UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOYOTA MOTOR CORP., Petitioner.

v.

AUTOCONNECT HOLDINGS LLC, Patent Owner.

> Case No. PGR2025-00041 Patent No. 12,039,243

PETITION FOR POST-GRANT REVIEW

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LIST OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 12,039,243
1002	File History of U.S. Patent No. 12,039,243
1003	Declaration of Scott Denning
1004	Curriculum Vitae of Scott Denning
1005	U.S. Patent App. Pub. No. 2012/0303178 to Hendry et al. ("Hendry")
1006	U.S. Patent App. Pub. No. 2007/0276795 to Poulsen ("Poulsen")
1007	U.S. Patent No. 8,918,231 to Rovik ("Rovik")
1008	U.S. Patent App. Pub. No. 2007/0255464 to Singh et al. ("Singh")
1009	U.S. Patent No. 8,977,408 to Cazanas et al. ("Cazanas")
1010	U.S. Patent App. Pub. No. 2009/0005070 to Forstall et al. ("Forstall")
1011	U.S. Patent App. Pub. No. 2012/0254960 to Lortz et al. ("Lortz")
1012	Microsoft Computer Dictionary, 5th Ed. (2002) (excerpted)
1013	U.S. Patent App. Pub. No. 2009/0325491 to Bell et al. ("Bell")
1014	Bluetooth Specification v2.1 (2007) (excerpted)
1015	U.S. Patent No. 9,229,905 to Penilla et al. ("Penilla")
1016	U.S. Patent App. Pub. No. 2008/0205655 to Wilkins et al. ("Wilkens")
1017	U.S. Patent No. 8,863,256 to Addepalli et al. ("Addepalli")
1018	U.S. Patent App. Pub. No. 2011/0078570 to Larsen et al. ("Larsen")
1019	U.S. Patent App. Pub. No. 2010/0191748 to Martin et al. ("Martin")
1020	U.S. Patent App. Pub. No. 2014/0282931 to Protopapas
	("Protopapas")
1021	U.S. Patent App. Pub. No. 2013/0030645 to Divine et al. ("Divine")
1022	U.S. Patent App. Pub. No. 2004/0148526 to Sands et al. ("Sands")

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1023	Barth, Matthew, et al., "Interoperability Options for Shared-Used
	Vehicle Systems," Transportation Research Record: Journal of the
	Transportation Research Board, No. 1887, TRB, National Research
	Council, Washington, D.C., 2004, pp. 137-144 ("Barth")
1024	U.S. Patent App. Pub. No. 2011/0195699 to Tadayon et al.
	("Tadayon")
1025	Exhibit K2 to AutoConnect's Disclosure of Asserted Claims and
	Infringement Contentions, served Jan. 21, 2025, in AutoConnect
	Holdings, LLC v. Toyota Motor Corp., No. 2:24-cv-00802 (E.D. Tex.)
1026	AutoConnect's Disclosure of Asserted Claims and Infringement
	Contentions, served Jan. 21, 2025, in AutoConnect Holdings, LLC v.
	Toyota Motor Corp., No. 2:24-cv-00802 (E.D. Tex.)

LISTING OF CLAIMS

Element	Claim Language	
Claim 1		
1[pre]	A system, comprising:	
1[a]	memory;	
1[b]	machine-readable instructions; and	
1[c]	one or more processors to execute the machine-readable	
	instructions to:	
1[c-1]	receive a request to access a user profile stored at a vehicle,	
	the user profile including one or more preferences associated	
	with functions or settings of the vehicle;	
1[c-2]	determine, by performing at least one of a verification	
	process or an authentication process in response to the	
	request, whether the request is authorized to access the user	
	profile;	
1[c-3]	in response to determining that the request is authorized to	
	access the user profile, determine one or more requested	
	modifications to at least one of the one or more preferences;	
	and	
1[c-4]	in response to the one or more requested modifications,	
	create an updated user profile at the vehicle, the updated user	
	profile including one or more updated preferences based on	
	the one or more requested modifications.	
	Claim 2	
2[a]	The system of claim 1, wherein the one or more processors are to	
	execute the machine-readable instructions to transmit the updated	
	user profile from the vehicle to at least one of a mobile device, a	
	cloud server, a remote server, or another vehicle,	
2[b]	wherein a local user profile including one or more local	
	preferences is stored at the at least one of the mobile device, the	
	cloud server, the remote server, or the other vehicle prior to	
	transmission of the updated user profile to the at least one of the	
	mobile device, the cloud server, the remote server, or the other	
	vehicle.	
	Claim 3	
3	The system of claim 2, wherein the one or more processors are to	
	execute the machine-readable instructions to determine whether	
	any conflicts exist between the updated preferences of the updated	
	user profile and the local preferences of the local user profile.	

