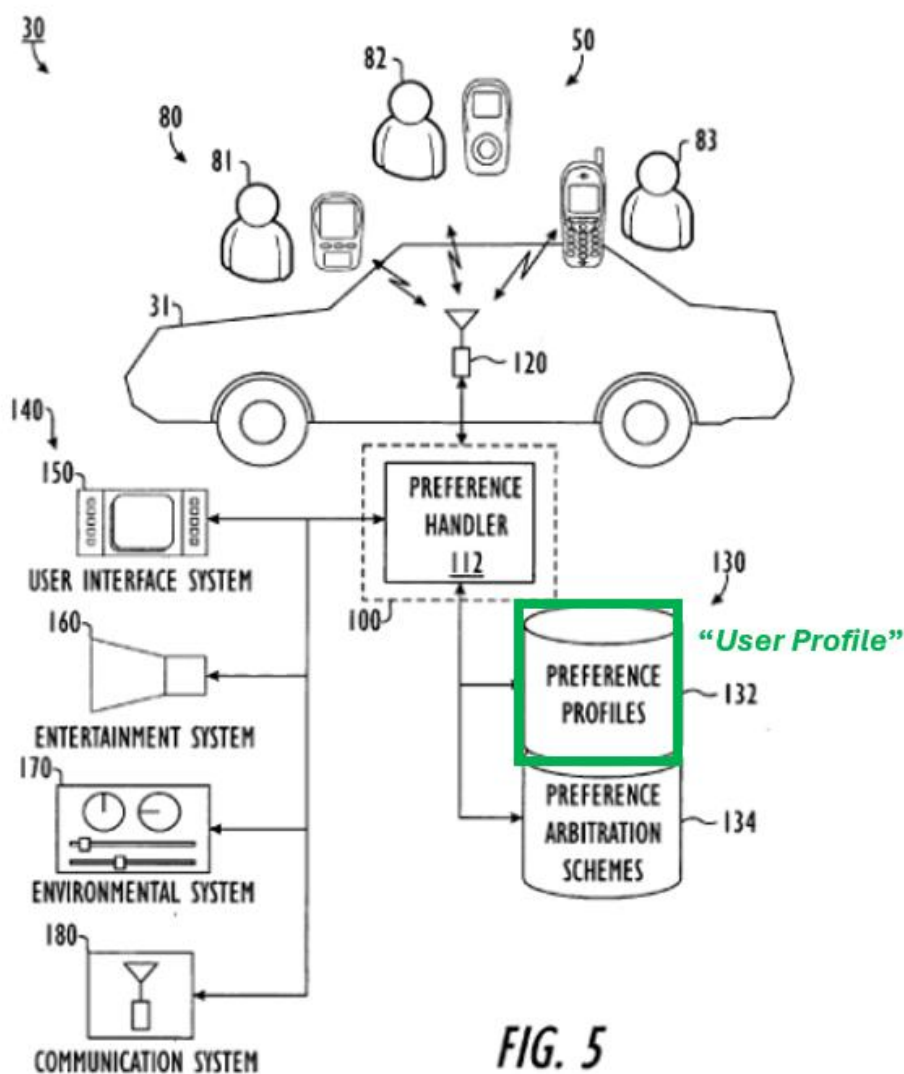
the memory 130 that accesses the preference handler software 112, preference profiles 132, and the arbitration schemes 134 and is further connected to the vehicle systems 140 for operating the vehicle systems 140. (Ex. 1022, [0048]-[0050], Fig. 4; Ex. 1003, ¶¶296-297, 327.)

Accordingly, Zanchi discloses a “*non-transitory computer readable medium* [e.g., memory 130] *having instructions* [e.g., the preference handler 112 software and arbitration schemes 134] *stored thereon that, when executed by a processor* [control unit 110], *perform a method* [e.g., the process for handling preferences of Figure 2].” Zanchi further discloses an “*infotainment control system* [controller 100], *comprising: a profile identification module* [preference handler 112] *contained in a memory* [130] *and executed by a processor* [control unit 110] *of the infotainment control system*[.]” (Ex. 1003, ¶¶126-131, 289-297, 320-329.)

[1a]/[9a]/[15a] [the profile identification module configured to] detect[ing] a user profile associated with a user, the user profile having infotainment information stored therein;

Zanchi discloses that “[t]he controller 100 has preference profiles 132 for storing user preferences.” (Ex. 1022, [0045].) The “devices 50 may be associated with a particular user by an identification number, such as a network or IP address” and “[w]hen the particular device 50 and associated user are identified, the controller 100 can access those preferences.” (*Id.*, [0044]; Ex. 1003, ¶¶132-136, 139-141.)

Zancho thus discloses that the controller 100 “*detect[s] a user profile associated with a user*” by associating each user with a specific preference profile. (Ex. 1003, ¶142.)



Ex. 1022, Fig. 5

Zancho further discloses that “a compliant device active in the domain may have an identification associated with it, such as a network or Internet Protocol (IP)

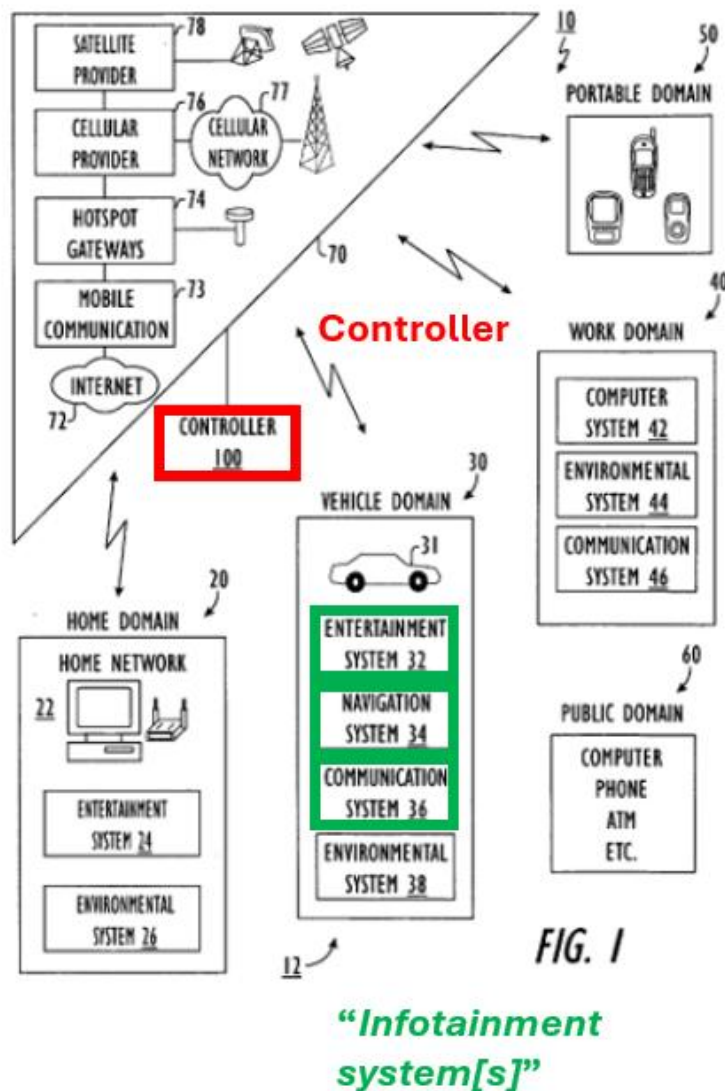
address” and that “[t]his identification can then be used by the controller to obtain preferences associated with the user.” (Ex. 1022, [0022].) Thus, Zanchi discloses that the controller 100, executing the preference handler 112 software (“*profile identification module*”) of Figure 2, “*detect[s] a user profile associated with a user.*” (Ex. 1003, ¶331.)

Zanchi further discloses that the preferences associated with a user in the vehicle domain 30 include “audio preferences (e.g., equalization levels, volume levels), preferred media (e.g., genre, songs, preset radio stations, etc.), navigation routes, hands-free cellular phone capabilities ... , access network media (e.g., ability of passengers to access subscription based media services in the vehicle)[.]” (Ex. 1022, [0036]; Ex. 1003, ¶136.)

A POSA would have understood that infotainment refers to information and entertainment. (Ex. 1003, ¶137, 84-86.) Zanchi’s disclosure that the preference profiles 132 (“*user profile*”) include navigation routes and audio configurations—teaches that the preference profiles 132 include “*infotainment information.*” (Ex. 1022, [0002].) Accordingly, Zanchi discloses that the “*user profile [e.g., preference profiles 132] [has] infotainment information [e.g., preferences such as visual settings, navigation routes, and audio configurations] stored therein.*” (Ex. 1003, ¶¶132-143, 298, 330-331.)

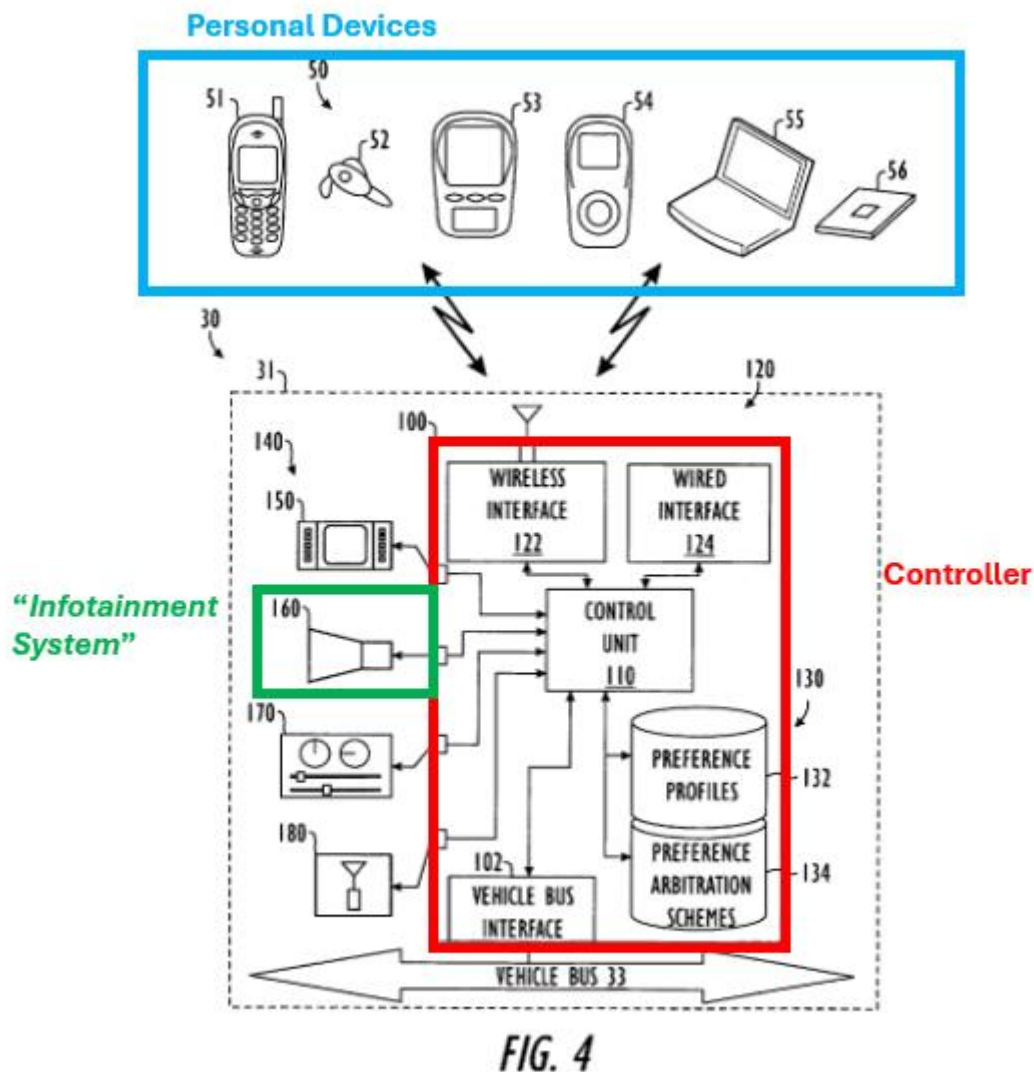
***[1b]/[9b]/[15b] detect[ing] at least one infotainment system
associated with the user[;] and***

Zancho discloses that a “vehicle domain 30 for a vehicle 31 can include an entertainment system 32, a user interface or navigation system 34, [and] a communication system 36[.]” (Ex. 1022, [0018].) A POSA would have understood that Zancho’s entertainment system 32, navigation system 34, and communication system 36 are “*infotainment system[s]*.” (Ex. 1003, ¶¶144-146.)



Ex. 1022, Fig. 1

The controller 100 is in “communication with various devices and systems in the domains 12” including the entertainment system 32, navigation system 34, and communication system 36. (Ex. 1022, [0020].) Zanchi discloses a personal area network (PAN) that enables multiple devices 50 to interact with the controller 100. (Ex. 1022, [0020], [0042]; Ex. 1003, ¶¶147-151.)



Ex. 1022, Fig. 4

Zancho discloses that “the controller can identify users by monitoring for active devices associated with users.” (Ex. 1022, [0021]) As explained for claims [1a]/[9a]/[15a] “[t]his identification can then be used by the controller to obtain preferences associated with the user.” (Ex. 1022, [0022].) The controller 100 arbitrates user preferences, including infotainment system preferences, e.g., “these

users 80 may have different and potentially conflicting preferences with respect to audio settings, and the preferences can affect how audio should be delivered or controlled in the vehicle 30 with the entertainment system 160.” (Ex. 1022, [0053]; Ex. 1003, ¶¶152-156.)

In sum, the controller 100 detects the entertainment system 32, 160 via being communicatively connected to the entertainment system 32, 160, and the entertainment system 32, 160 is “*associated with*” a particular user when the device 50 of the particular user is also connected to the controller 100. The device 50 of the particular user is “*associated with*” the entertainment system 32, 160 (“*infotainment system*”) by the preferences (“*infotainment information*”) stored thereon that are utilized to control the settings of the entertainment system 32, 160, which is an “*infotainment system*.” (Ex. 1003, ¶¶144-158, 299, 332.)

[1c]/[9c]/[15c] determin[ing] to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration [further] comprises:

Zancho discloses that the “controller 100 includes a preference handler 112 for determining how to arbitrate or negotiate between various preferences of the users 80[,]” and that the various preferences may include various “audio preferences ... preferred media ... [and] access network media.” (Ex. 1022, [0036], [0046].) Zancho also discloses setting the “arbitrated preferences” “[i]f the arbitration was

successful[.]” (Ex. 1022, [0028]; Ex. 1003, ¶¶159-165.)

Accordingly, Zanchi discloses “*determin[ing] to adjust [e.g., arbitrate or negotiate between preferences] a configuration of the at least one infotainment system [e.g., entertainment system 160] based at least partially on the infotainment information [preferences] in the user profile [preference profiles 132].*” (Ex. 1003, ¶¶159-167, 300, 333.)

[1d]/[9d]/[15d] determining an access priority of the user[;] and

Zanchi discloses that “the preference handler 112 uses a preference arbitration scheme 134 to decide how to handle preferences when they conflict” “[b]ased on the context[.]” (Ex. 1022, [0047].) The “context” includes the user’s identification, location, and preferences: “The context is defined by what users 80 are active, what systems 140 are operating, what operations are requested, and what preferences are associated with the users 80 in the domain 30.” (*Id.*; Ex. 1003, ¶¶168-174.)

Zanchi further discloses that the “preferences associated with the owner of the domain are first selected if the owner of the domain is present” and “[o]therwise, those remaining preferences associated with the user having the highest ranking are selected.” (Ex. 1022, [0027].) This teaches that the preference handler 112 selects preferences based on the context, which includes the location of the users 80 relative to the vehicle, i.e., what users are active, and the preferences of the users and ranking.

(Ex. 1003, ¶¶170-171.)

The arbitration scheme “assign[s] preferences to one of a plurality of categories” including: “non-compromiseable,” “compromiseable,” and “yielding,” which are used to weight or rank preferences. (Ex. 1022, [0014], [0025].) For example, a non-compromiseable preference “acts as a veto to other preferences” when in conflict, and a yielding preference “automatically yields” to another preference when in conflict. (Ex. 1022, [0025], [0027].) “A preference in the compromiseable category does allow for compromise and has a range, weight, or priority that can be used to negotiate or compromise with other preferences or alternatives with which it comes in conflict” as described with reference to Block 230 below. (Ex. 1022, [0025], Fig. 2; Ex. 1003, ¶¶172-173.)

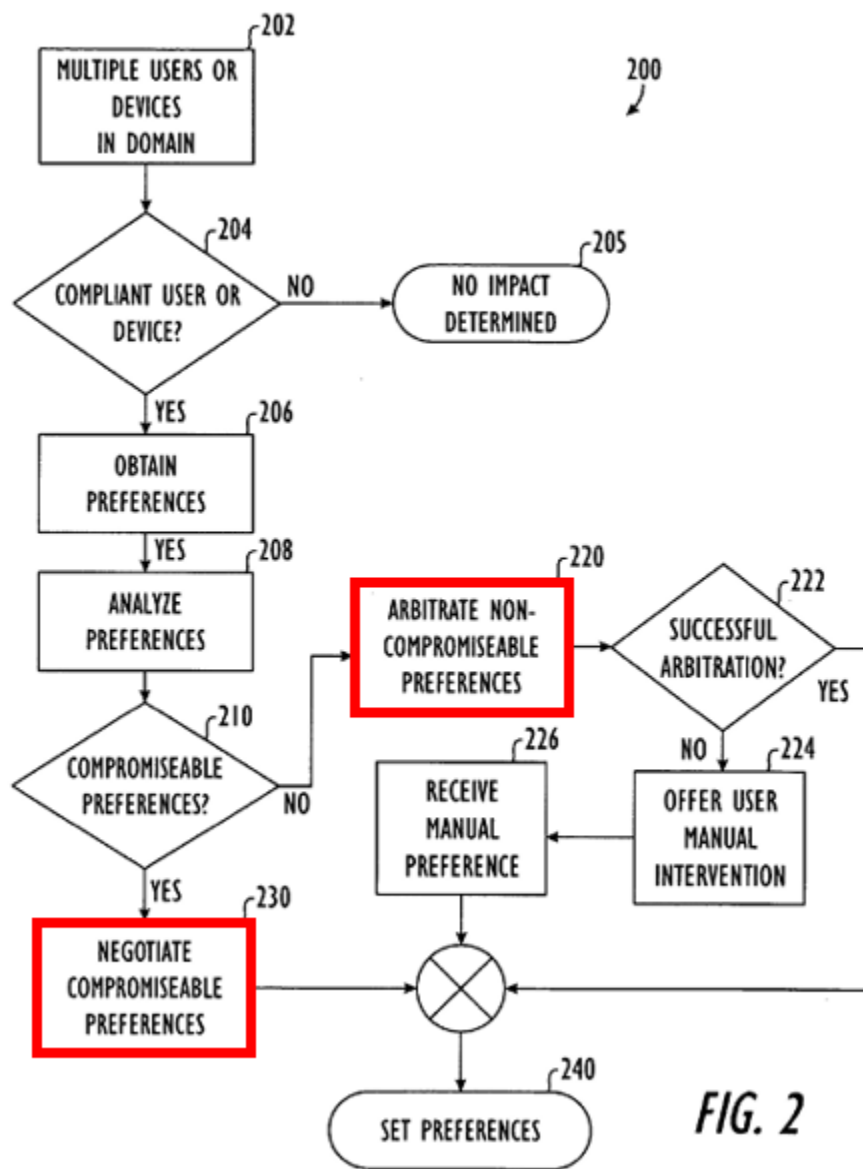


FIG. 2

Ex. 1022, Fig. 2

Zancho discloses that the controller 100 is configured to determine a preference (“infotainment information”) for each of at least two users associated with active devices 50, and that the preferences are arbitrated based on the “context” including user identity and location, which correspond to “priority” and/or

“weightings or rankings associated with the preferences[.]” A POSA would have understood that this teaches that the controller 100 “*determin[es] an access priority*” of each user including the owner, i.e., “*the user*”, and then resolves conflicts between multiple users 80 by applying a hierarchy of priority values and rankings. (Ex. 1003, ¶¶168-174, 301, 334.)

[1e]/[9e]/[15e] determining whether the access priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment [further] comprises[:]

Zancho discloses that “the preference handler 112 uses a preference arbitration scheme 134 to decide how to handle preferences when they conflict” based on the “context” which includes the identification, location, and preferences of each user, including the owner (“*access priority of the user*”). (Ex. 1022, [0047]; Ex. 1003, ¶¶175-178.)

Zancho also discloses that the controller is configured to “determine a preference for each of at least two users associated with active devices” where “[e]ach of the preferences is related to controlling behavioral operation of or content presented by the domain system, which can be an entertainment, user interface, navigation, communication, or environmental system in the vehicle.” (Ex. 1022, Abstract.) For example, Zancho discloses, with reference to Figure 6A, that “[b]ased on a comparison of the [radio station] genre selections 304 and their rankings, the

preference handler determines which genre satisfies the preferences of ... all the users 302.” (Ex. 1022, [0056]; Ex. 1003, ¶¶179-186.)

300 302 DEVICE ID	304 GENRE SELECTION #1	304 GENRE SELECTION #2	304 GENRE SELECTION #3	306 SELECTED PROGRAMMING
DRIVER'S DEVICE	NEWS	ROCK	CLASSICAL	ROCK
PASSANGER'S DEVICE #1	COUNTRY	ROCK	RAP	
PASSANGER'S DEVICE #2	ROCK	COUNTRY	NEWS	

Selected Music Genre

FIG. 6A

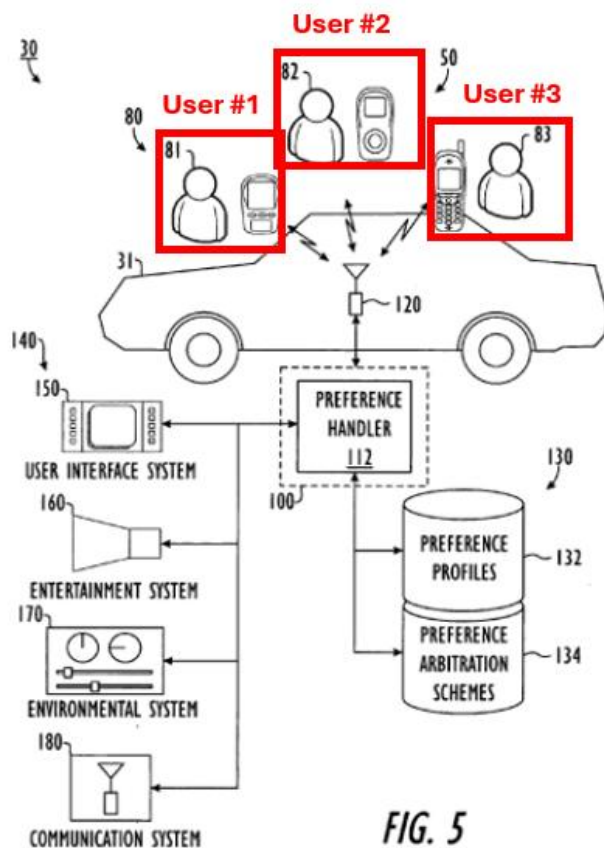
Ex. 1022, Fig. 6A

Zancho discloses monitoring for active devices in a domain, determining preferences for users associated with active devices and corresponding weights or rankings (“*access priority*”), and selecting one of the preferences based on an arbitration scheme that takes into account the “*access priority*”, where the preferences may correspond to preferences associated with an entertainment system (“*infotainment system*”). Accordingly, Zancho discloses “*determining whether the access priority of the user allows for the adjustment to the configuration of the at least one infotainment system [.]*” (Ex. 1003, ¶¶175-187, 302, 335.)

[1f]/[9f]/[15f] determining a second access priority of a second user

associated with the infotainment system[;] and

Zancho discloses, with reference to Figure 5 below, that “[w]hen two or more users 80 [e.g., a first user 81, a second user 82, and a third user 83] are active in the domain 30, the preference handler 112 determines whether the preferences [“*infotainment information*”] of these users 80 are relevant to the current context of the domain 30 and uses one or more preference arbitration schemes 134 to handle any conflicts in the preferences.” (Ex. 1022, [0049], *see also* [0050]; Ex. 1003, ¶¶188-189.) Therefore, Zancho teaches determining a ranking or “*access priority*” for each user 81, 82, and 83. (Ex. 1003, ¶189.)



Ex. 1022, Fig. 5

Zancho discloses an example in which “the first user 81 is . . . the vehicle owner” (Ex. 1022, [0050]), *i.e.*, “the user”, therefore the second user 82 is a non-owner, *i.e.*, the “second user.” Accordingly, Zancho discloses “determining a second access priority of a second user associated with the infotainment system[.]” (Ex. 1003, ¶¶188-191, 303, 336.)

[1g]/[9g]/[15g] comparing the access priority of the user to the second access priority of the second user,

Zancho discloses that “[w]hen two or more users 80 are active in the domain 30, the preference handler 112 determines whether the preferences [“infotainment

information”] of these users 80 are relevant to the current context of the domain 30 and uses one or more preference arbitration schemes 134 to handle any conflicts in the preferences.” (Ex. 1022, [0049].) “[T]he preference arbitration scheme 134 negotiates the preferences by determining a level, attribute, or selection of a preference to operate the system 140 based on ranges, weightings, or rankings associated with preferences of the users 80.” (Ex. 1022, [0051]; Ex. 1003, ¶¶192-194.)

Zancho further discloses that “the preference arbitration scheme 134 selects the preference of the owner of the domain 30 if available” otherwise it “selects the preference for the highest ranked user 80 currently in the domain 30.” (Ex. 1022, [0052]; Ex. 1003, ¶195.)

Zancho discloses comparing and negotiating preferences (“*infotainment information*”) between multiple users “by determining a level, attribute, or selection of a preference to operate” a system based on ranges, weightings, and/or rankings (“*access priority*”) associated with the preferences, which may include selecting a preference having a highest priority from multiple users. Accordingly, Zancho discloses “*comparing the access priority of the user to the second access priority of the second user[.]*” (Ex. 1003, ¶¶192-196, 304, 337.)

[1h]/[9h]/[15h] wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the

second user, and

Zancho discloses selecting the preferences of users having higher rankings for weightings. For example, Zancho discloses selecting the preference of the owner (“*the user*”) over the preference of other users (e.g., “*the second user*”) based on the identity and location of the owner: “In general, the preference arbitration scheme 134 selects the preference of the owner of the domain 30 if available.” (Ex. 1022, [0052].) Zancho further discloses that “the non-compromiseable preference of the first user 81 essentially vetoes the preferences of the other users 82 and 83.” (Ex. 1022, [0050]; Ex. 1003, ¶¶197-201.)

A POSA would have understood that an adjustment preference of the first user/owner (“*the user*”) is allowed while an adjustment preference of “*the second user*” is denied when the preferences of the first user have a higher ranking or are set to veto the preferences of the second user. Accordingly, Zancho discloses “*wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user[.]*” (Ex. 1003, ¶¶197-202, 305, 338.)

[1i]/[9i]/[15i] wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.

Zancho discloses that the preferences of the owner (“*the user*”) are given less

weight when the owner is not present in the domain, e.g., “If no owner is present, the preference arbitration scheme 134 determines a level, attribute, or selection of a preference that is common to all of the users 80” or “selects the preference for the highest ranked user 80 currently in the domain 30.” (Ex. 1022, [0052]; Ex. 1003, ¶203.)

Accordingly, Zanchi discloses “*wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.*” (Ex. 1003, ¶¶203-204, 306, 339.)

3. Dependent Claims 2, 4-8, 10, and 12-14, and 16-20

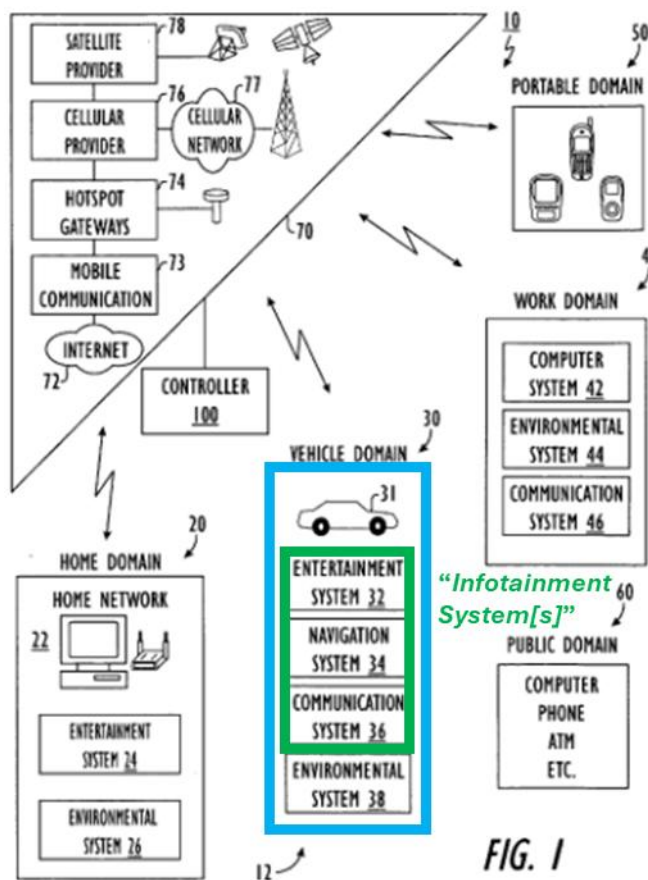
2[pre]. The method of claim 1,

10[pre]. The non-transitory computer readable medium of claim 9,

16[pre]. The system of claim 15,

... wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the method further comprises: [the profile identification module is further configured to]

Zanchi discloses that the “vehicle domain 30 for a vehicle 31 can include an entertainment system 32, a user interface or navigation system 34, a communication system 36, and an environmental system 38.” (Ex. 1022, [0018], *see also* Abstract; Ex. 1003, ¶¶207-209.)



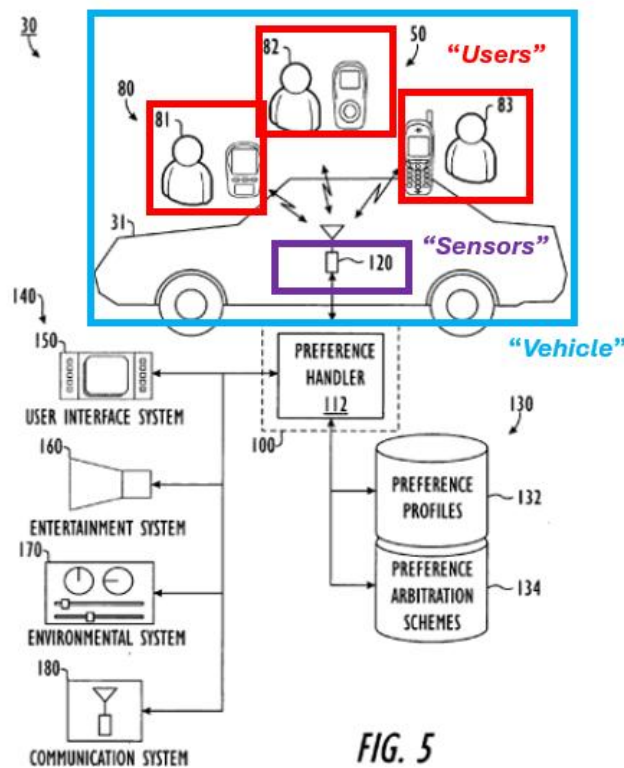
Ex. 1022, Fig. 1

Accordingly, Zanchi discloses “wherein the at least one infotainment system is a vehicle infotainment system[.]” (Ex. 1003, ¶¶207-210, 308-309, 340-342.)

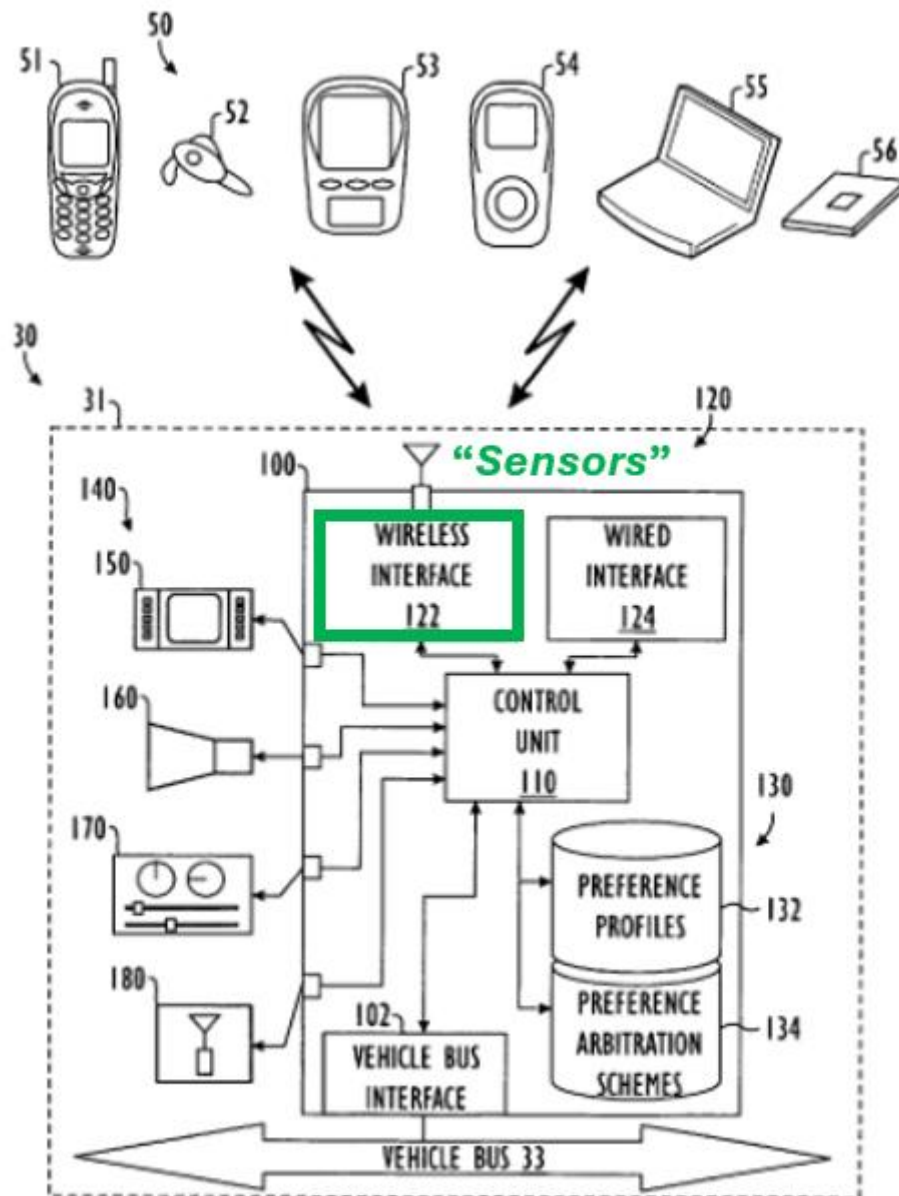
[2a]/[10a]/[16a] identify[ing] the user inside a vehicle via one or more sensors associated with the vehicle[;] and

Zanchi discloses that the controller 100 includes interfaces 120 to “establish a personal area network (PAN) that defines the extent of the domain 30 in the vehicle 31” and that within the PAN “multiple personal devices 50 can interact simultaneously with the controller 100.” (Ex. 1022, [0042].) The interfaces 120 include a wireless interface 122 and a wired interface 124. (Ex. 1022, [0044].)

Zancho further discloses that “examples of wireless communication include cellular communication, **Bluetooth®**, **Wi-Fi**, Ultra Wide Band (UWB), and other wireless communication techniques known in the art.” (Ex. 1022, [0019]; Ex. 1003, ¶¶215-220.)



Ex. 1022, Fig. 5



Ex. 1022, Fig. 4

Zancho discloses “determining which users 80 are in the domain 30 can involve monitoring for devices 50 of the users 80 active in the domain 30 and obtaining the preferences associated with those users 80 from the device 50, from

local memory 130, or from elsewhere in a network.” (Ex. 1022, [0048].) In other words, “the controller 110 can **identify a user 80** based on identification of an active device 50 and can access the user’s preferences from local memory 130 or from elsewhere.” (*Id.*) Zanchi thus discloses device-based detection for identifying users where the controller identifies a device that acts as a proxy for the user⁶ and then obtains preferences associated with the user. (Ex. 1003, ¶¶211-214.)

A POSA would have understood that the wireless interface 122 includes a transceiver for wireless communication, and that Bluetooth communication includes a device discovery process for automatically connecting, or pairing, with wireless devices. (See Ex. 1022 [0019]; Ex. 1003, ¶¶91-95.) A POSA would have therefore understood the wireless transceiver to be a “*sensor*” for identifying a device associated with a user. (Ex. 1003, ¶220.)

Accordingly, Zanchi discloses “*prior to detecting the user profile ... identifying the user inside a vehicle via one or more sensors associated with the vehicle* [e.g., based on identifying a device connected to the wireless interface 122] [.]” (Ex. 1003, ¶¶211-221, 308-309, 340-342.)

[2b]/[10b]/[16b] refer[ring], in response to identifying the user, to a

⁶ The ’297 Patent describes identifying a user based on device identification. (See e.g., Ex. 1001, 44:37-42, 88:25-31.)

memory associated with the identified user, wherein the memory includes the user profile.

Zancho discloses that “the controller 110 can identify a user 80 based on identification of an active device 50 and can access the user’s preferences from local memory 130 or from elsewhere.” (Ex. 1022, [0048]; Ex. 1003, ¶¶222-224.)

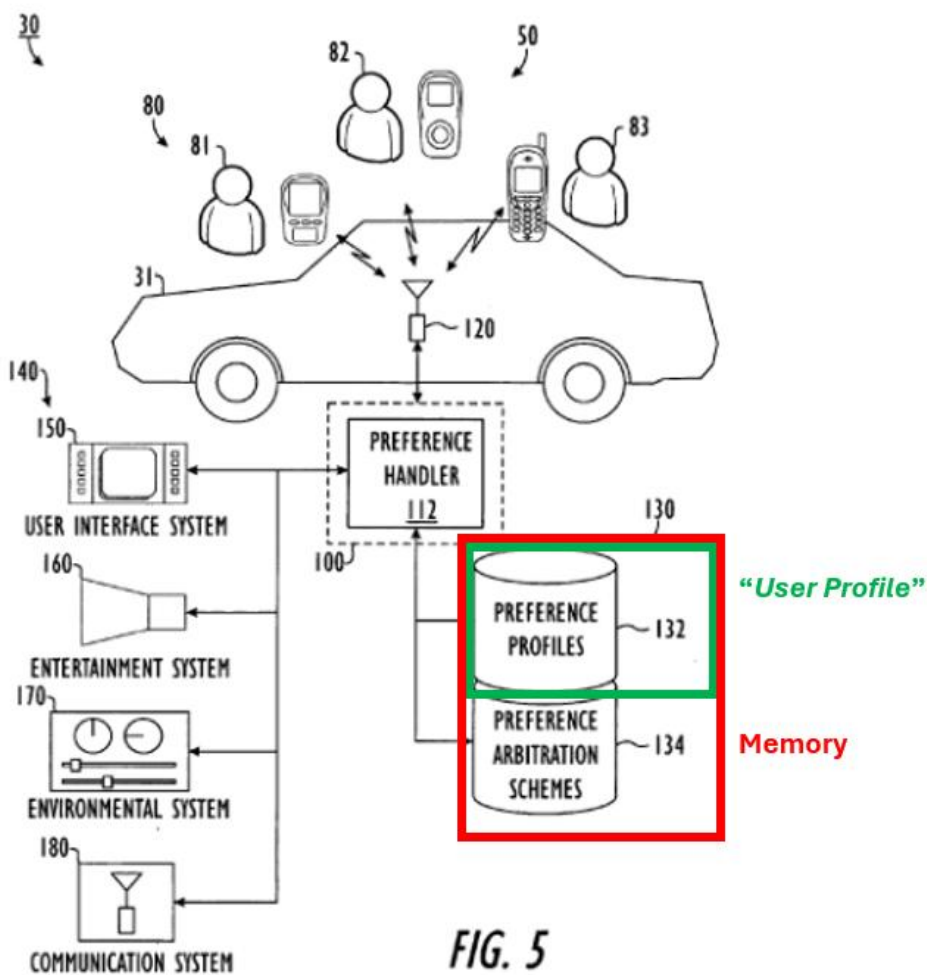


FIG. 5

Ex. 1022, Fig. 5

Accordingly, Zancho discloses “referring, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the

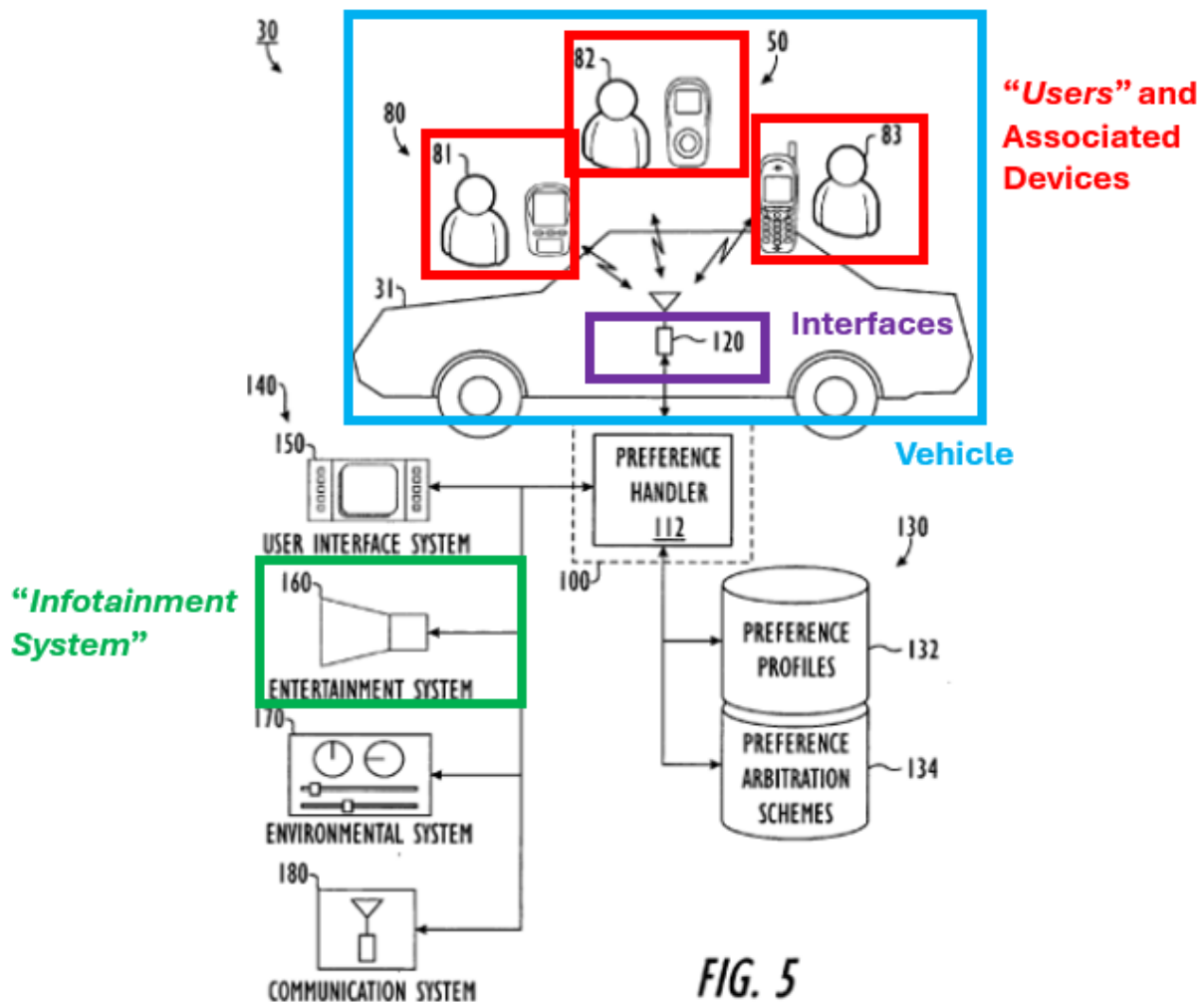
user profile.” (Ex. 1003, ¶¶222-225, 308-309, 340-342.)