Element	Claim Language			
Claim 4				
4	The system of claim 3, wherein, in response to determining that			
	one or more conflicts exist between the updated preferences and			
	the local preferences, the one or more processors are to execute the			
	machine-readable instructions to overwrite conflicted ones of the			
	local preferences with corresponding conflicting ones of the			
	updated preferences.			
	Claim 5			
5	The system of claim 3, wherein, in response to determining that			
	one or more conflicts exist between the updated preferences and			
	the local preferences, the one or more processors are to execute the			
machine-readable instructions to perform a reconciliation proce				
	that allows selective determination of which conflicted ones of the			
	local preferences should be overwritten by corresponding			
conflicting ones of the updated preferences.				
Claim 6				
6	The system of claim 1, wherein the one or more processors are to			
	perform both the verification process and the authentication			
	process, and wherein the one or more processors are to determine			
that the request is authorized to access the user profile in response to successfully verifying the request via the verification process				
			and successfully authenticating the request via the authentication	
process.				
Claim 7				
7	The system of claim 1, wherein the verification process includes at			
	least one of biometric recognition, gesture recognition, facial			
recognition, or identification of a mobile device.				
Claim 8				
8	The system of claim 1, wherein the authentication process includes			
	an exchange of security keys between the vehicle and a mobile			
	device.			
	Claim 9			
9	The system of claim 1, wherein the user profile is based on a			
	template for the one or more preferences, and the updated user			
	profile is created relative to the template.			

Element	Claim Language		
	Claim 10		
10	The system of claim 9, wherein the template is a global standard		
	template that is common among at least two vehicle		
	manufacturers.		
	Claim 11		
11[pre]	A method, comprising:		
11[a]	receiving a request to access a user profile stored at a vehicle, the		
	user profile including one or more preferences associated with		
	functions or settings of the vehicle;		
11[b]	determining, by performing at least one of a verification process or		
	an authentication process via one or more processors in response to		
	the request, whether the request is authorized to access the user		
profile;			
11[c]	in response to determining that the request is authorized to access		
	the user profile, determining, via the one or more processors, one		
	or more requested modifications to at least one of the one or more		
4 4 5 13	preterences; and		
11[d]	in response to the one or more requested modifications, creating,		
	via the one or more processors, an updated user profile at the		
	vehicle, the updated user profile including one or more updated		
preferences based on the one or more requested modifications.			
12[a]	The method of claim 11, further comprising transmitting the		
	device a cloud server, a remote server, or another vehicle		
10[]	device, a cloud server, a remote server, or another vehicle,		
12[0]	wherein a local user profile including one of the mobile device, the		
	cloud server, the remote server, or the other vehicle prior to		
	transmission of the undated user profile to the at least one of the		
	mobile device, the cloud server, the remote server, or the other		
	vehicle		
	Claim 13		
13	The method of claim 12 further comprising determining whether		
	any conflicts exist between the updated preferences of the updated		
	user profile and the local preferences of the local user profile		
	Claim 14		
14	The method of claim 13, wherein, in response to determining that		
	one or more conflicts exist between the updated preferences and		

Element	Claim Language		
	the local preferences, the method further comprises overwriting		
	conflicted ones of the local preferences with corresponding		
	conflicting ones of the updated preferences.		
	Claim 15		
15	The method of claim 13, wherein, in response to determining that		
	one or more conflicts exist between the updated preferences and		
the local preferences, the method further comprises performing a			
	reconciliation process that allows selective determination of which		
	conflicted ones of the local preferences should be overwritten by		
	corresponding conflicting ones of the updated preferences.		
Claim 16			
16	The method of claim 11, further comprising performing both the		
	verification process and the authentication process, wherein		
	determining that the request is authorized to access the user profile		
	includes successfully verifying the request via the verification		
	process and successfully authenticating the request via the		
	authentication process.		
Claim 17			
17	The method of claim 11, wherein the verification process includes		
	at least one of biometric recognition, gesture recognition, facial		
recognition, or identification of a mobile device.			
Claim 18			
18	The method of claim 11, wherein the authentication process		
	includes an exchange of security keys between the vehicle and a		
mobile device.			
Claim 19			
19	The method of claim 11, wherein the user profile is based on a		
	template for the one or more preferences, and the updated user		
	profile is created relative to the template.		
	Claim 20		
20	The method of claim 19, wherein the template is a global standard		
	template that is common among at least two vehicle		
	manufacturers.		