[4] The method of claim 1,

[12] The non-transitory computer readable medium of claim 9,

... wherein detecting the at least one infotainment system associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system.

As explained for claims [1b]/[9b], Zanchi discloses detecting an infotainment system associated with the user. Zanchi further discloses that “the interfaces 120 of the controller 100 establish a personal area network (PAN) that defines the extent of the domain 30 in the vehicle 31” and that “[w]ithin the personal area network, multiple personal devices 50 can interact simultaneously with the controller 100.” (Ex. 1022, [0042], *see also* [0012]; Ex. 1003, ¶¶226-228.)



Ex. 1022, Fig. 5

A POSA would have understood that for the personal device 50 to communicate with the controller 100 over the PAN, which is constrained within the vehicle 31, the personal device 50 is proximate to the controller 100. For example, a wired connection between the vehicle system and the device would require that the device was in proximity of, if not within, the vehicle. Additionally, because of the short range of Bluetooth, a device connected via a Bluetooth wireless connection

would be proximate to, if not within, the vehicle. (Ex. 1022 [0019]; Ex. 1003, ¶¶228-232.)

Accordingly, Zanchi discloses “*wherein detecting the at least one infotainment system [e.g., vehicle systems 32, 34, and 36] associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system [e.g., due to the short range of Bluetooth and a wired connection].*” (Ex. 1003, ¶¶226-233, 310-311.)

5[pre]. The method of claim 1,

13[pre]. The non-transitory computer readable medium of claim 9,

... wherein determining to adjust the configuration of the at least one infotainment system further comprises:

[5a]/[13a] determining the configuration of the at least one infotainment system; and

[5b]/[13b] determining whether the infotainment information matches the determined configuration of the at least one infotainment system,

Zanchi discloses “determining which of the preferences associated with the users are applicable to the current circumstances in the domain” including whether the “audio-related preferences are applicable to current operation of the entertainment system in the domain.” (Ex. 1022, [0024]; Ex. 1003, ¶¶235-238.)

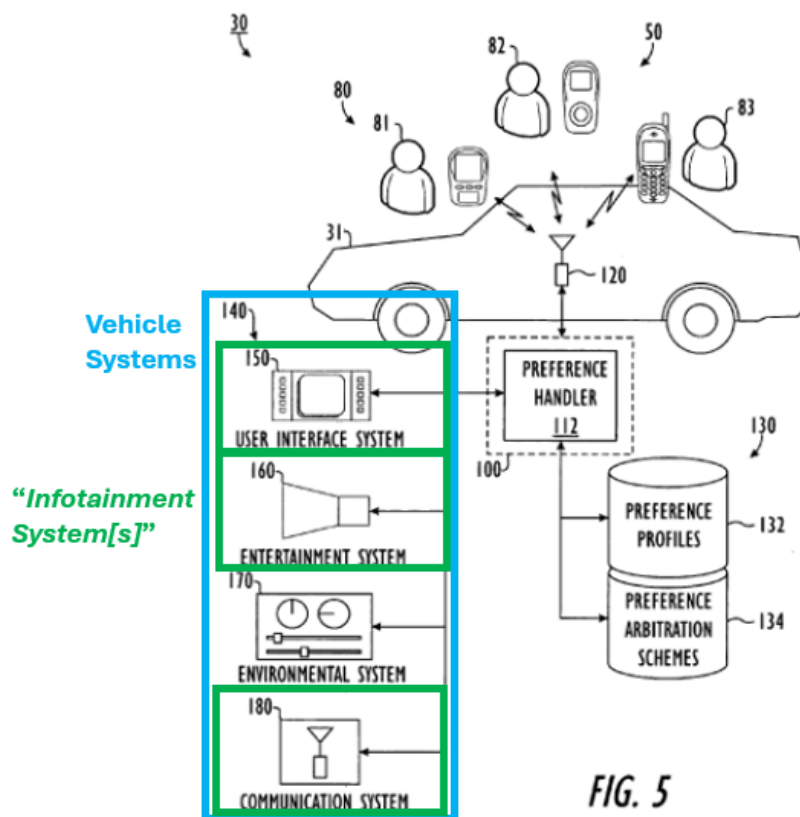


FIG. 5

Ex. 1022, Fig. 5

A POSA would have understood that Zancho's disclosure of determining if preferences are applicable to the "current operation" of the entertainment system, which is an "infotainment system," discloses that the controller first "*determin[es] the configuration of the at least one infotainment system*" before comparing the configuration to the preferences to "*determin[e] whether the infotainment information matches the determined configuration of the at least one infotainment system[.]*" (Ex. 1003, ¶¶234-243, 312-313.)

[5c]/[13c] wherein the infotainment information includes at least one infotainment setting, preference, content, and power state.

Zancho discloses that the preferences (“*infotainment information*”) include various infotainment preferences such as “audio preferences (e.g., equalization levels, volume levels), preferred media (e.g., genre, songs, preset radio stations, etc.), ...[and] access network media.” (Ex. 1022, [0036]; Ex. 1003, ¶244.)

Zancho further discloses that the preference handler 112 and arbitration scheme sets preferred music genres (“*content*”) for an entertainment system, preferred video “*content*” to deliver to a video display of an entertainment system, and a preferred volume to deliver to a video display of an entertainment system. (Ex. 1022, [0036], [0055]-[0058], [0063]; Ex. 1003, ¶¶245-248.)

Furthermore, a POSA would have understood that changing a radio station or playing a specific video requires an “on” power state of the infotainment device, and adjusting the volume corresponds to increasing or decreasing the amount of power (“*power state*”) being delivered to speakers. Accordingly, Zancho discloses “*wherein the infotainment information includes at least one infotainment setting [e.g., setting a volume level of an audio or video device], preference [e.g., preset radio stations], content [e.g., music genre, etc.], and power state [e.g., volume].*” (Ex. 1003, ¶¶244-249, 312-313.)

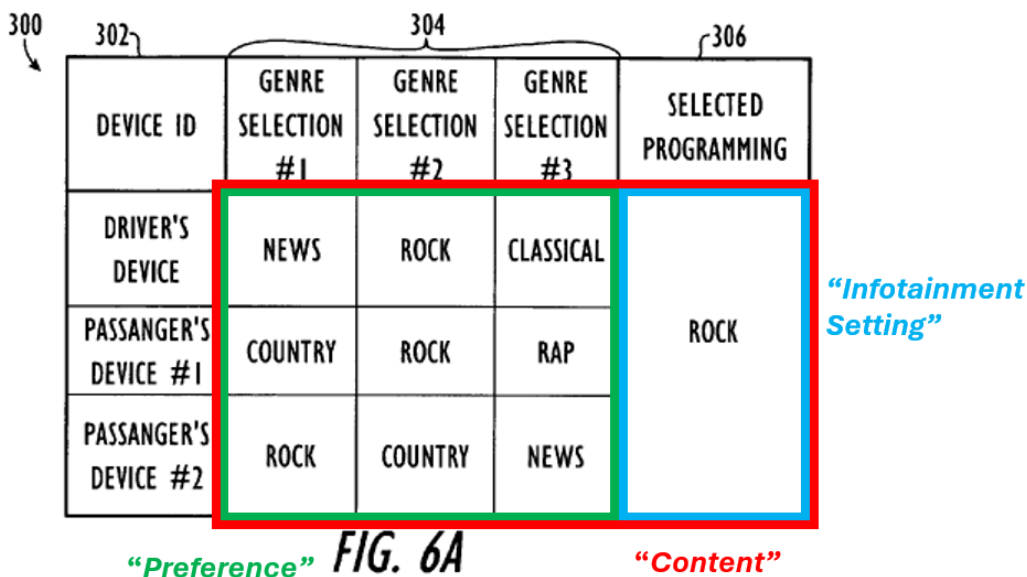
[6] The method of claim 5, further comprising:

***[14] The non-transitory computer readable medium of claim 13,
wherein the method further comprises:***

... providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the at least one infotainment system.

Zancho discloses that “determining which of the preferences associated with the users are applicable to the current circumstances in the domain” and making a determination if the “preferences are applicable to current operation of the entertainment system in the domain.” (Ex. 1022, [0024]; Ex. 1003, ¶250.)

Zancho discloses, with reference to Figure 6A, that “preferences for users are ranked in an order within a preference arbitration scheme 300” with “ranked genre selections 304 for active devices in the domain” that are “relevant to the operation of a satellite radio of an entertainment system in a vehicle and can be used to set which station to operate the radio.” (Ex. 1022, [0055].) “Based on the determination from the preference arbitration scheme 300, the preference handler 112 of FIG. 5 sets or suggests that the satellite radio of the entertainment system 160 be operated with a station having the ‘Rock’ genre.” (Ex. 1022, [0056].) (Ex. 1003, ¶¶251-253.)



Ex. 1022, Fig. 6A

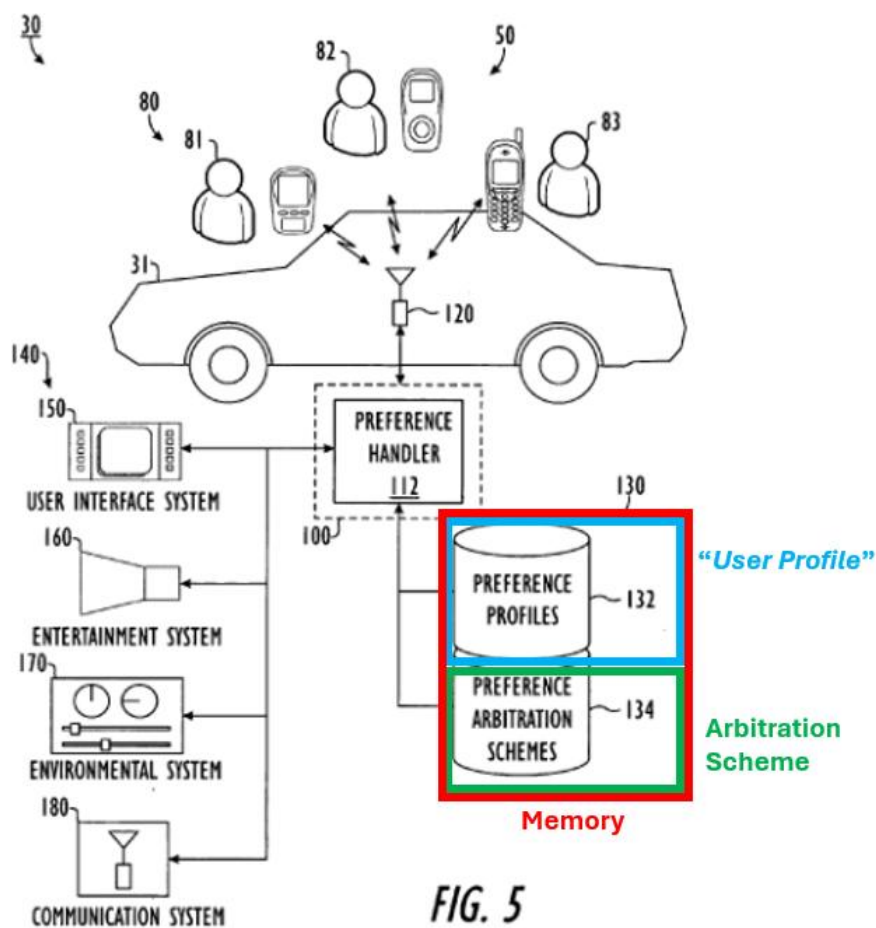
Zancho thus discloses that the preference handler first determines a level, attribute, or selection of a preference (*“infotainment information”*) for an entertainment system (*“infotainment system”*) followed by selecting the specific preference to adjust the entertainment system (*“adjustment output”*). (Ex. 1022, [0055]-[0056].) A POSA would have understood that selecting the preference for the entertainment system to adjust the output of the entertainment system first requires a determination that the current operation of the entertainment system does not correspond to the selected preference. Accordingly, Zancho discloses *“providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the at least one infotainment system.”* (Ex.

1003, ¶¶250-254, 314-315.)

7[pre]. The method of claim 1, further comprising:

[7a] receiving additional infotainment information via at least one device associated with the user;

Zancho discloses that “the controller can monitor for wireless devices active in a wireless personal area network of the controller and can upload preferences from the devices or can access preferences already stored in the controller's memory.” (Ex. 1022, [0013].) Zancho further discloses that “preference profiles 132 and preferences arbitration schemes 134 can be entered and stored in memory 130 using direct entry with the user interface 150, uploads from the devices 50, or other techniques known in the art.” (Ex. 1022, [0045]; Ex. 1003, ¶¶256-257.)



Ex. 1022, Fig. 5

As explained for claim [1a], the preferences, or “*user profiles*” include “*infotainment information*” related to audio settings. Zanchi further discloses that the preferences include video selections: “*infotainment information*” e.g., “[a]fter determining the preferred video selection, the preference handler 112 of FIG. 5 plays or suggests playing the selected video on the video display of the entertainment system 160.” (Ex. 1022, [0059]; Ex. 1003, ¶¶132-143, 258-259.)

350 DEVICE ID 352	354 VIDEO SELECTION #1	354 VIDEO SELECTION #2	354 VIDEO SELECTION #3	356 SELECTED PROGRAMMING
REAR PASSENGER'S DEVICE #1	TITANIC	RAIN MAN	OKLAHOMA	OKLAHOMA
REAR PASSENGER'S DEVICE #1	STAR GATE	STAR WARS	OKLAHOMA	
REAR PASSENGER'S DEVICE #1	STAR WARS	GREASE	OKLAHOMA	

“Additional Infotainment Information”

FIG. 6B

“Content”

“Infotainment Setting”

Ex. 1022, Fig. 6B

A POSA would have understood that Zanchó’s disclosure of uploading video selection preferences, in addition to audio preferences, from the device 50 to the controller discloses “receiving additional infotainment information via at least one device associated with the user[.]” (Ex. 1003, ¶¶255-259.)

[7b] determining whether the additional infotainment information qualifies as user profile data; and

Zanchó discloses determining “whether the user has preferences that are compliant with the preference handling process of the platform [at] (Block 204)” (Ex. 1022, [0021], annotated in red below) and then “obtain[ing] preferences associated with” “those compliant users or devices, ... [at] (Block 208)” and (Block

206 below. (Ex. 1022, [0022].) Zanchi explains that “[t]o be compliant” the device “must support the common platform's memory storage, architectural framework, data structures, communication protocols, software, etc.” (Ex. 1022, [0043].) A POSA would have understood that Zanchi's disclosure of determining if preferences are compliant teaches that the preference handler 112 determines if the video selection preferences (“*additional infotainment information*”) are compliant e.g., with the common platform storage, framework, etc., before being uploaded to the controller. For example, if the video selection is the wrong format or exceeds the available memory storage, then it would not be uploaded. (Ex. 1003, ¶¶260-265.)

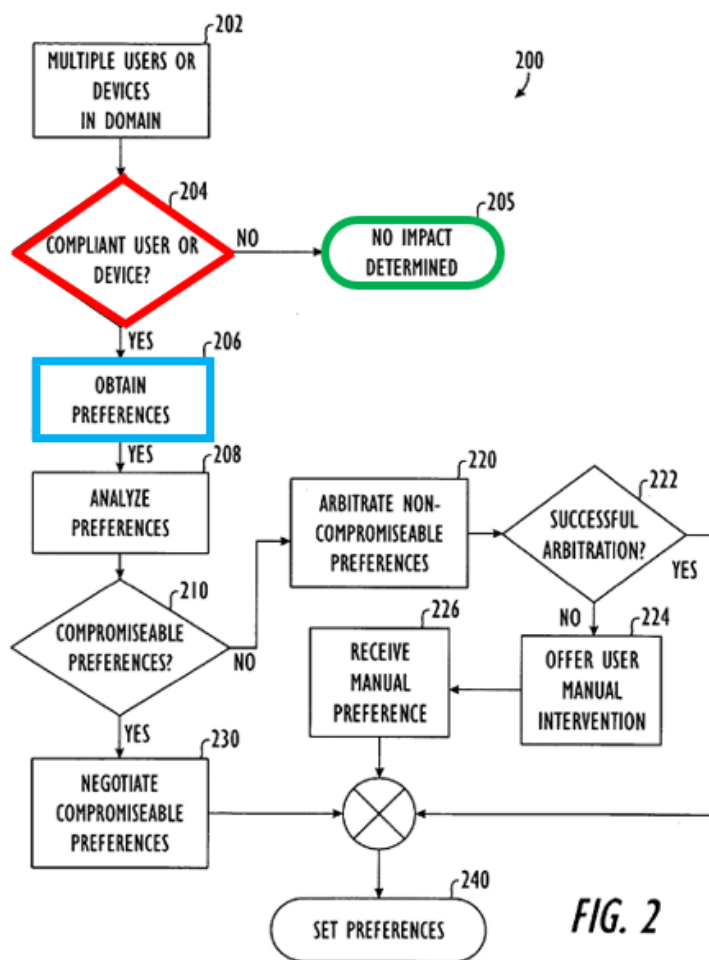


FIG. 2

Ex. 1022, Fig. 2

Zancho discloses “obtain[ing] preferences associated with” “those compliant users or devices[.]” (Ex. 1022, [0022].) Accordingly, Zancho discloses “*determining whether the additional infotainment information qualifies as user profile data [e.g., by determining if a device is compliant before storing its preferences, including video selection preferences][.]*” (Ex. 1003, ¶¶260-265.)

[7c] storing, based at least partially on determining that the additional infotainment information qualifies as user profile data,

***the additional infotainment information in the user profile
associated with the user.***

Zancho discloses that “a compliant device active in the domain may store preferences for the user, and these preferences can be accessed or uploaded to the controller.” (Ex. 1022, [0022].) Zancho further discloses that “preferences can be stored remotely on a network accessible to the controller, stored on individual portable devices, or stored locally at the controller.” (Ex. 1022, [0012]; Ex. 1003, ¶¶266-268.)

Accordingly, Zancho discloses “*storing, based at least partially on determining that the additional infotainment information qualifies as user profile data, the additional infotainment information in the user profile associated with the user* [e.g., by determining if a device is compliant before storing its preferences].” (Ex. 1003, ¶¶266-270.)

***[8] The method of claim 1, further comprising:
adjusting the configuration of the at least one infotainment system,
wherein adjusting the configuration includes at least one of tuning
to a station, setting an infotainment input, selecting a content genre,
and recording content for playback to the user.***

Zancho discloses “an arbitration scheme 134 to determine from the preferences stored in the profiles 132 what genre to use for a station of the satellite radio so that the selected station satisfies the preferred genres of the users 80 in the

vehicle domain 30.” (Ex. 1022, [0054]; Ex. 1003, ¶¶271-272.)

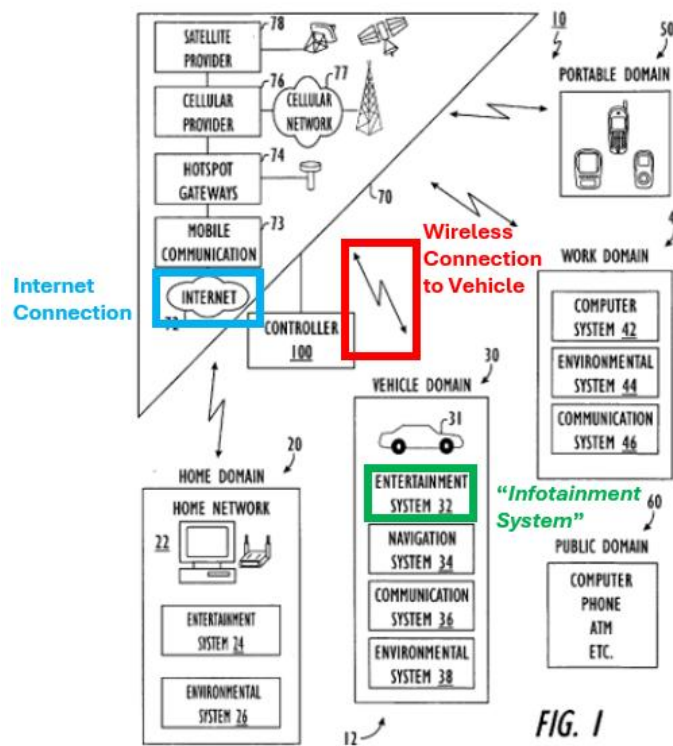
Accordingly, Zanchi discloses “*wherein adjusting the configuration includes at least one of ... selecting a content genre[.]*” (Ex. 1003, ¶¶271-273.)

17[pre]. The method of claim 1, further comprising:

19[pre]. The non-transitory computer readable medium of claim 9, wherein the method further comprises:

[17a]/[19a] collecting, while the at least one infotainment system is online, additional infotainment information associated with the user; and

Zanchi discloses that “preferences can be stored remotely on a network accessible to the controller[.]” (Ex. 1022, [0012].) Zanchi further discloses that the devices and systems “are capable of wired or wireless communication with various communication sources 70, which can include the Internet 72, mobile communication 73 (e.g., Dedicated Short Range Communication (DSRC) and vehicle-to-roadside/vehicle-to-vehicle communication), hotspot gateways 74, cellular service providers 76 and networks 77, and satellite providers 78.” Zanchi further discloses “a controller 100 capable of wired and wireless communication with the various devices and systems in the domains 12 and with the sources 70.” (Ex. 1022, [0019]-[0020]; Ex. 1003, ¶¶274-279.)



Ex. 1022, Fig. 1

Zancho further discloses accessing user preferences (“*additional infotainment information*”) from remote sources, e.g., over the internet, including network-accessible storage systems and memories that are “stored elsewhere outside the vehicle domain 30”. (Ex. 1022, [0044].) Accordingly, Zancho discloses “*collecting, while the at least one infotainment system is online, additional infotainment information associated with the user[.]*” (Ex. 1003, ¶¶274-281, 316-317.)

[17b]/[19b] storing the additional infotainment information in the user profile associated with the user.

Zancho discloses that “preferences can be stored remotely on a network accessible to the controller, ... or stored locally at the controller.” (Ex. 1022, [0012].)

Accordingly, Zanchi teaches “*storing the additional infotainment information in the user profile associated with the user.*” (Ex. 1003, ¶¶282-283, 316-317.)

[18] The method of claim 17,

[20] The non-transitory computer readable medium of claim 19,

... wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.

Zanchi discloses preferences that include “audio preferences (e.g., equalization levels, volume levels), preferred media (e.g., genre, songs, preset radio stations, etc.), ... [and] access network media (e.g., ability of passengers to access subscription based media services in the vehicle)[.]” (Ex. 1022, [0036].) (Ex. 1003, ¶¶284-287.)

Zanchi discloses a radio station genre, viewing content, music genre, preferred media, etc. as the user preferences (“*infotainment information*”). Zanchi accordingly discloses “*wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.*” (Ex. 1003, ¶¶284-288, 318-319.)

B. Ground 2: Claims 3 and 11 are Unpatentable as Obvious Over Zanchi and Sundaram

1. Overview of Sundaram

Sundaram discloses “a method and system for providing an integrated platform for entertainment, information, communication, control and computing applications in a vehicle” that identifies a user “through visual recognition using a camera, voice recognition, finger print identification etc.” and “enables the setting of different usage profiles for different users[.]” (Ex. 1027, Abstract, [0018], [0020].) The “[c]amera 210 enables live video capturing of the user, enabling in-vehicle computer 104 to recognize gestures and user’s moods and provide entertainment such as music, movies, advertisements, games etc. based on the identified gestures and moods.” (Ex. 1027, [0031]; Ex. 1003, ¶¶343-346.)

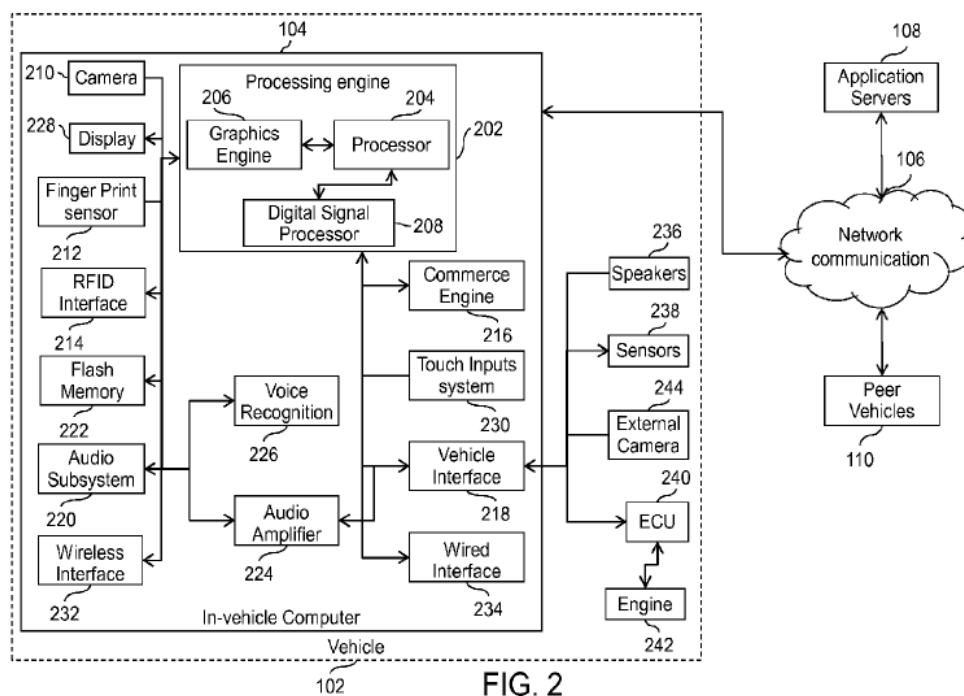


FIG. 2

Ex. 1027, Fig. 2

2. Rationale to Combine Zanchi and Sundaram

It would have been obvious to a POSA to combine the system of identifying users based on their devices and associating preferences with the users and arbitrating between the preferences as disclosed in Zanchi, with the known technique of identifying users via visual recognition, fingerprint identification, voice recognition, etc. as disclosed in Sundaram to provide refined control and improved performance in identifying specific users. For example, Zanchi contemplates methods of identifying users other than via detecting personal devices associated with the users. Sundaram's user identification techniques confirm a user's identification automatically and thereby improve on Zanchi's manual entry approach. (Ex. 1003, ¶¶347-348.)

As explained in detail below, a POSA would have understood that Zanchi and Sundaram describe complementary technologies in the same field of controlling automotive infotainment systems based on user profiles that address similar problems of customizing a new device by programming their preferences and conflicts when multiple users and devices are present in a vehicle domain and are combinable. (Ex. 1003, ¶¶349-354) For example, Zanchi states that "the appended claims include all modifications and alterations to the full extent that they come within the scope of the following claims or the equivalents thereof." (Ex. 1022, [0064]; Ex. 1003, ¶355.)

Zancho acknowledges potential conflicts when a group of users interact together in a domain. (Ex. 1022, [0004].) However, Zancho's solution, i.e., device based user identification, could misidentify users, motivating a POSA to look for a solution, such as that described in Sundaram. (Ex. 1003, ¶¶356-357)

A POSA would have understood that combining Zancho with Sundaram would improve the accuracy and operation of the system in Zancho by specifically identifying the user based on their physical characteristics. For example, incorporating the system of Sundaram, allows the system in Zancho to accurately distinguish between particular users and avoid potential conflicts, e.g., when a device associated with a particular user is not present, when one user is controlling a device associated with another user, or when a device associated with a particular user is not compliant. (Ex. 1003, ¶358.)

Sundaram also resolves the problem presented in Zancho of manually entering user preferences into the user interface, which is time consuming and requires an association between the user and a compliant device, by teaching the use of biometric and multimodal identification methods such as visual recognition, fingerprint identification, and voice recognition to automatically identify the user. This allows a user to be reliably and quickly identified, and authenticated automatically even without a compliant device, allowing their preferences to be retrieved from a biometric-linked profile and included in the arbitration process. (Ex.

1027, [0020]; Ex. 1003, ¶¶359-360.)

Several *KSR* factors also support combining the teachings of Zanchi with the teachings of Sundaram. As discussed, identifying users via biometric authentication as opposed to device detection is an application of a known technique (identification via biometric authentication or image processing) to a known technique (identification via device detection) that is ready for improvement to yield predictable results, e.g., more accurate user identification. (Ex. 1003, ¶361.)

A POSA would have understood how to combine Zanchi and Sundaram with a reasonable expectation of success. In terms of hardware modifications, a POSA would have modified Zanchi's system that detects users based on detecting personal devices associated with the users via a wired or wireless interfaces to include additional sensors that detect users based on physical characteristics via visual recognition, fingerprint identification, voice recognition, etc. (Ex. 1003, ¶¶362-366.) Such modifications would have been a straightforward and well-known combination of known elements in the prior art to yield predictable results. (Ex. 1003, ¶¶367-369.)

3. Dependent Claims 3 and 11

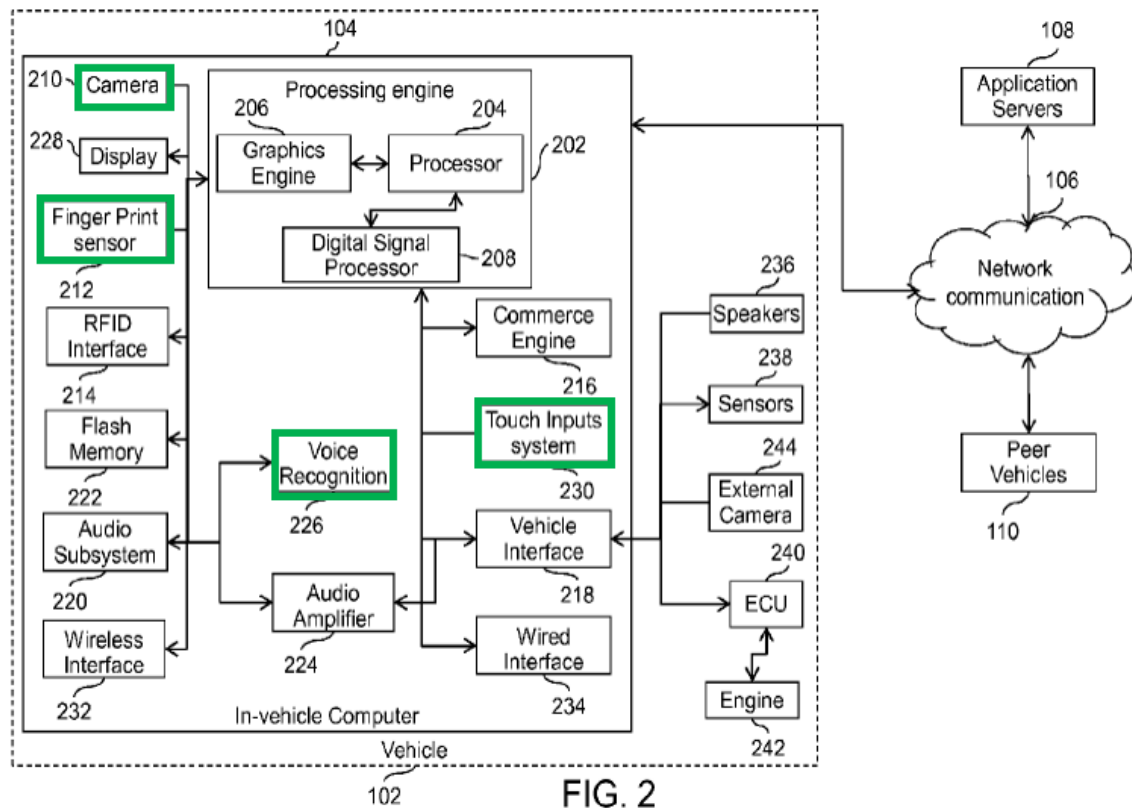
3[pre]. The method of claim 2,

11[pre]. The non-transitory computer readable medium of claim 10,

... wherein identifying the user further comprises:

[3a]/[11a] receiving identifying characteristics associated with the user via an image sensor or via a signal provided by a device associated with the user; and

Sundaram discloses a system that includes an in-vehicle computer that identifies a user “through visual recognition using a camera, voice recognition, finger print identification etc.” (Ex. 1027, [0020].) The “[c]amera 210 enables live video capturing of the user, enabling in-vehicle computer 104 to recognize gestures and user’s moods and provide entertainment such as music, movies, advertisements, games etc. based on the identified gestures and moods.” (Ex. 1027, [0031]; Ex. 1003, ¶¶372-373.)



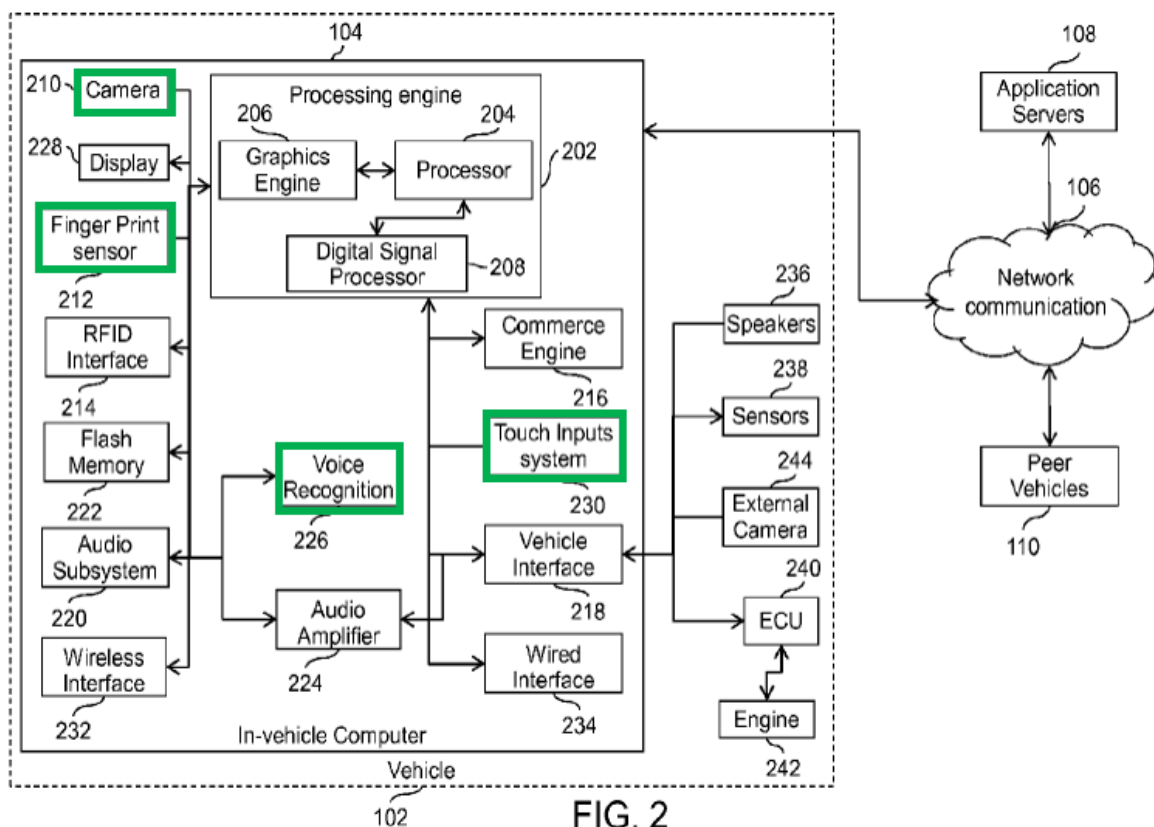
Ex. 1027, Fig. 2

Accordingly, Sundaram discloses “receiving identifying characteristics associated with the user via an image sensor[.]” (Ex. 1003, ¶¶370-374, 378-380.)

[3b]/[11b] determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory, wherein the unique user characteristics are configured to verify an identity of the user.

Sundaram discloses that the “[i]n-vehicle computer 104 enables the setting of different usage profiles for different users, exposing one user to a set of features of vehicle 102 and another other user with a different set of features” and that “the user

is identified by in-vehicle computer 104 through visual recognition using a camera, voice recognition, finger print identification etc. and user's profile is automatically enabled in vehicle 102[.]" (Ex. 1027, [0018] and [0020]; Ex. 1003, ¶¶375-376.)



Ex. 1027, Fig. 2

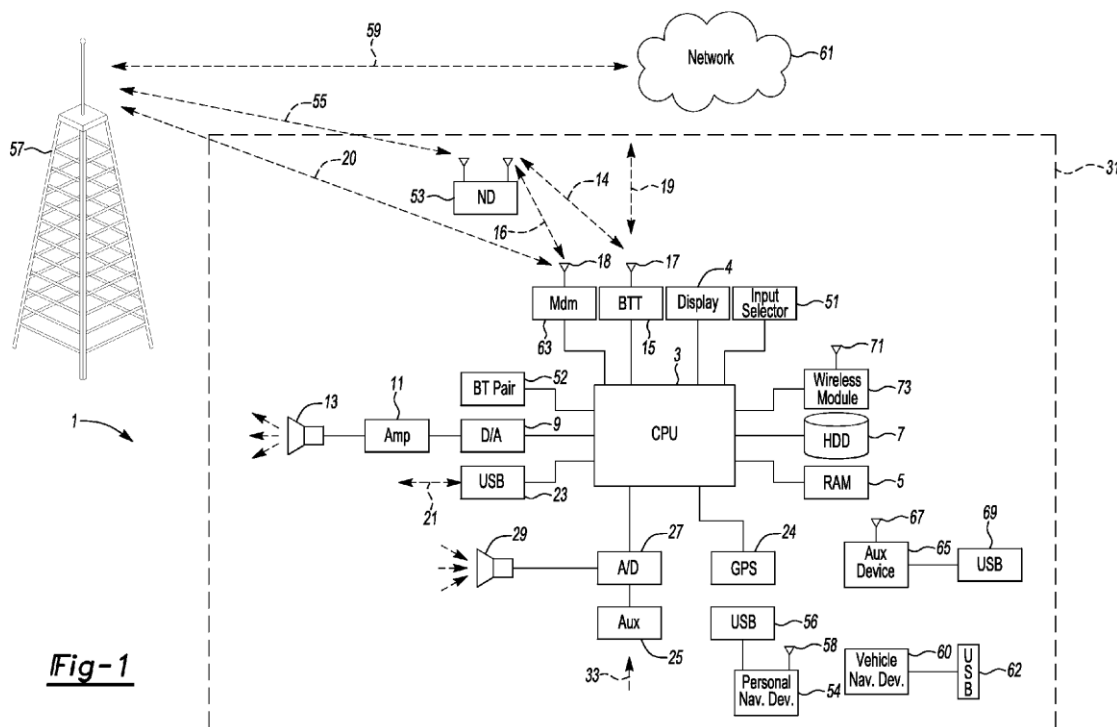
It would have been obvious to a POSA to combine the system of identifying users based on their devices as disclosed in Zanchi, with the known technique of identifying users via visual recognition, fingerprint identification, voice recognition, etc. (“*identifying characteristics associated with the user*”) as disclosed in Sundaram to provide refined control and improved performance in identifying specific users.

(Ex. 1003, ¶377.) Accordingly, the combination of Zanchi and Sundaram teaches “determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory, wherein the unique user characteristics are configured to verify an identity of the user.” (Ex. 1003, ¶¶375-380.)

C. Ground 3: Claims 1–20 are Unpatentable as Obvious Over Demeniuk and Zanchio

1. Overview of Demeniuk

Demeniuk discloses “a vehicle infotainment system implementing a user-interactive vehicle information display system[.]” (Ex. 1023, 3:7-9; Ex. 1003, ¶382.)



Ex. 1023, Fig. 1

Demeniuk discloses prioritizing control of an infotainment system with

respect to multiple users, which the Examiner identified as allowable subject matter during prosecution. (Ex. 1002, 528, *see also* 141, 143; Ex. 1003, ¶¶381-389.)

Demeniuk further discloses that the “[p]riority of which handheld device may communicate with a vehicle function or feature when multiple devices are trying to communicate at the same time may be configured by the driver or vehicle owner.” (Ex. 1023, 16:4-7.) Demeniuk explains that the “VCS may prioritize passenger’s nomadic device commanded controls requested allowing a ranking between the multiple nomadic devices connected to the VCS at the same time.” (Ex. 1023, 15:36-39; Ex. 1003, ¶389.)