Toyota Motor Corp. ("Petitioner") requests post-grant review of claims 1-20 of U.S. Patent No. 12,039,243 (EX1001, the "243 Patent"). It is more likely than not Petitioner will prevail on at least one challenged claim (and, in fact, all claims).

I. Introduction

The '243 Patent claims recite basic, well-known concepts for accessing and updating "user profiles" at a vehicle, implemented using admittedly conventional "memory" and "processors." But for use of the conventional computer components, the claimed functions could be done entirely in a human's mind or with pen and paper. They are functional, results-oriented, and ineligible under Section 101.

There is also nothing novel or non-obvious about the claims—the concepts were well known in the art and the claims are invalid under Section 103.

The Board should institute and cancel the claims.

II. Mandatory Notices

A. Real Parties in Interest

The real parties in interest are Toyota Motor Corp., Toyota Motor North America, Inc., Toyota Motor Engineering & Manufacturing North America, Inc., and Toyota Motor Sales, U.S.A., Inc.

B. Related Matters

The '243 Patent is being asserted in the following pending district court cases:

- AutoConnect Holdings LLC v. Toyota Motor Corp., et al., Case No.
 - 2:24-cv-00802 (E.D. Tex. filed Oct. 3, 2024); and

 AutoConnect Holdings LLC v. General Motors LLC, Case No. 2:24cv-00877 (E.D. Tex. filed Oct. 30, 2024).

C. Counsel and Service Information

Petitioner designates the following lead and back-up counsel:

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Petitioner authorizes service at the above-listed email addresses and rj_toyota-autoconnect@reichmanjorgensen.com.

III. Requirements for Post-Grant Review

A. Grounds for Standing

Petitioner certifies the '243 Patent is available for PGR. This Petition is being filed within 9 months of the '243 Patent's issuance (issued July 16, 2024), and the earliest possible priority date is April 15, 2013. EX1001, 1-2; EX1026, 59.

Petitioner is not barred or estopped from requesting PGR challenging the claims on the identified grounds.

B. Identification of Challenge and Relief Requested

Petitioner requests institution on the following grounds:

Ground	Theory/Art	Basis	Claims
		(AIA)	
1	Lack of Patent Eligibility	§101	1-20
2	U.S. Patent App. Pub. No. 2012/0303178	§103	1, 6-8, 11,
	("Hendry"; EX1005)		16-18
3	Hendry in view of U.S. Patent App. Pub. No.	§103	2-7, 12-17
	2007/0276795 ("Poulsen"; EX1006)		
4	Hendry in view of U.S. Patent No. 8,918,231	§103	9-10, 19-20
	("Rovik"; EX1007)		
5	U.S. Patent App. Pub. No. 2007/0255464	§103	1, 6-7, 11,
	("Singh"; EX1008)		16-17
6	Singh in view of U.S. Patent No. 8,977,408	§103	2-8, 12-18
	("Cazanas"; EX1009) and U.S. Patent App.		
	Pub. No. 2009/0005070 ("Forstall"; EX1010)		
7	Singh in view of Rovik	§103	9-10, 19-20

IV. Relevant Information Concerning the Contested Patent

A. '243 Patent Overview

The '243 Patent discloses "[a] system to access one or more user profiles that govern one or more vehicle functions," which "cooperates with a processor and verification module which are adapted to verify, using one or more of biometric information, gesture recognition, facial recognition and device identification information, that a user has authority to access the one or more user profiles, where the one or more profiles are stored in one or more of a vehicle, a cloud and a communications device." EX1001, Abstract.