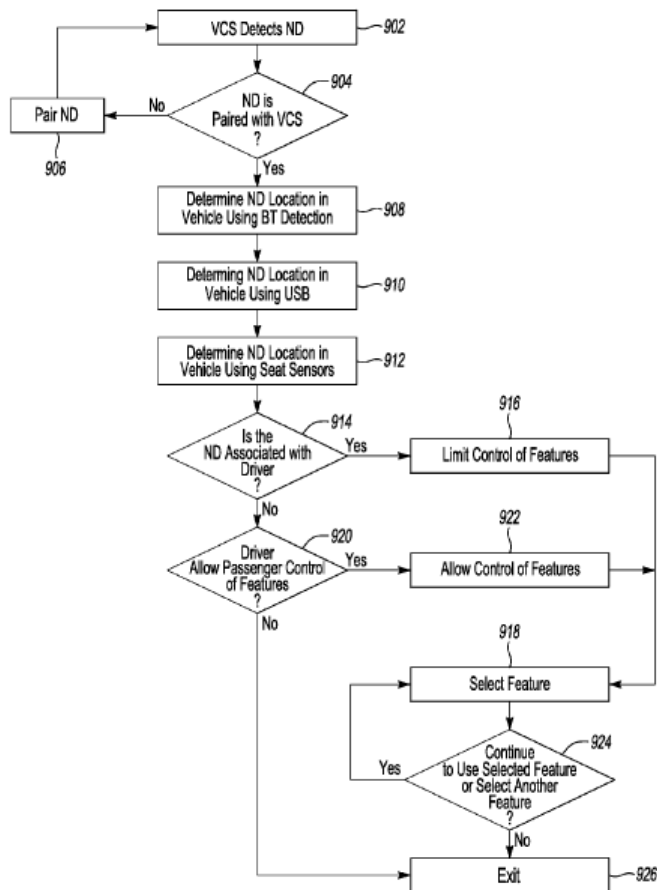


Fig-9

Ex. 1023, Fig. 9

2. Rationale to Combine Demeniuk and Zanchio

It would have been obvious to a POSA to combine the system in Demeniuk, that gives priority for controlling vehicle infotainment systems to certain vehicle occupants over other vehicle occupants based on the position of the occupant within the vehicle, to store infotainment information in user profiles as disclosed in Zanchio to provide refined control and improved performance of the system in Demeniuk. (Ex. 1003, ¶¶390-392.)

Demeniuk and Zanchó are from the same field—systems for controlling vehicle systems, including infotainment systems, that prioritize/rank control between multiple users to resolve conflicts. (Ex. 1003, ¶¶393-396.) For example, Demeniuk discloses that “[t]he communication manager may assign a priority for each device connected to the VCS” while Zanchó discloses a “preference handler 112 . . . [that] uses one or more preference arbitration schemes 134 to handle any conflicts in the preferences.” (Ex. 1023, 16:2-4; Ex. 1022, [0049]; Ex. 1003, ¶¶394-396.)

Demeniuk and Zanchó solve similar problems— resolving conflicts between multiple users controlling vehicle systems, including infotainment systems. (Ex. 1003, ¶¶397-401.)

A POSA would have understood that systems disclosed in Zanchó and Demeniuk are complementary technologies which are combinable. For example, Demeniuk states that “it is understood that various changes may be made without departing from the spirit and scope of the invention. Additionally, the features of various implementing embodiments may be combined to form further embodiments of the invention.” (Ex. 1023, 20:2-6; Ex. 1003, ¶402.)

It would have been obvious to a POSA to combine Demeniuk’s vehicle based computing system (VCS) with Zanchó’s strategy of storing and processing infotainment information in user profiles associated with vehicle occupants to

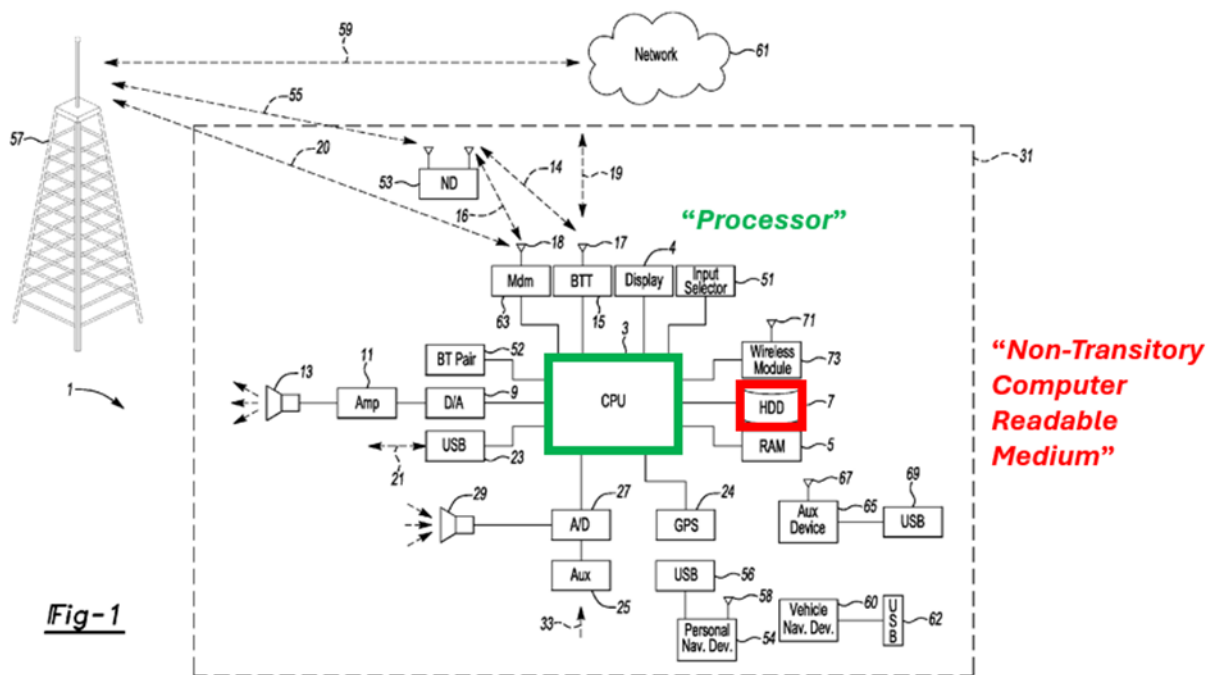
prioritize control over vehicle infotainment systems based on the user profiles so that the VCS can maintain the priority control between individual occupants and to prevent an occupant's preferences who are of a higher priority from being overridden by another occupant's preferences that are of a lower priority in the event the occupants change positions or if one occupant's handheld device is handed over to one of the other vehicle occupants. (Ex. 1003, ¶¶403-408.)

A POSA would have understood how to combine Demeniuk and Zanchi. In terms of hardware modifications, a POSA would have modified Demeniuk's controller to include and/or use memory and software for storing and processing infotainment information in the user profiles in order to prioritize control over vehicle infotainment systems based on the user profiles. (Ex. 1003, ¶¶409-413.)

3. Independent Claims 1, 9, and 15

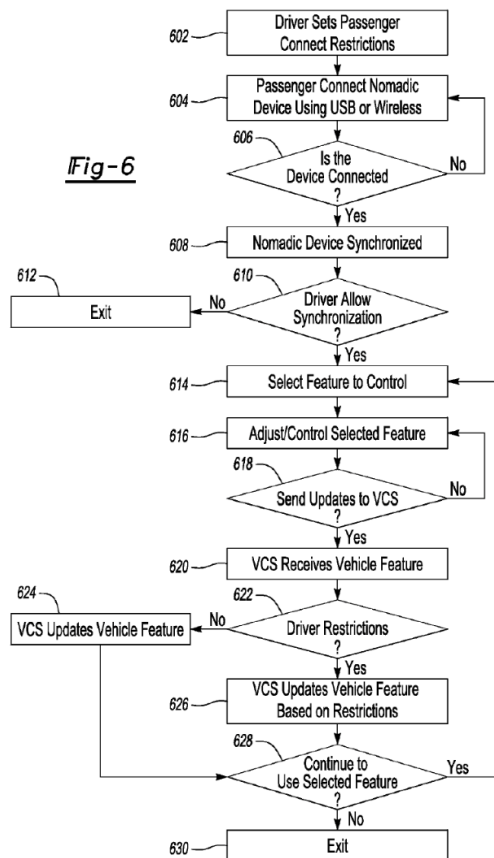
1[pre]/9[pre]/15[pre]

Demeniuk discloses a vehicle based computing system (VCS) 1 that includes a “processor [3] connected to both non-persistent 5 and persistent storage 7 [memory] ... [where the] persistent (non-transitory) memory can include all forms of memory that maintain data when a computer or other device is powered down.” (Ex. 1023, 4:25-26, 4:29-31; Ex. 1003, ¶¶415, 551-552, 585.)



Ex. 1023, Fig. 1

With reference to Figure 6, Demeniuk discloses “a flow chart illustrating an example method of a driver restricting a passenger’s nomadic device control of vehicle features[,]” and the VCS enforcing the restrictions. (Ex. 1023, 14:42-44; Ex. 1003, ¶416.)



Ex. 1023, Fig. 6

With reference to Figure 9, Demeniuk discloses “a flow chart illustrating an example method of a vehicle computing system [VCS] detecting occupant location using connected devices,” and then limiting vehicle controls based on the location of the nomadic connected devices. (Ex. 1023, 3:36-38; Ex. 1003, ¶417-418.)

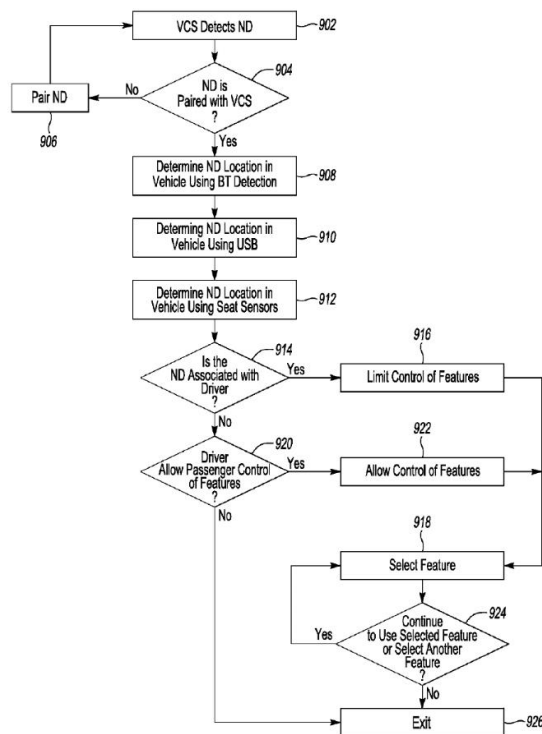


Fig-9

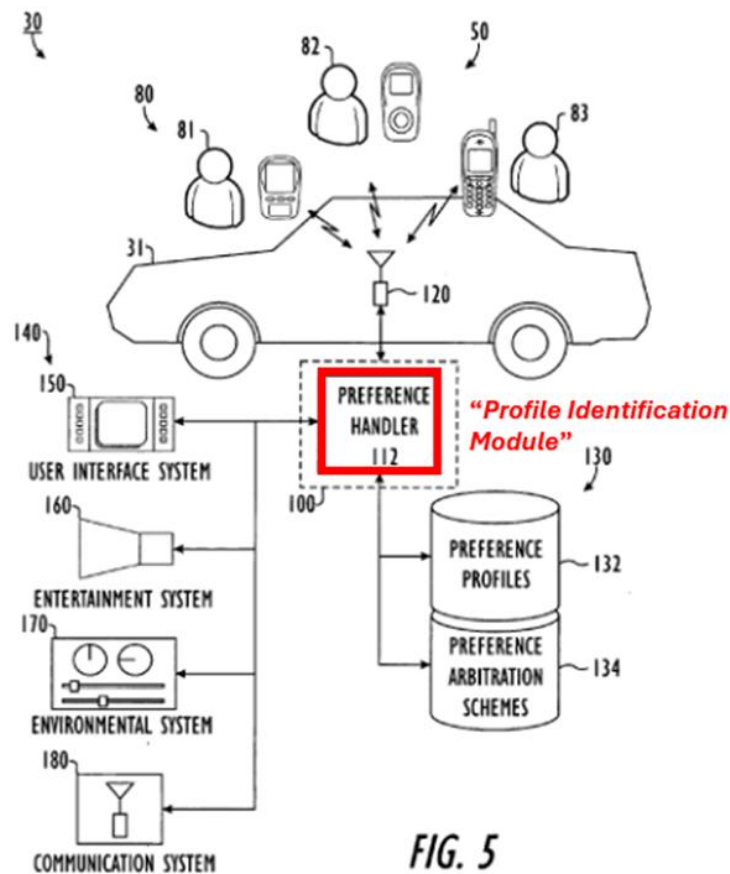
Ex. 1023, Fig. 9

Thus, Demeniuk teaches “[a] non-transitory computer readable medium [persistent storage 7] having instructions stored thereon that, when executed by a processor [processor 3], perform a method [e.g., the processes of restricting and limiting vehicle controls of Figures 6 and 9][.]” (Ex. 1003, ¶¶ 550-553.)

Demeniuk further discloses that “[t]he VCS may determine if the detected mobile device may have been previously paired with the system at step 904.” (Ex. 1023, 18:45-47.) The passenger restrictions (“*user profile[s]*”) are applied once a handheld device is identified based on a location within the vehicle (e.g., a driver or

non-driver passenger position). (Ex. 1003, ¶¶581-583.)

Zancho discloses that “preference profiles 132 for storing user preferences and preference arbitration schemes 134 for handling preferences of multiple users” are “stored in memory 130.” (Ex. 1022, [0045]; Ex. 1003, ¶585.) Zancho further discloses that “[t]he controller 100 includes a preference handler 112 for determining how to arbitrate or negotiate between various preferences of the users 80.” (Ex. 1022, [0046].) “The preference handler 112 ... is preferably embodied in software.” (Ex. 1022, [0046]; Ex. 1003, ¶¶584, 586-587.) A POSA would have understood that the preference handler 112 software is also stored in the memory 130 so that is accessible by the controller 100. (Ex. 1003, ¶588.)



Ex. 1022, Fig. 5

It would have been obvious to a POSA to modify Demeniuk to incorporate the preference handler 112 software (“*profile identification module*”) of Zanchi, so that the limits or restrictions (“*user profile[s]*”) may be accessed by the VCS in Demeniuk once a handheld device is identified as driver or non-driver based on a previous pairing. Specifically, the preference handler 112 may be stored within the memory (e.g., persistent storage 7) of Demeniuk and accessed by the processor 3. This allows the system in Demeniuk to apply the limitations/restrictions once a handheld device is identified as associated with a particular user based on a previous

pairing. (Ex. 1003, ¶588.)

Accordingly, the combination of Demeniuk and Zanco teaches “[a]n *infotainment control system* [VCS 1], *comprising: a profile identification module* [preference handler 112] *contained in a memory* [persistent storage 7] *and executed by a processor* [CPU 3] *of the infotainment control system[.]*” (Ex. 1003, ¶¶414-418, 549-553, 579-589.)

[1a]/[9a]/[15a]

Demeniuk discloses that “the VCS may detect a nomadic device using wireless technology and/or by detecting a connection using a physical port.” (Ex. 1023, 18:41-43.) Demeniuk further discloses that “[u]sing their handheld device, the occupant may have control of vehicle systems, including ... navigation command, and/or media selection.” (Ex. 1023, 14:17-20; Ex. 1003, ¶422-428.) “The system may determine if the at least one of a plurality of handheld computing devices is a driver or non-driver handheld computing device based on a detected location of the communication connection.” (Ex. 1023, Abstract; Ex. 1003, ¶419.)

Demeniuk discloses that if the VCS determines that “the nomadic device belongs to a driver,” then the VCS allows “limited control of features and functions from that device ... [by] ‘locking out’ one or more inputs to vehicle infotainment controls while the vehicle is moving including, ... navigation control inputs, radio selections, and/or one or more applications.” (Ex. 1023, 19:30-37; Ex. 1003, ¶426.)

Demeniuk discloses that “[t]he VCS may determine if the detected mobile device may have been previously paired with the system at step 904. In another embodiment, the system may not require pairing of the nomadic device. (Ex. 1023, 18:45-48; Ex. 1003, ¶424.)

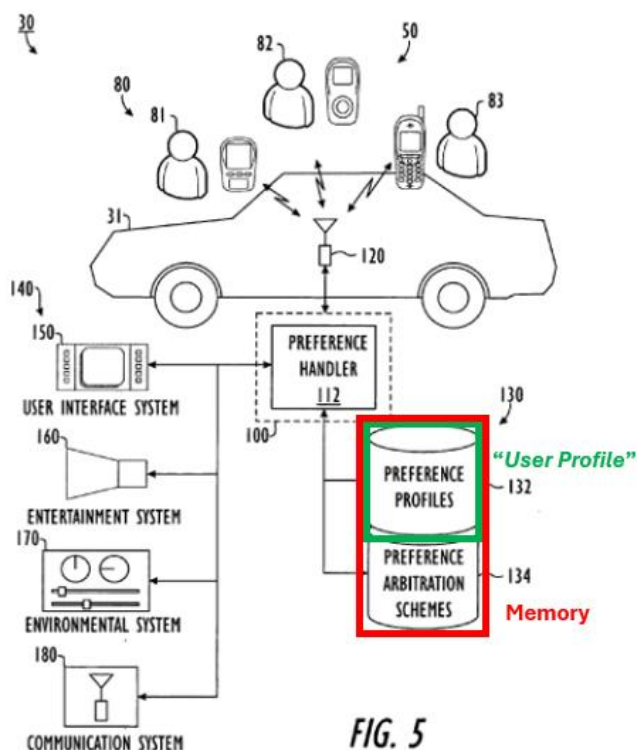
Demeniuk discloses that “[t]he driver may **limit** certain vehicle features and functions that a non-driver nomadic device may control including, ... entertainment control, ... and/or navigation control.” (Ex. 1023, 19:40-44.) “The driver and/or vehicle owner may allow or limit a passenger control of vehicle features and function using their nomadic device[.]” (Ex. 1023, 19:48-50.) “The driver may use the vehicle infotainment system interface to adjust settings and/or limits on a passenger’s nomadic device remote control access of the infotainment system.” (Ex. 1023, 19:50-53.) Furthermore, “the driver may set passenger restrictions to prevent the occupant from controlling certain vehicle features with their nomadic device.” (Ex. 1023, 14:46-48; Ex. 1003, ¶¶428-429.)

Demeniuk thus discloses “*detecting*” handheld devices associated with vehicle occupants (e.g., drivers and non-drivers) and that the VCS facilitates limited or restricted control of “*infotainment system[s]*” from particular handheld devices based on set limits or restrictions that at least suggests “*user profile[s]*”. The restrictions disclosed in Demeniuk include “*infotainment information*” with regard to properly setting the desired user limitations or restrictions for controlling of the

“*infotainment system[s]*”. (Ex. 1003, ¶¶430-431.)

Demeniuk further suggests that the set limits or restrictions are stored in memory. A POSA would have understood that in order for the VCS to execute the limits or restrictions after they have been set by the vehicle owner, the limits and restrictions must be retrieved from memory. (Ex. 1003, ¶432.)

Demeniuk expressly discloses limits and restrictions (e.g., *user profile[s]*). (Ex. 1003, ¶433.) Zanchi further discloses preference profiles 132 (“*user profiles*”) for storing user preferences (“*infotainment information*”) associated with particular users in memory 130, where the preferences are accessed by a preference handler 112 for arbitrating between the preferences. (Ex. 1022, [0045], [0054]; Ex. 1003, ¶434.)



Ex. 1022, Fig. 5

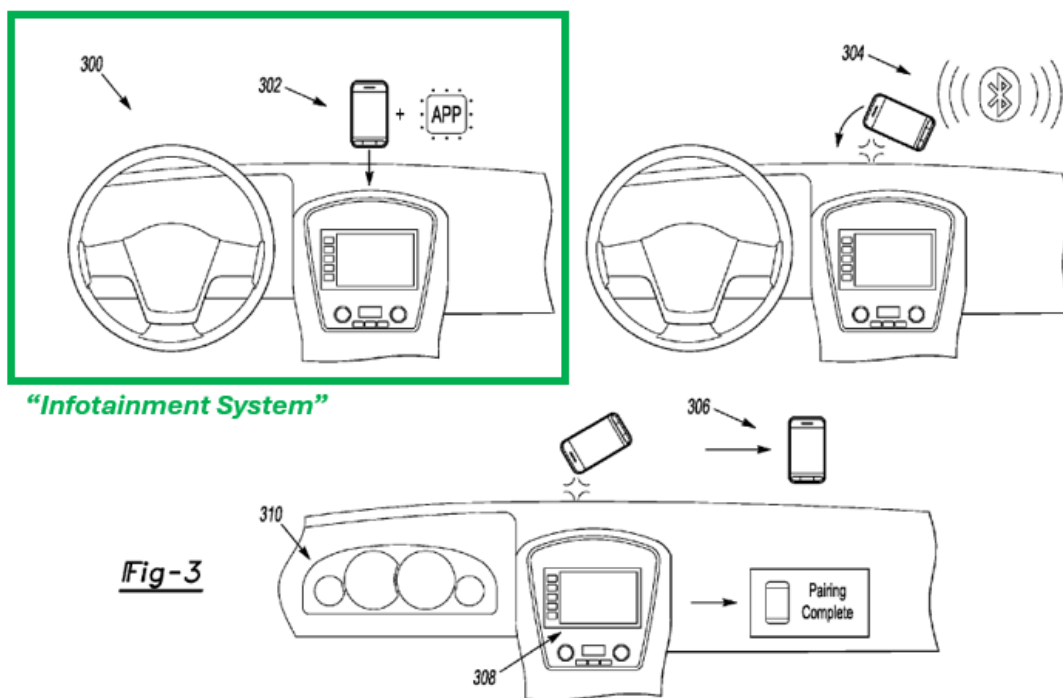
It would have been obvious to a POSA to modify Demeniuk's VCS to store and access the limits and restrictions ("user profile[s]") associated with particular users as taught by Zanchi, including the "infotainment information" for applying the limits and restrictions for controlling the "infotainment system", so that the limits or restrictions may be applied by the VCS in Demeniuk once a handheld device is identified as corresponding to a particular user. (Ex. 1003, ¶¶435-436.)

Accordingly, Demeniuk combined with Zanchi teaches "detecting a user profile [preference profiles 132] associated with a user [e.g., driver or non-driver], the user profile having infotainment information [e.g., limits or restrictions on

infotainment control] *stored therein*[.]” (Ex. 1003, ¶¶419-437, 554, 590.)

[1b]/[9b]/[15b]

Demeniuk discloses “configuring the infotainment system offline and synchronizing the configuration with the vehicle before a driving event.” (Ex. 1023, 11:54-56.) “The driver may configure specific features or function to display when driving the vehicle by using an application on a nomadic device offline and to later synchronize the configuration to the VCS.” (Ex. 1023, 11:60-63; Ex. 1003, ¶438.)



Ex. 1023, Fig. 3

Demeniuk further discloses that “the passenger’s smart phone may select media controls and push a playlist ... to the VCS to play over the vehicle’s entertainment system.” (Ex. 1023, 15:14-17; Ex. 1003, ¶439.)

Furthermore, such a connection between a passenger's smart phone and infotainment system is an example of a bi-directional pairing such as a Bluetooth connection. Bluetooth requires a master device (e.g., the infotainment system) to transmit inquiry messages, and a slave device (e.g., passenger's smart phone) to respond with an inquiry response packet. In order for the slave device to transmit data corresponding the inquiry response packet to the appropriate master device, the slave device must first identify (detect) the master device. (Ex. 1023, 18:41–45; Ex. 1003, ¶¶440-441; See Ex. 1022 [0019].)

Therefore, Demeniuk discloses “*detecting* [e.g. via Bluetooth] *at least one infotainment system* [e.g., entertainment system] *associated with the user* [e.g., the driver or passenger][.]” (Ex. 1003, ¶¶438-441, 555, 591.)

[1c]/[9c]/[15c]

Demeniuk discloses, with reference to Figure 9 below, analyzing the identity of the user and corresponding restrictions at steps 914, 916, 920, 924 and then at step 918, “once the nomadic device is allowed remote infotainment control of vehicle features and/or functions, the user may select one or more vehicle features to control using their device.” (Ex. 1023, 19:57-60; Ex. 1003, ¶¶443-448.)

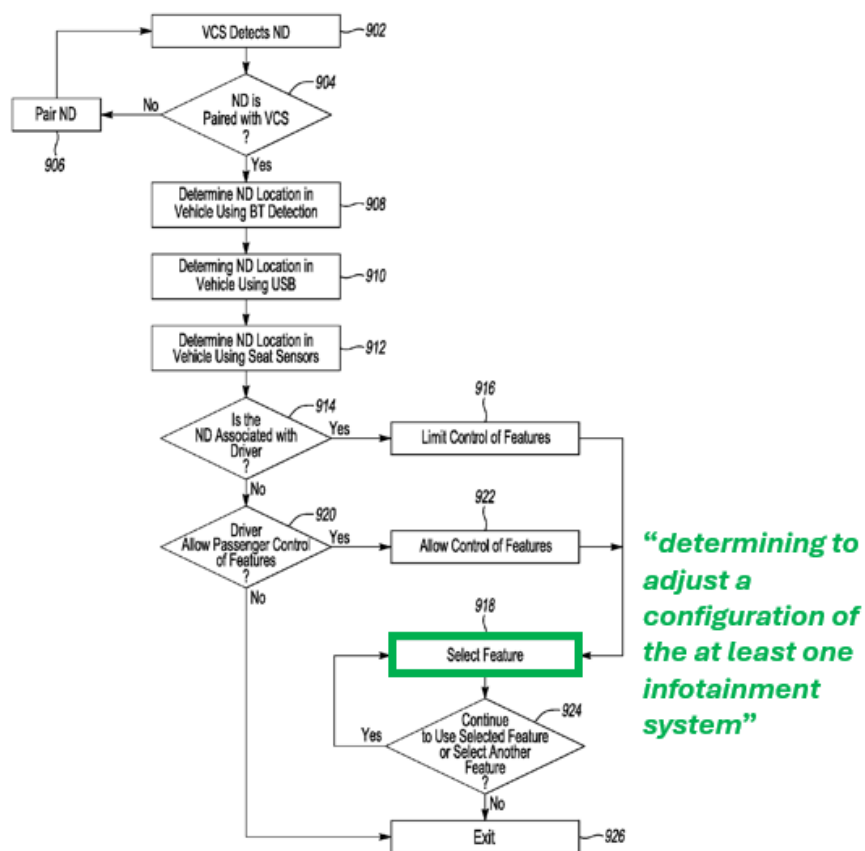


Fig-9

Ex. 1023, Fig. 9

Accordingly, Demeniuk discloses “determining to adjust a configuration [selecting one or more features] of the at least one infotainment system [e.g., entertainment system] based at least partially on the infotainment information in the user profile [limits and restrictions for controlling infotainment features][.]” (Ex. 1003, ¶¶442-448, 556, 592.)

[1d]/[9d]/[15d]

Demeniuk discloses that “the system may determine whether or not the nomadic device belongs to the driver using one or more methods at step 914” as

annotated in red below. (Ex. 1023, 19:21-23.) “At step 916, if the nomadic device belongs to a driver, then the VCS may allow limited control of features and functions from that device.” (Ex. 1023, 19:30-32; Ex. 1003, ¶¶449-451.)

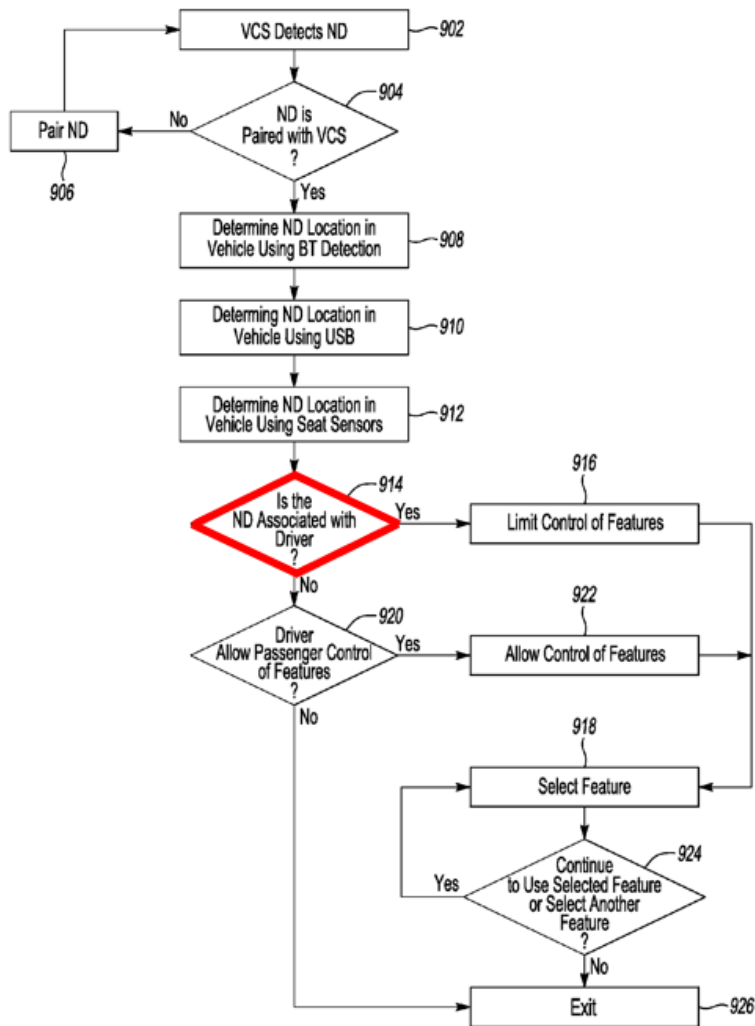


Fig-9

Ex. 1023, Fig. 9

Demeniuk further discloses that the VCS limits control of certain features to the driver by “‘locking out’ one or more inputs to vehicle infotainment controls while the vehicle is moving including, ... navigation control inputs, radio selections,

and/or one or more applications[.]” (Ex. 1023, 19:32-36.) Accordingly, Demeniuk discloses that the VCS “*determine[es] an access priority of the user [driver]*” at steps 914 and 916, based on the user’s identity. (Ex. 1003, ¶¶449-452, 557, 593.)

[1e]/[9e]/[15e]

Again, Demeniuk discloses, with reference to steps 914 and 916 below, that the VCS limits control of certain features to the driver by “‘locking out’ one or more inputs to vehicle infotainment controls while the vehicle is moving including, ... navigation control inputs, radio selections, and/or one or more applications[.]” (Ex. 1023, 19:32-36.) Accordingly, Demeniuk discloses that the VCS “*determin[es] whether the access priority of the user [driver] allows for the adjustment to the configuration of the at least one infotainment system*” when the user is the driver at steps 914 and 916, based on the user’s identity. (Ex. 1003, ¶¶453-454, 558, 594.)

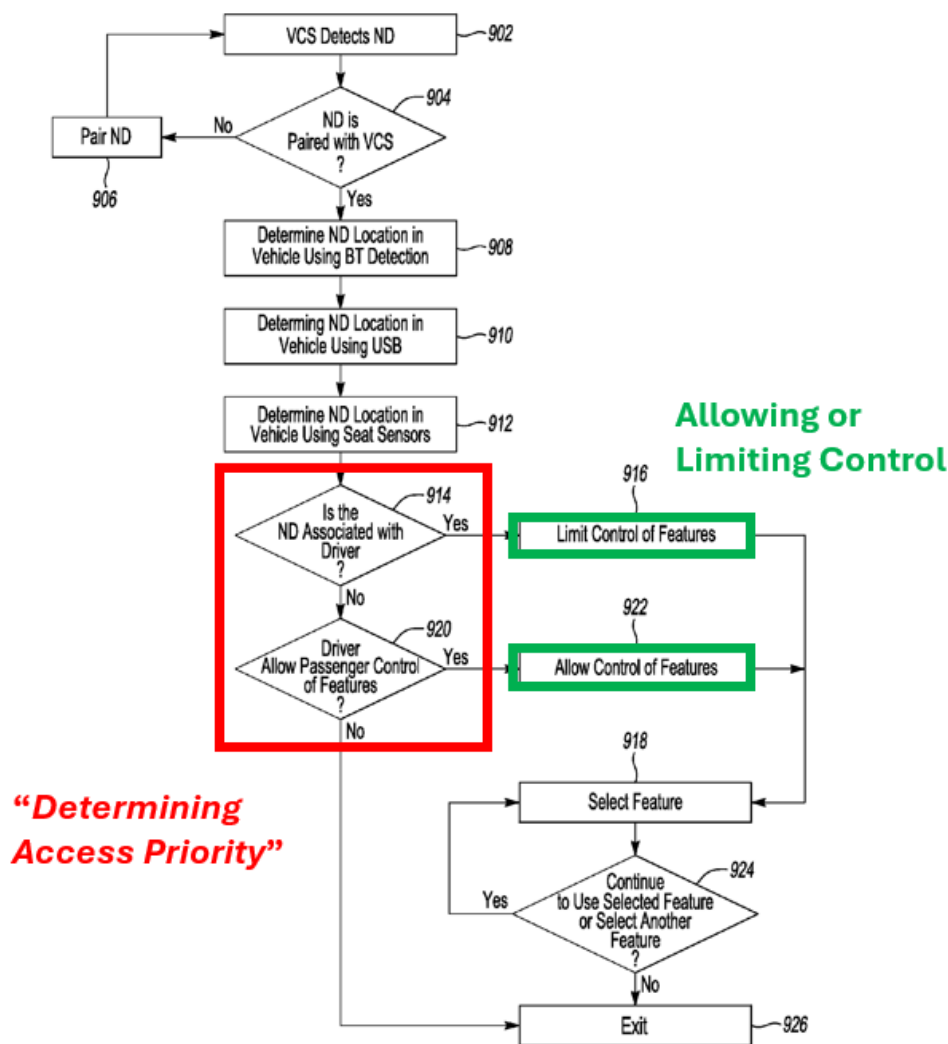


Fig-9

Ex. 1023, Fig. 9

[1f]/[9f]/[15f]

Demeniuk discloses that “[t]he driver may limit certain vehicle features and functions that a non-driver nomadic device may control including, ... entertainment control, ... and/or navigation control.” (Ex. 1023, 19:40-44.) Therefore, “[a]t step 920, if the [VCS determines that] the detected nomadic device belongs to a non-

driver, the system may determine the amount of control that may be allowed to the non-driver nomadic device.” (Ex. 1023, 19:38-40; Ex. 1003, ¶¶455-457, 559, 595.)

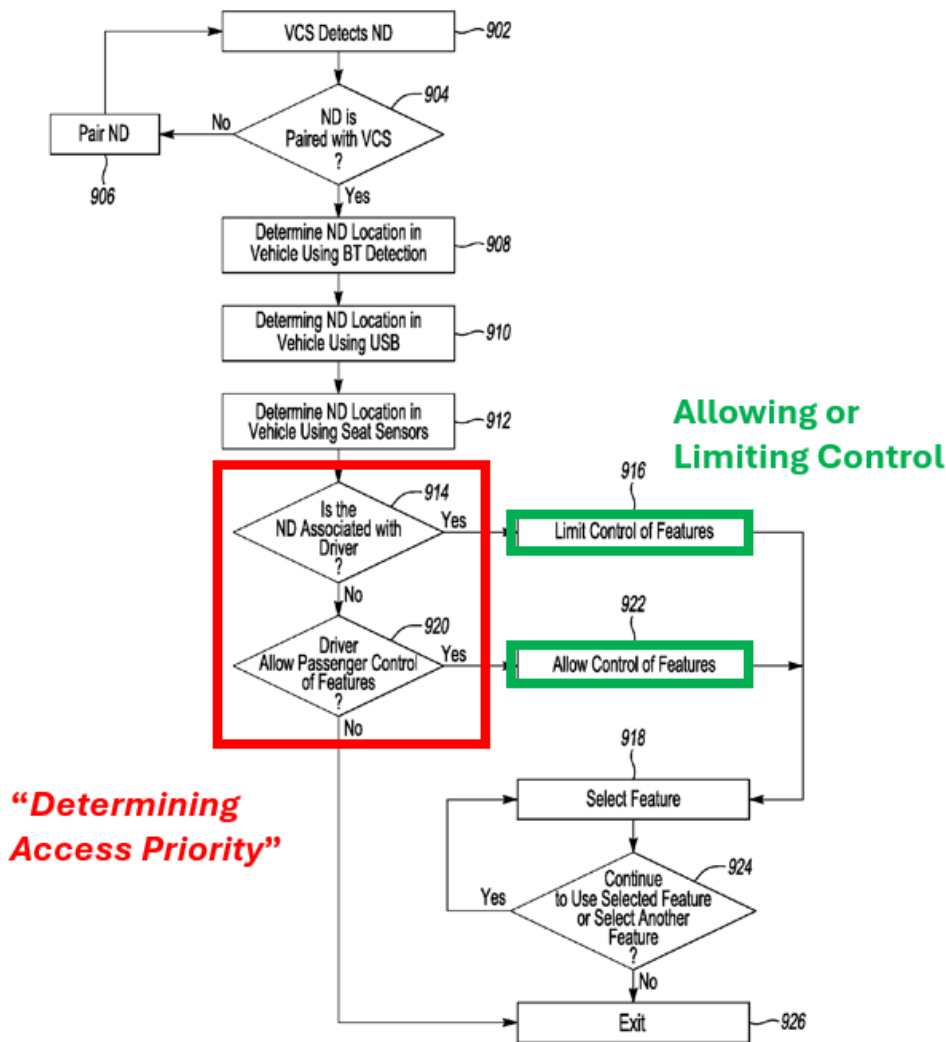


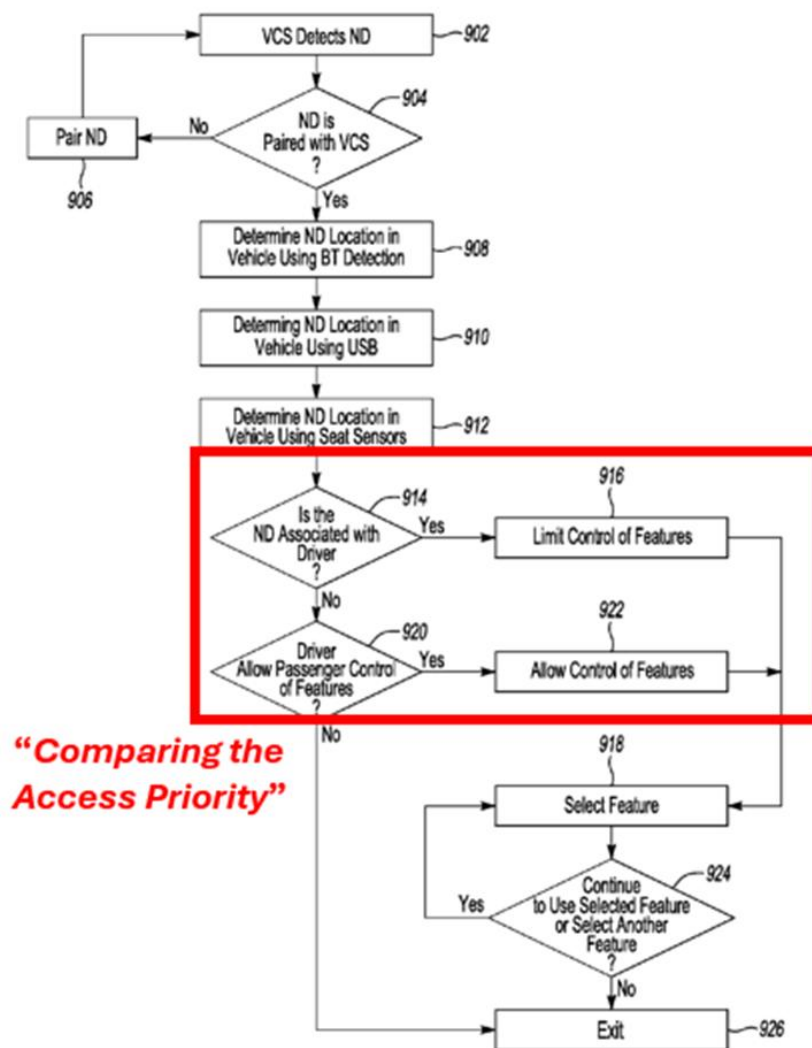
Fig-9

Ex. 1023, Fig. 9

Accordingly, Demeniuk discloses “determining a second access priority of a second user [e.g., a passenger] associated with the infotainment system [at steps 920-922][.]” (Ex. 1003, ¶457.)

[1g]/[9g]/[15g]

Demeniuk discloses limitations and restrictions for controlling infotainment features that are applicable to a subset of the vehicle occupants. For example, “if the nomadic device belongs to a driver [*“the user”*], then the VCS may allow limited control of features and functions from that device” (Ex. 1023, 19:30-32.) Additionally, “[t]he driver and/or vehicle owner may allow or limit a passenger control of vehicle features and function using their nomadic device[.]” (Ex. 1023, 19:48-50.) Demeniuk further discloses: “Another example of priority being configured when multiple handheld devices are communicating with the VCS may be that if the driver’s handheld device is commanding a playlist, the passengers may not override that infotainment function.” (Ex. 1023, 16:11-14; Ex. 1003, ¶¶458-460.)



“Comparing the Access Priority”

Fig-9

Ex. 1023, Fig. 9

Demeniuk discloses determining whether the handheld devices belong to specific vehicle occupants (e.g., driver or a non-driver), limiting or allowing control of the vehicle features and functions (“*comparing the access priority*”) based on whether the handheld devices belong to a specific vehicle occupant, and prioritizing infotainment control of one vehicle occupant over other vehicle occupants.

Accordingly, Demeniuk discloses “*comparing the access priority of the user to the second access priority of the second user[.]*” (Ex. 1003, ¶¶458-461, 560, 596.)

[1h]/[9h]/[15h]

Demeniuk discloses prioritizing driver (“user”) control over passenger (“second user”) control of the vehicle functions and features, including infotainment systems. (Ex. 1003, ¶462.) For example, Demeniuk discloses that “if the driver’s handheld device is commanding a playlist, the passengers may not override that infotainment function.” (Ex. 1023, 16:13-14; Ex. 1003, ¶¶463-464.)

Accordingly, Demeniuk discloses “*wherein the adjustment [e.g., controlling a playlist] is allowed when the access priority of the user [driver] is greater than the second access priority of the second user [passenger][.]*” (Ex. 1003, ¶¶462-464, 561, 597.)

[1i]/[9i]/[15i]

Demeniuk further discloses that the VCS limits control of certain features to the driver by “‘locking out’ one or more inputs to vehicle infotainment controls while the vehicle is moving including, ... navigation control inputs, radio selections, and/or one or more applications[.]” (Ex. 1023, 19:32-36; Ex. 1003, ¶465.)