The patent relies upon admittedly conventional computing components and techniques, and explains that any known processor, memory, and verification/authentication technique may be used. EX1001, 11:42-12:8, 21:64-22:10 ("processor 304 may comprise a general purpose programmable processor or controller...."), 22:19-23 (any storage can be used), 22:42-53 (same), 83:35-54 ("utilizing known facial recognition techniques"), 87:54-67 (listing known biometric verification techniques), 92:66-93:67 (listing dozens of known hardware tools), FIG. 3. The patent explains a "profile" can be basically any data: "[t]he term 'profile,' as used herein, can refer to any^1 data structure, data store, and/or database that includes one or more items of information associated with a vehicle, a vehicle system, a device (e.g., a mobile device, laptop, mobile phone, etc.), or a person." EX1001, 14:50-55, 17:54-62.

¹ Unless noted, emphasis and coloring have been added and case citations have been cleaned up.

Figure 3 depicts "vehicle control environment 300" including "vehicle control system 204." EX1001, 21:34-36.



Control system 204 includes processor 304 and memory 308. EX1001, 21:64-22:47. Processor 304 "may compromise a general purpose programmable processor" and "generally functions to run programming code or instructions implementing various functions of... control system 204." EX1001, 21:64-22:10. The memory may be various known memory. EX1001, 22:18-22:47. Also in Figure 3 is "profile data store 252 for storing data about user profiles and data associated with users,"

EX1001, 23:26-33, 71:40-44, which "can include any type of data associated with at least one user...." EX1001, 18:22-36.

During prosecution, the Examiner rejected originally-filed claims 1-20 over prior art, including "Divine" (EX1021) and "Sands" (EX1022). EX1002, 203-211 (rejection); 106-108 (claims).

The applicant canceled the original claims and added new claims (which ultimately issued as claims 1-20 of the '243 Patent). EX1002, 285-303. The applicant argued the prior art failed to teach what became limitation 1[c-1] (receiving a request to access a user profile stored at a vehicle), as well as limitations 1[c-3] and 1[c-4] (regarding accessing and modifying a user profile). EX1002, 297-302.

The Examiner allowed the claims. EX1002, 370-375.

B. Person of Ordinary Skill in the Art

Several factors may be considered in determining the qualifications of a person of ordinary skill in the art ("POSA"). MPEP §2141.03. Here, the level of skill is apparent from the cited art. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

Petitioner submits a POSA would have had at least a bachelor's degree in computer science, electrical engineering, or a related field, and two years' experience in data management or client-server systems and communications. EX1003 ¶¶35-39. This description is approximate—a higher education or skill level might make up for less experience, and vice-versa. EX1003 ¶37. Petitioner's expert, Scott Denning, was at least a POSA as of the '243 Patent's earliest possible priority date, April 15, 2013.² EX1003 ¶¶6-15, 37-38; EX1004 (Denning CV).

C. Claim Construction

This Petition construes terms consistent with the understanding a POSA would have had at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005). Only terms subject to a legitimate dispute relevant to the invalidity issues in this PGR need to be construed here. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

As shown herein, the claims are unpatentable under any reasonable construction. Any implicit constructions derived from Petitioner's analysis are for the purposes of this PGR only, and may be based in-part on Patent Owner's infringement allegations and/or positions Patent Owner has taken in district court.

² Because the prior art herein pre-dates the '243 Patent's earliest possible priority date (April 15, 2013), Petitioner uses this date. Petitioner does not concede any claim is entitled to such date.

V. The Specific Grounds of Unpatentability

As evidenced by the prior art and Denning's declaration, there was nothing new or novel about the inventions claimed in the '243 Patent.

A. Exemplary Prior Art and State of the Art

The below provides an overview of exemplary prior art; additional art is discussed in Sections V.C-H.

As explained below in this Section V.A and in Sections V.C-H, the prior art including Hendry, Singh, Poulsen, Rovik, Cazanas, Forstall, and others—teaches various data profile management systems (including specifically applied to user vehicle settings), where the profiles are created, stored, updated, and reinstated at the vehicle; transmitted, stored, reconciled, and updated at an external location (*e.g.*, remote server or mobile device); and transmitted to other vehicles to enable automatic user settings without requiring the user to manually set various preferences each time the user enters a vehicle; and where access to profiles is predicated on a multi-factor authentication and verification process using known techniques such as security keys, passwords, device identifiers, and biometrics. *See* EX1003 ¶76; §§V.A, C-H.

1. Hendry

Hendry was filed May 26, 2011, and published November 29, 2012. EX1005, 1. It is prior art under 35 U.S.C. §102(a)(1)-(2). Hendry "relates generally to a method and system for establishing user settings of vehicle components of a vehicle," and "[i]n particular, the system retrieves the user settings from at least one data store associated with the vehicle based on a request from an external device to establish a communications link with a communications module of the vehicle." EX1005, [0001].

Hendry depicts an example system in Figure 2, where the "user settings system reinstates a user's personal settings" (such as seat, temperature, mirrors, etc.) "when an external device... is detected within the vicinity of the vehicle." EX1005, [0012]-[0013], [0005], [0033]. "Upon receiving notification of the user or the external device 100, each of the modules 104, 112, 116, and 120, will retrieve user settings corresponding to the user or external device 100 from a respective datastore." EX1005, [0014].

Hendry discloses verifying and/or authenticating the external device and/or user before loading user settings, *e.g.*, using a device identifier and key exchange. EX1005, [0017]-[0019]. Hendry discloses that setting modifications may be "at any given time" and saved to vehicle datastores. EX1005, [0031].



2. Singh

Singh was filed April 26, 2006, and published November 1, 2007. EX1008, 1. It is prior art under 35 U.S.C. §102(a)(1)-(2).

Singh discloses "an intelligent vehicle that allows multiple drivers to drive the vehicle and provides customized settings and services for each of them." EX1008, Abstract. Singh discloses a multi-factor authentication/verification process (using passwords and fingerprints), after which a user's settings are loaded (for seats, mirrors, temperature, etc.). EX1008, Abstract, [0003], [0034], [0038]-[0039], [0041], FIG. 3. Singh discloses "[t]he vehicle features tab will allow each driver to

modify or change their current seating arrangements," which may be saved "just when the driver completes the task" or a later time. EX1008, [0060]-[0064], FIG. 3.



3. Poulsen

Poulsen was filed May 24, 2007, and published November 29, 2007. EX1006, 1. It is prior art under 35 U.S.C. §102(a)(1)-(2).

Poulsen discloses "methods for creating, applying, using and retrieving profile information that includes attributes that may be stored separately from, or with, the content to which the profiles are being applied" such that "profiles can be shared in various environments and across various applications." EX1006, Abstract. Poulsen discloses its system and method are applicable to many environments, including a vehicle with driver preferences. EX1006, [0085]-[0087]. In Figure 15, Poulsen discloses creating, storing, transmitting, and reconciling a user profile for vehicle settings. EX1006, [0085]-[0087].



4. Rovik

Rovik was filed May 2, 2012, and issued December 23, 2014. EX1007, 1. It is prior art under 35 U.S.C. §102(a)(2).

Rovik discloses a system for sharing user profile settings across vehicles via a server. EX1007, Abstract, 1:5-2:29. Rovik discloses "storing user settings at a server remote from a vehicle so that the user settings can be transmitted to different vehicles for the user." EX1007, 1:21-32. Rovik discloses user profiles are used with "vehicles of different makes and models," EX1007, 2:1-5, and also various "types of vehicles" such as "passenger automobiles," "trucks," "boats," etc. EX1007, 3:20-31. Rovik discloses user profiles (*e.g.*, 510 and 512 in Figure 5) including common setting options and common organization (namely, in a template format) such that they can be used to generate user settings for different vehicles. EX1007, 9:3-51, FIG. 5 (disclosing common setting options that may be updated for a particular user including, *e.g.*, so that "user preferences can also be used to generate new user settings for vehicles or vehicle types not driven by the user before").

User P	rofile 510
User Key	CB1906X
User Eye Point	1.1
User Hip Point	2.4
Recline Value	3.6
Lumbar Value	5.0
Mirror 1 Value	0.82
Mirror 2 Value	0.71
Arm Length	2.1
Preferred Music Genre	Classic Rock
Default Volume Level	4.2
Scheduled Location	L1:0800 M-F
Background Image	—
Language	English
Units	English
Location 1	Home: 1060 W. Addison
Location 2	Work: 600 Anton
Mobile Device 1	John's Phone
Temperature Setpoint	73° F

User Pr	rofile 512
User Key	WS2005Y
User Eye Point	-0.8
User Hip Point	-0.9
Recline Value	4.1
Lumbar Value	0.0
Mirror 1 Value	0.74
Mirror 2 Value	0.76
Arm Length	1.2
Preferred Music Genre	Нір Нор
Default Volume Level	4.9
Scheduled Location	—
Background Image	sox.jpg
Language	English
Units	English
Location 1	Home: 333 W. 35th St.
Mobile Device 1	Bob's Phone
Mobile Device 2	Bob's Laptop
Temperature Setpoint	71° F

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5. Cazanas

Cazanas was filed September 23, 2011, and issued March 10, 2015. EX1009, 1. It is prior art under 35 U.S.C. §102(a)(2).