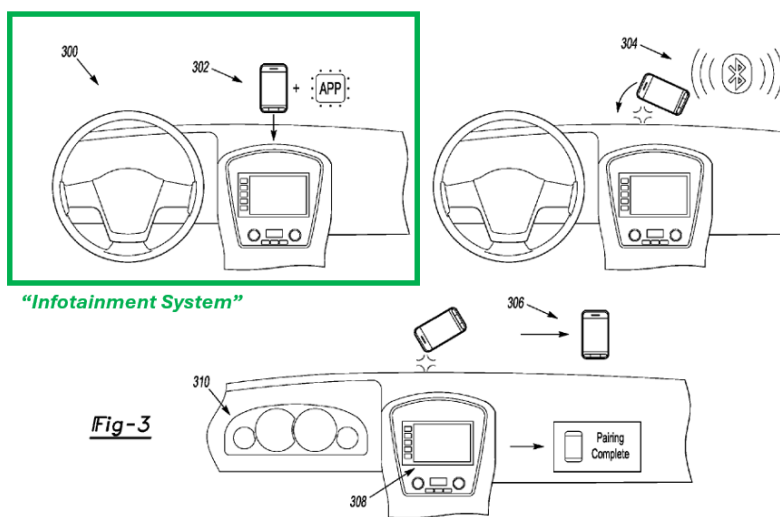
Accordingly, Demeniuk discloses that a driver’s selected “*adjustment [e.g., controlling a playlist] is prevented when the access priority of the user [driver] is less than the second access priority of the second user [passenger. e.g., when the*

vehicle is in motion].” (Ex. 1003, ¶¶465-466, 562, 598.)

4. Dependent Claims 2-8, 10-14, and 16-20

2[pre]/10[pre]/16[pre]

With reference to Figure 3, Demeniuk discloses “configuring the infotainment system[.]” (Ex. 1023, 3:16-17; Ex. 1003, ¶470.)



Ex. 1023, Fig. 3

Demeniuk further discloses that “[t]he integration of handheld devices with the vehicle-based computing system and core operations of the vehicle infotainment system may allow limitless interaction with device applications and the vehicle to improve the passenger riding experience.” (Ex. 1023, 4:5-8; Ex. 1003, ¶¶471-472.)

Accordingly, Demeniuk discloses “*wherein the at least one infotainment system is a vehicle infotainment system[.]*” (Ex. 1003, ¶¶469-472, 565-566, 600-601.)

[2a]/[10a]/[16a]

Demeniuk discloses identifying nomadic devices. (Ex. 1023, 3:34-35.) “The seat 802 may contain one or more sensors to validate an occupant presence at that seating position in the vehicle. The seat 802 may contain one or more back sensors 804, and one or more seat sensors 806 to ensure an occupant is present in that seat.” (Ex. 1023, 17:44-48.) “[I]n addition to or in combination of the one or more seat sensors, the vehicle may implement an in-vehicle camera system to identify where a passenger is located in the vehicle[.]” (Ex. 1023, 18:4-7; Ex. 1003, ¶¶473-475.)

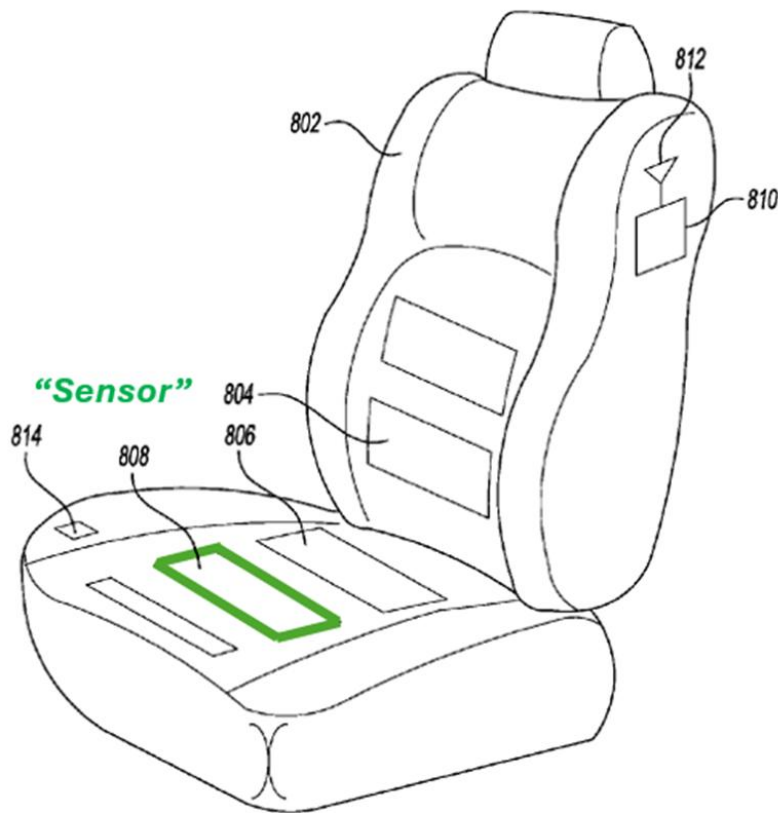


Fig-8

Ex. 1023, Fig. 8

Accordingly, Demeniuk discloses “*identifying the user [driver or passenger] inside a vehicle via one or more sensors [seat sensors, camera] associated with the vehicle[.]*” (Ex. 1003, ¶¶473-476, 565-566, 599-601.)

[2b]/[10b]/[16b]

Demeniuk discloses determining whether a device belongs to a driver or passenger using seat sensors in combination with one or more methods at steps 912 and 914: “once the nomadic device is recognized the system may perform an analysis

of the passenger's nomadic device location using one or more seat sensors in a vehicle" at step 912. (Ex. 1023, 19:16-18.) "At step 916, if the nomadic device belongs to a driver, then the VCS may allow limited control of features and functions from that device." (Ex. 1023, 19:30-32; Ex. 1003, ¶¶477-478.)

As explained for claim [1a], Demeniuk discloses applying restrictions ("*user profile[s]*") once a handheld device is identified, and it would have been obvious to a POSA to store the restrictions in memory in view of Zanchi. (Ex. 1003, ¶479.) Accordingly, Demeniuk combined with Zanchi teaches "*referring, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.*" (Ex. 1003, ¶¶477-479, 565-566, 600-601.)

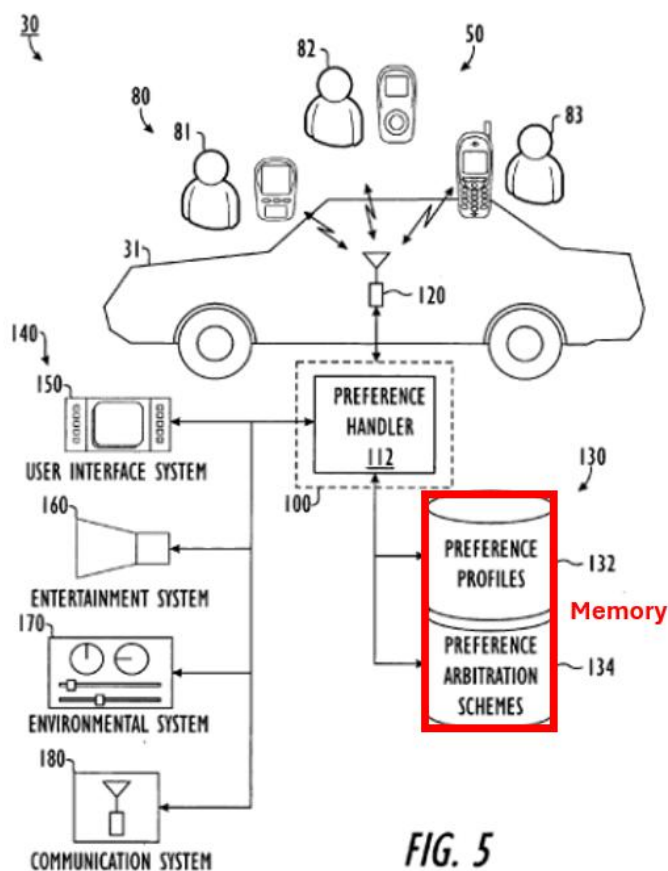
3[pre]-[3a]/11[pre]-[11a]

Demeniuk discloses that the vehicle utilizes an "in-vehicle camera system to identify where a passenger is located in the vehicle before allowing access to vehicle features and functions using the passenger's nomadic device." (Ex. 1023, 18:6-8.) Demeniuk also discloses a "method of a vehicle computing system detecting occupant location using connected devices." (Ex. 1023, 18:27-29.) A POSA would have understood that images of an individual captured by the camera in Demeniuk include "*identifying characteristics*" such as facial features. (Ex. 1003, ¶¶481-484.) Accordingly, Demeniuk discloses "*receiving identifying characteristics associated with the user via an image sensor or via a signal provided by a device associated*

with the user[.]” (Ex. 1003, ¶¶480-484, 567-568.)

[3b]/[11b]

Demeniuk teaches that control priorities can be set according “*user profile[s]*” [e.g., limits and restrictions for controlling the infotainment system] based on their locations in the vehicle. (Ex. 1003, ¶¶485-486.) Zanchi, uses device information to uniquely identify users. For example, Zanchi discloses “preferences associated with the user of such a device 50 may be stored ... in memory 130 of the controller 100. When the particular device 50 and associated user are identified, the controller 100 can access those preferences.” (Ex. 1022, [0044]; Ex. 1003, ¶486.)



Ex. 1022, Fig. 5

As explained in the rationale to combine, it would have been obvious to a POSA to incorporate the unique user identifications of Zanchio into the control scheme of Demieniuk after identifying the specific users via the cameras to increase the granularity of control and provide additional prioritization options. (Ex. 1003, ¶487.) Accordingly, Demieniuk combined with Zanchio teaches “*determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory, wherein the unique user characteristics are configured to verify an identity of the user.*” (Ex. 1003, ¶¶485-487, 567-568.)

[4]/[12]

Demeniuk discloses “determining infotainment control based on the location of the handheld device in the vehicle.” (Ex. 1023, Abstract.) Demeniuk discloses that the VCS detects the location of a passenger based on where the associated device is connected and/or using a seat sensor: “The passenger detection system may monitor one or more seat inputs including, ... physical connection port 814, vehicle seat wireless transceiver 810, and/or a passenger detection sensor 808.” (Ex. 1023, 17:22-26.) “[T]he physical connection port 814 is securely mounted to the passenger seat 802” which allows “for interconnecting a passenger’s brought-in handheld device by detecting where the passenger is located in the vehicle.” (Ex. 1023, 17:18-22.) Additionally, “[t]he seat 802 may contain one or more sensors to validate an occupant presence at that seating position in the vehicle[,] ... back sensors 804, ... seat sensors 806 [and] ... additional sensors 808 that may detect ... body temperature, and/or a weight sensor.” (Ex. 1023, 17:44-51; Ex. 1003, ¶¶488-492.)

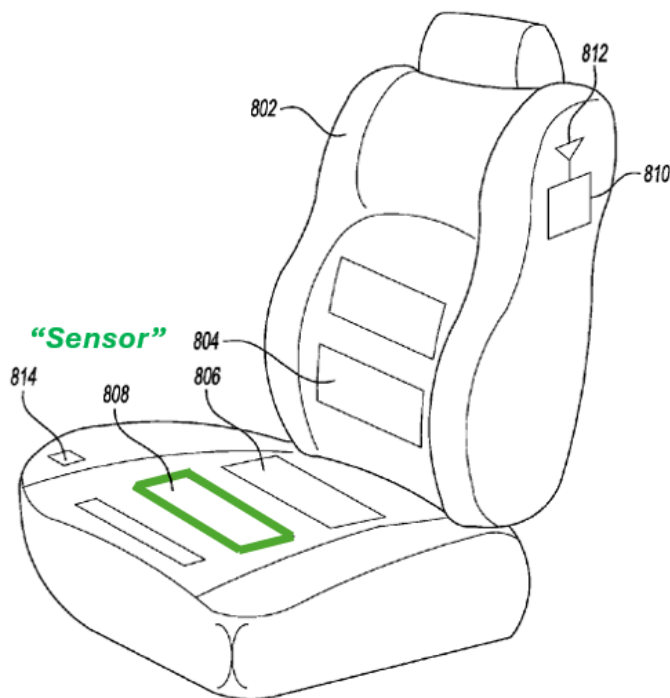


Fig-8

Ex. 1023, Fig. 8

Accordingly, Demeniuk discloses “wherein detecting the at least one infotainment system associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system [e.g., based on seat sensors or physical connections].” (Ex. 1003, ¶¶488-493, 569-570.)

5[pre]-[5a]/13[pre]-[13a]

Dememiuk discloses that when “the device is connected, synchronization may begin allowing the smart phone to access vehicle features that can be adjusted, updated, or modified.” (Ex. 1023, 14:9-11.) Demeniuk further discloses that “the

smart phone [can be] configured to have the vehicle features' current settings shown on the smart phone display screen.” (Ex. 1023, 14:12-14; Ex. 1003, ¶¶495-496.) Accordingly, Demeniuk teaches “*determining the configuration* [e.g., current settings] *of the at least one infotainment system[.]*” (Ex. 1003, ¶¶494-497, 571-572.)

[5b]/[13b]

Demeniuk further discloses that a customer may control infotainment features using their handheld device including “navigation directions, destination information, . . . and music selection.” (Ex. 1023, 12:42-44.) Infotainment features that may be controlled by the user's handheld device comprise “*infotainment information*”, in addition to the “*infotainment information*” for applying the limits and restrictions for controlling the “*infotainment system*”. (Ex. 1003, ¶¶498-500.)

A POSA would have understood that the VCS determines whether a music selection (e.g., “*infotainment information*”) matches the current settings (“*determining the configuration*”) of the infotainment system based on whether the selection is within the set limits or is restricted. If the selection is not within the set limits or is restricted, the infotainment system would not be adjusted, and the selection would not match the current settings of the infotainment system. If the selection is within the set limits and is not restricted, the infotainment system would be adjusted, and the selection would match the current settings of the infotainment system. (Ex. 1003, ¶¶498-501.)

Accordingly, Demeniuk discloses “*determining whether the infotainment information matches the determined configuration of the at least one infotainment system[.]*” (Ex. 1003, ¶¶498-501, 571-572.)

[5c]/[13c]

Demeniuk discloses infotainment features and settings, including music selection, media selection, and radio preset settings: “the centralized control display may be configured to the radio preset settings requested by the driver and configured based off the synchronization of the offline configure application settings to the VCS” (Ex. 1023, 12:25-28.) “The infotainment features that a customer may control using their nomadic device 400 may include[] ... music selection.” (Ex. 1023, 12:40-44; Ex. 1003, ¶502.)

Demeniuk further discloses that “[t]he passenger may adjust and control the selected vehicle feature that may include, ... selecting the song to play, controlling music volume, and/or adjusting tuning features of the entertainment system at step 616.” (Ex. 1023, 15:17-20; Ex. 1003, ¶503.)

Demeniuk discloses infotainment features and settings (“*infotainment setting[s]*”), including music selection, media selection, radio preset settings (“*preference[s]*”), selecting the song (“*content*”) to play, and controlling music volume (“*power state*”). Furthermore, adjusting the music volume also corresponds to a power state of the infotainment system, since adjusting the volume corresponds

to increasing or decreasing the amount of power (“*power state*”) being delivered to speakers. Accordingly, Demeniuk discloses “*wherein the infotainment information includes at least one infotainment setting, preference, content, and power state.*” (Ex. 1003, ¶¶504-505, 571-572.)

[6]/[14]

Demeniuk discloses that a vehicle occupant may have control over some vehicle systems including media selection: “Using their handheld device, the occupant may have control of vehicle systems, including ... climate control, navigation command, and/or media selection.” (Ex. 1023, 14:16-20; Ex. 1003, ¶506.)

Demeniuk discloses the driver establishing preset settings based on an offline configuration and the display panel being configured to display certain features and settings based on the offline configuration: “For example, the centralized control display may be configured to the radio preset settings requested by the driver” and may be “configured based off the synchronization of the offline configure application settings to the VCS. At step 310, the instrument panel (or display information center) may be configured to display certain features and settings based on the offline configuration application settings.” (Ex. 1023, 12:25-31; Ex. 1003, ¶507.)

Demeniuk discloses that the driver may set restrictions on what options or

infotainment features an occupant may have access to control, adjust, download and/or share: “The driver may set restrictions on what options or features an occupant may have access to control, adjust, download and/or share.” (Ex. 1023, 12:45-48; Ex. 1003, ¶508.)

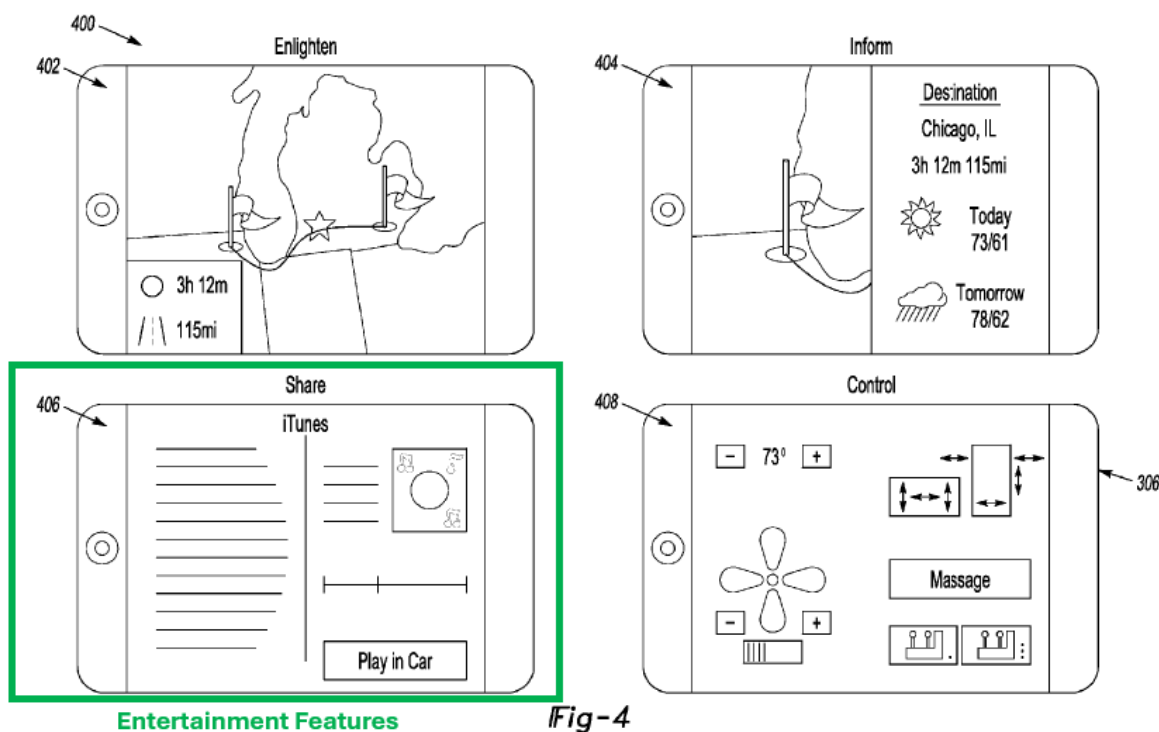
Demeniuk discloses that a vehicle driver may establish preset settings based on an offline configuration, that the driver may set restrictions on what options or infotainment features an occupant may have access to control, that the display panel is configured to display certain features and settings based on the offline configuration, and what options or infotainment features an occupant may have access to control, adjust, download and/or share. A POSA would have understood that under a scenario where an occupant attempts to select an infotainment feature that is different from the current setting and that the driver has restricted the occupant from controlling (e.g., non-allowed radio station selections), the infotainment system will not allow the selected change in the infotainment feature, e.g., a radio station will not change from a currently selected station (“*determined configuration*”), and the display panel will only display selectable settings (“*adjustment output*”), such as allowed radio station selections. Accordingly, Demeniuk teaches “*providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the at least one infotainment system.*” (Ex. 1003, ¶¶506-509, 573-

574.)

7[pre]-[7a]

Demeniuk discloses transmitting information from a user's handheld device to the vehicle controller, including music, movies, and other entertainment features: "An occupant's nomadic device connected to the VCS may also share information including... music, movies, and other entertainment features 406 that may be transmitted to the VCS." (Ex. 1023, 13:31-34; Ex. 1003, ¶511.)

With reference to Figure 4, Demeniuk discloses that an occupant's handheld device may share information including "music, movies, and other entertainment features 406 that may be transmitted to the VCS." (Ex. 1023, 13:31-34; Ex. 1003, ¶¶511-515.)



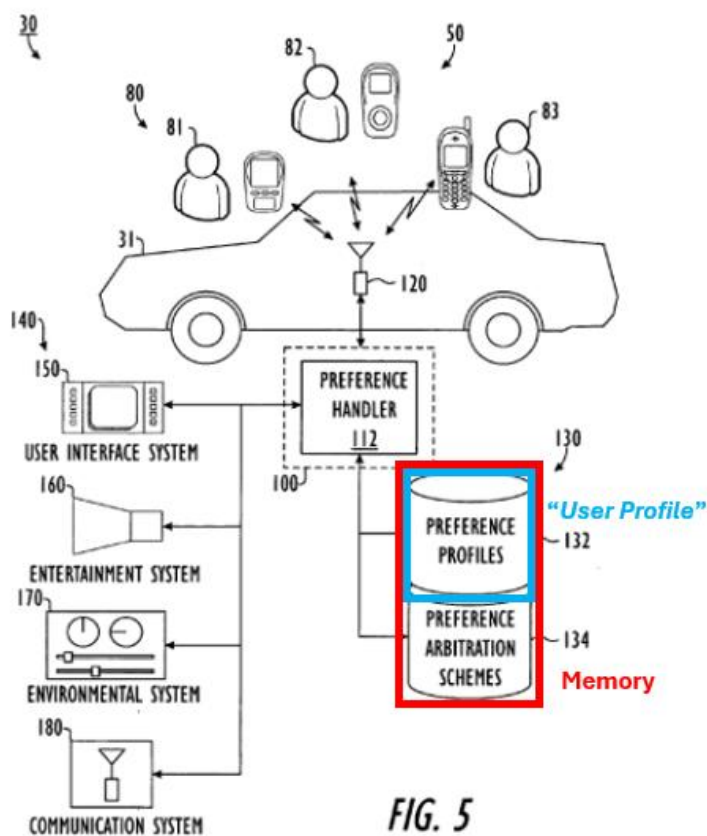
Ex. 1023, Fig. 4

Demeniuk discloses that the VCS receives multiple types of infotainment information including music, movies, and other entertainment features. A POSA would have understood that, upon the VCS having received both a first type of infotainment information (e.g., limitations and restrictions on infotainment control) and a second type of infotainment information (e.g., shared information such as music and movies), the second type of infotainment information is provided in addition to the first type. Accordingly, Demeniuk discloses “*receiving additional infotainment information [e.g., shared information] via at least one device associated with the user*” since the second type of information is in addition to the first type of information. (Ex. 1003, ¶¶510-516.)

[7b]

Demeniuk discloses that “[a]n occupant's nomadic device connected to the VCS may also share information including ... music, movies, and other entertainment features 406 that may be transmitted to the VCS.” (Ex. 1023, 13:31-34.) (Ex. 1003, ¶¶517, 521.)

Zancho discloses that the controller has preference profiles for storing user preferences (“*user profile data*”) in memory. (Ex. 1003, ¶¶517-521.) For example, Zancho discloses that “controller 100 has preference profiles 132 for storing user preferences and preference arbitration schemes 134 for handling preferences of multiple users. The preference profiles 132 and preferences arbitration schemes 134 can be entered and stored in memory 130[.]” (Ex. 1022, [0045]; Ex. 1003, ¶520.)



Ex. 1022, Fig. 5

A POSA would have been motivated to modify Demeniuk's vehicle controller that receives information from handheld devices with Zanchi to include *"determining whether the additional infotainment information qualifies as user profile data,"* so that the vehicle based computing system (VCS) can distinguish between the preferences of an occupant having higher priority (e.g., the driver's infotainment preferences, such as a playlist) and the infotainment preferences of an occupant having lower priority with respect to any *"additional infotainment information"* (e.g., shared information). (Ex. 1003, ¶522.)

Accordingly, Demeniuk combined with Zanchi teaches “*determining whether the additional infotainment information [e.g., shared information] qualifies as user profile data [e.g., preferences][.]*” (Ex. 1003, ¶523.)

[7c]

Demeniuk discloses that the VCS receives shared infotainment information including music, movies, and other entertainment features. (Ex. 1023, 13:31-34.) As explained for claim limitation [7b], a POSA would have understood that, upon the VCS having received both a first type of infotainment information (e.g., limits and restrictions on infotainment control) and a second type of infotainment information (e.g., shared information), the second type of infotainment information is provided in addition to the first type.” (Ex. 1003, ¶¶524, 527.)

Zanchi discloses that the controller has preference profiles for storing user preferences (“*user profile data*”) in memory. (Ex. 1003, ¶¶525-526.) For example, Zanchi discloses that “controller 100 has preference profiles 132 for storing user preferences and preference arbitration schemes 134 for handling preferences of multiple users. The preference profiles 132 and preferences arbitration schemes 134 can be entered and stored in memory 130[.]” (Ex. 1022, [0045]; Ex. 1003, ¶526.)

The preference profiles 132 (“*user profile[s]*”) in Zanchi correspond to a portion of the memory 130 that is dedicated for storing user preferences (“*user profile data*”). A POSA would have understood that with respect to any incoming

“additional infotainment information” that is meant to be stored within the memory 130, it must first be determined if the *“additional infotainment information”* corresponds to preferences (*“user profile data”*) before storing the additional information in the preference profiles 132. (Ex. 1003, ¶527.)

It would have been obvious to combine Demeniuk with Zanchi to include storing and processing *“additional infotainment information”* based on the infotainment information being *“user profile data,”* so that the vehicle based computing system (VCS) can readily access and distinguish between the occupants’ infotainment preferences (e.g., playlists) with respect to the *“additional infotainment information”* to ensure the desired prioritization is applied. (Ex. 1003, ¶¶528-529.)

Accordingly, combination of Demeniuk and Zanchi teaches *“storing, based at least partially on determining that the additional infotainment information qualifies as user profile data, the additional infotainment information in the user profile associated with the user.”* (Ex. 1003, ¶530.)

[8]

Demeniuk discloses *“controlling music volume, and/or adjusting tuning features of the entertainment system”* and that the *“vehicle infotainment controls ... [include] navigation control inputs, radio selections, and/or one or more applications.”* (Ex. 1023, 15:17-20, 19:33-36; Ex. 1003, ¶¶531-533.)

Accordingly, Demeniuk discloses *“adjusting the configuration of the at least*

one infotainment system, wherein adjusting the configuration includes at least one of tuning to a station[.]” (Ex. 1003, ¶534.)

17[pre]-[17a]/ 19[pre]-[19a]

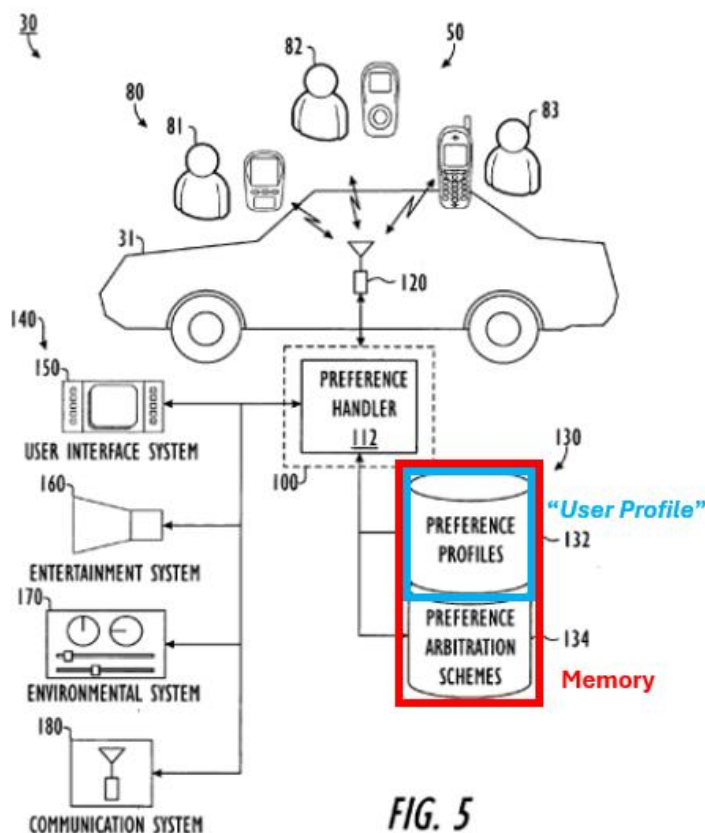
Demeniuk discloses that “[a]n occupant's nomadic device connected to the VCS may also share information including ... music, movies, and other entertainment features 406 that may be transmitted to the VCS.” (Ex. 1023, 13:31-34; Ex. 1003, ¶538.)

Demeniuk further discloses that “[i]n addition to having an exemplary processes executed by a vehicle computing system located in a vehicle, in certain embodiments, the exemplary processes may be executed by a computing system in communication with a vehicle computing system” and that “[s]uch a system may include, but is not limited to, a wireless device (e.g., and without limitation, a mobile phone) or a remote computing system (e.g., and without limitation, a server) connected through the wireless device.” (Ex. 1023, 6:28–35; Ex. 1003, ¶¶537, 539-540.)

Accordingly, Demeniuk combined with Zanchi teaches “*collecting, while the at least one infotainment system is online, additional infotainment information associated with the user [e.g., shared infotainment information from a server][.]” (Ex. 1003, ¶¶535-541, 575-576.)*

[17b]/[19b]

Zancho discloses that the controller has preference profiles for storing user preferences (“user profile data”) in memory. (Ex. 1022, [0045]; Ex. 1003, ¶543.)



Ex. 1022, Fig. 5

As explained in the rationale to combine, a POSA would have would have been motivated to modify Demeniuk in view of Zancho to “stor[e] the additional infotainment information in the user profile associated with the user[,]” so that the vehicle based computing system (VCS) can distinguish between the preferences of an occupant having higher priority (e.g., the driver’s infotainment preferences, such

as a playlist) and the infotainment preferences of an occupant having lower priority with respect to any “*additional infotainment information*” (e.g., shared information). (Ex. 1003, ¶¶542-545, 575-576.)

[18]/[20]

Demeniuk discloses that the handheld device may share information (“*additional infotainment information*”) including music (“*listening content*”), movies (“*viewing content*”), and other entertainment features that may be transmitted to the VCS: “An occupant’s nomadic device connected to the VCS may also share information including ... music, movies, and other entertainment features 406 that may be transmitted to the VCS.” (Ex. 1023, 13:31-34; Ex. 1003, ¶¶546-547.)

Accordingly, Demeniuk discloses “*wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.*” (Ex. 1003, ¶¶548, 577-578.)

VII. Objective Indicia of Nonobviousness

Petitioner is not aware of any evidence of alleged secondary considerations of non-obviousness having nexus to the challenged claims. (Ex. 1003, ¶602.)

VIII. Conclusion

For the foregoing reasons, the Board should grant institution.

Respectfully submitted,

Dated: December 5, 2025

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Certificate of Service

The undersigned hereby certifies that the foregoing **PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. § 311 *ET SEQ.* AND 37 C.F.R. § 42.100 *ET SEQ.* (U.S. PATENT NO. 9,147,297)**, including all exhibits and supporting evidence, was served by overnight courier in its entirety on December 5, 2025, upon the following correspondence address as shown for the '297 Patent:

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Certificate of Compliance Pursuant to 37 C.F.R. § 42.24

This paper complies with the type-volume limitation of 37 C.F.R. § 42.24. The paper contains 13,831 words, excluding the parts of the paper exempted by §42.24(a).

This paper also complies with the typeface requirements of 37 C.F.R. § 42.6(a)(ii) and the type style requirements of § 42.6(a)(iii)&(iv).

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Appendix A

A. Listing of All Challenged Claims

1[pre].	A method, comprising:
[1a]	detecting a user profile associated with a user, the user profile having infotainment information stored therein;
[1b]	detecting at least one infotainment system associated with the user; and
[1c]	determining to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration further comprises:
[1d]	determining an access priority of the user, and
[1e]	determining whether the access priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment further comprises:
[1f]	determining a second access priority of a second user associated with the infotainment system; and
[1g]	comparing the access priority of the user to the second access priority of the second user,

[1h]	wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and
[1i]	wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.
2[pre]	The method of claim 1, wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the method further comprises:
[2a]	identifying the user inside a vehicle via one or more sensors associated with the vehicle; and
[2b]	referring, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.
3[pre]	The method of claim 2, wherein identifying the user further comprises:
[3a]	receiving identifying characteristics associated with the user via an image sensor or via a signal provided by a device associated with the user; and
[3b]	determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory,

	wherein the unique user characteristics are configured to verify an identity of the user.
[4]	The method of claim 1, wherein detecting the at least one infotainment system associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system.
5[pre]	The method of claim 1, wherein determining to adjust the configuration of the at least one infotainment system further comprises:
[5a]	determining the configuration of the at least one infotainment system; and
[5b]	determining whether the infotainment information matches the determined configuration of the at least one infotainment system,
[5c]	wherein the infotainment information includes at least one infotainment setting, preference, content, and power state.
[6]	The method of claim 5, further comprising: providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the

	at least one infotainment system.
7[pre]	The method of claim 1, further comprising:
[7a]	receiving additional infotainment information via at least one device associated with the user;
[7b]	determining whether the additional infotainment information qualifies as user profile data; and
[7c]	storing, based at least partially on determining that the additional infotainment information qualifies as user profile data, the additional infotainment information in the user profile associated with the user.
[8]	The method of claim 1, further comprising: adjusting the configuration of the at least one infotainment system, wherein adjusting the configuration includes at least one of tuning to a station, setting an infotainment input, selecting a content genre, and recording content for playback to the user.
9[pre].	A non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform a method comprising:
[9a]	detecting a user profile associated with a user, the user profile having infotainment information stored therein;

[9b]	detecting at least one infotainment system associated with the user; and
[9c]	determining to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration further comprises:
[9d]	determining an access priority of the user; and
[9e]	determining whether the access priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment further comprises:
[9f]	determining a second access priority of a second user associated with the infotainment system; and
[9g]	comparing the access priority of the user to the second access priority of the second user,
[9h]	wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and
[9i]	wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.
10[pre].	The non-transitory computer readable medium of claim 9, wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the method further comprises:

[10a]	identifying the user inside a vehicle via one or more sensors associated with the vehicle; and
[10b]	referring, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.
11[pre].	The non-transitory computer readable medium of claim 10, wherein identifying the user further comprises:
[11a]	receiving identifying characteristics associated with the user via an image sensor or via a signal provided by a device associated with the user; and
[11b]	determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory, wherein the unique user characteristics are configured to verify an identity of the user.
[12]	The non-transitory computer readable medium of claim 9, wherein detecting the at least one infotainment system associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system.
13[pre].	The non-transitory computer readable medium of claim 9, wherein determining to adjust the configuration of the at least one infotainment system further comprises:
[13a]	determining the configuration of the at least one infotainment system; and
[13b]	determining whether the infotainment information matches the determined configuration of the at least one infotainment system,

[13c]	wherein the infotainment information includes at least one infotainment setting, preference, content, and power state.
[14]	The non-transitory computer readable medium of claim 13, wherein the method further comprises: providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the at least one infotainment system.
15[pre].	An infotainment control system, comprising: a profile identification module contained in a memory and executed by a processor of the infotainment control system,
[15a]	the profile identification module configured to detect a user profile associated with a user, the user profile having infotainment information stored therein,
[15b]	detect at least one infotainment system associated with the user, and
[15c]	determine to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration comprises
[15d]	determining an access priority of the user, and

[15e]	determining whether the access priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment comprises
[15f]	determining a second access priority of a second user associated with the infotainment system, and
[15g]	comparing the access priority of the user to the second access priority of the second user,
[15h]	wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and
[15i]	wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.
16[pre]	The system of claim 15, wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the profile identification module is further configured to
[16a]	identify the user inside a vehicle via one or more sensors associated with the vehicle, and

[16b]	refer, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.
17[pre].	The method of claim 1, further comprising:
[17a]	collecting, while the at least one infotainment system is online, additional infotainment information associated with the user; and
[17b]	storing the additional infotainment information in the user profile associated with the user.
[18]	The method of claim 17, wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.
19[pre].	The non-transitory computer readable medium of claim 9, wherein the method further comprises:
[19a]	collecting, while the at least one infotainment system is online, additional infotainment information associated with the user; and
[19b]	storing the additional infotainment information in the user profile associated with the user.
[20]	The non-transitory computer readable medium of claim 19,

	wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.
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Appendix B

A. Comparison of Independent Claims

Ind. Claim 1	Ind. Claim 9	Ind. Claim 15
1[pre]. A method, comprising:	9[pre]. A non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform a method comprising:	15[pre]. An infotainment control system, comprising:
[1a] detecting a user profile associated with a user, the user profile having infotainment information stored therein;	[9a] detecting a user profile associated with a user, the user profile having infotainment information stored therein;	[15a] the profile identification module configured to detect a user profile associated with a user, the user profile having infotainment information stored therein,
[1b] detecting at least one infotainment system associated with the user; and	[9b] detecting at least one infotainment system associated with the user; and	[15b] detect at least one infotainment system associated with the user, and
[1c] determining to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration further comprises:	[9c] determining to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration further comprises:	[15c] determine to adjust a configuration of the at least one infotainment system based at least partially on the infotainment information in the user profile, wherein determining to adjust the configuration comprises
[1d] determining an access priority of the user; and	[9d] determining an access priority of the user; and	[15d] determining an access priority of the user, and
[1e] determining whether the access	[9e] determining whether the access	[15e] determining whether the access

priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment further comprises:	priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment further comprises:	priority of the user allows for the adjustment to the configuration of the at least one infotainment system, wherein determining whether the access priority of the user allows for the adjustment comprises
[1f] determining a second access priority of a second user associated with the infotainment system; and	[9f] determining a second access priority of a second user associated with the infotainment system; and	[15f] determining a second access priority of a second user associated with the infotainment system, and
[1g] comparing the access priority of the user to the second access priority of the second user,	[9g] comparing the access priority of the user to the second access priority of the second user,	[15g] comparing the access priority of the user to the second access priority of the second user,
[1h] wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and	[9h] wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and	[15h] wherein the adjustment is allowed when the access priority of the user is greater than the second access priority of the second user, and
[1i] wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.	[9i] wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.	[15i] wherein the adjustment is prevented when the access priority of the user is less than the second access priority of the second user.

B. Comparison of Dependent Claims

Depend from Ind. Claim 1	Depend from Ind. Claim 9	Depend from Ind. Claim 15
2[pre]. The method of claim 1, wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the method further comprises:	10[pre]. The non-transitory computer readable medium of claim 9, wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the method further comprises:	16[pre]. The system of claim 15, wherein the at least one infotainment system is a vehicle infotainment system, and wherein prior to detecting the user profile the profile identification module is further configured to
[2a] identifying the user inside a vehicle via one or more sensors associated with the vehicle; and	[10a] identifying the user inside a vehicle via one or more sensors associated with the vehicle; and	[16a] identify the user inside a vehicle via one or more sensors associated with the vehicle, and
[2b] referring, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.	[10b] referring, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.	[16b] refer, in response to identifying the user, to a memory associated with the identified user, wherein the memory includes the user profile.
3[pre]. The method of claim 2, wherein identifying the user further comprises:	11[pre]. The non-transitory computer readable medium of claim 10, wherein identifying the user further comprises:	
[3a] receiving identifying characteristics associated	[11a] receiving identifying characteristics associated	

with the user via an image sensor or via a signal provided by a device associated with the user; and	with the user via an image sensor or via a signal provided by a device associated with the user; and	
[3b] determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory, wherein the unique user characteristics are configured to verify an identity of the user.	[11b] determining whether the identifying characteristics associated with the user match unique user characteristics stored in a memory, wherein the unique user characteristics are configured to verify an identity of the user.	
[4] The method of claim 1, wherein detecting the at least one infotainment system associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system.	[12] The non-transitory computer readable medium of claim 9, wherein detecting the at least one infotainment system associated with the user is based at least partially on one or more of a proximity of a user and a user device to the at least one infotainment system.	
5[pre]. The method of claim 1, wherein determining to adjust the configuration of the at least one infotainment system further comprises:	13[pre]. The non-transitory computer readable medium of claim 9, wherein determining to adjust the configuration of the at least one infotainment system further comprises:	
[5a] determining the configuration of the at	[13a] determining the configuration of the at	

least one infotainment system; and	least one infotainment system; and	
[5b] determining whether the infotainment information matches the determined configuration of the at least one infotainment system,	[13b] determining whether the infotainment information matches the determined configuration of the at least one infotainment system,	
[5c] wherein the infotainment information includes at least one infotainment setting, preference, content, and power state.	[13c] wherein the infotainment information includes at least one infotainment setting, preference, content, and power state.	
[6] The method of claim 5, further comprising: providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the at least one infotainment system.	[14] The non-transitory computer readable medium of claim 13, wherein the method further comprises: providing, when the infotainment information does not match the determined configuration of the at least one infotainment system, an adjustment output configured to adjust the configuration of the at least one infotainment system.	
7[pre]. The method of claim 1, further comprising:		
[7a] receiving additional infotainment information via at least one device associated with the user;		
[7b] determining whether the additional		

infotainment information qualifies as user profile data; and		
[7c] storing, based at least partially on determining that the additional infotainment information qualifies as user profile data, the additional infotainment information in the user profile associated with the user.		
[8] The method of claim 1, further comprising: adjusting the configuration of the at least one infotainment system, wherein adjusting the configuration includes at least one of tuning to a station, setting an infotainment input, selecting a content genre, and recording content for playback to the user.		
17[pre]. The method of claim 1, further comprising:	19[pre]. The non-transitory computer readable medium of claim 9, wherein the method further comprises:	
[17a] collecting, while the at least one infotainment system is online, additional infotainment information	[19a] collecting, while the at least one infotainment system is online, additional infotainment information	

associated with the user; and	associated with the user; and	
[17b] storing the additional infotainment information in the user profile associated with the user.	[19b] storing the additional infotainment information in the user profile associated with the user.	
[18] The method of claim 17, wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.	[20] The non-transitory computer readable medium of claim 19, wherein the additional infotainment information includes one or more of preferred radio stations, content applications, listening content, viewing content, content playback settings, genres, content consumption habits, and recording preferences.	