Cazanas discloses a "system for transferring drive profile settings [including] a communication interface, processor, storage device and program device." EX1009, Abstract. Cazanas explains "[t]he system allows for transfer of a driver profile from the storage device to a vehicle for application on the vehicle," where the "profile specifies one or more preference settings for one or more configurable components of a vehicle." EX1009, Abstract. Cazanas discloses transmitting user profile data between the vehicle and server. EX1009, 12:13-30, FIG. 1.



6. Forstall

Forstall was filed February 22, 2008, and published January 1, 2009. EX1010, 1. It is prior art under 35 U.S.C. §102(a)(1)-(2).

Forstall discloses a system whereby "mobile device 100 is operable to update the vehicle device(s) with any information identified and/or stored by... device 100." EX1010, [0079]. Forstall discloses an "auto-update device or vehicle with new information" button, whereby "when this button is active new information stored in the mobile device 100 and/or vehicle device(s) 405 will automatically be provided to the other device" and such "new information is information stored in the mobile device 100 and/or vehicle device(s) 405 since the last synchronization" of the devices (namely, updated settings). EX1010, [0090]-[0091], FIG. 4.



B. Ground 1: Claims 1-20 are Patent Ineligible Under Section 101

Claims 1-20 are patent ineligible under 35 U.S.C. §101 because (1) they are directed to the abstract idea of accessing and updating information and (2) there is

nothing in the claims—which rely upon admittedly conventional computer components—that would rise to the level of an "inventive concept" to transform the abstract idea into a patent-eligible application. As explained below, the claims fail under *Alice*, as confirmed by the Patent Office's Guidance.

1. The Test for Patent Eligibility

While Section 101 is written broadly, there are "three specific exceptions to §101's broad patent-eligibility principles: laws of nature, physical phenomena, and" relevant here, "abstract ideas." *Bilski v. Kappos*, 561 U.S. 593, 601 (2010).

The Supreme Court has set out a two-step test for determining patent eligibility:

- Is the claim directed to a "patent-ineligible concept[]," *i.e.*, a law of nature, natural phenomenon, or abstract idea?; and
- (2) If so, do the particular elements of the claim, considered both individually and as an ordered combination, add enough to transform the nature of the claim into a patent-eligible application?

Alice Corp. Pty. v. CLS Bank Int'l, 573 U.S. 208, 217 (2014).

"Ultimately, the §101 inquiry must focus on the language of the [claims] themselves, and the specification cannot be used to import details from the specification if those details are not claimed." *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 769 (Fed. Cir. 2019).

Since *Alice*, the Federal Circuit has articulated categories of "abstract ideas" under *Alice* step one. As is relevant here, "collecting information, including when limited to particular content (which does not change its character as information), [is] within the realm of abstract ideas." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). Similarly, "analyzing information by steps people go through in their minds," storing it in a generic database, and transmitting information, are all "within the abstract-idea category." *Id.* at 1354; *In re TLI Commc 'ns LLC Pat. Litig.*, 823 F.3d 607, 612-13 (Fed. Cir. 2016).

Alice step two requires "consider[ing] the claim elements—individually and as an ordered combination." *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, 60 F.4th 1349, 1358 (Fed. Cir. 2023). Claims "recited at a high level of generality" that "merely invoke[] well-understood, routine, conventional components to apply the abstract idea" do not include an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible invention. *Yu v. Apple Inc.*, 1 F.4th 1040, 1045 (Fed. Cir. 2021). Taking an abstract idea and doing it using a "generic computer implementation" does not make it patent eligible. *Alice*, 573 U.S. at 221; *TLI*, 823 F.3d at 614. Nor does limiting the abstract idea to a "particular technological environment." *Alice*, 573 U.S. at 223. The Office issued Guidance regarding subject matter eligibility and the *Alice* two-step test. MPEP §2106 (R-10.2019). Guidance Step 1 examines whether the claim falls within one of the four statutory categories of invention. MPEP §2106.03.

If the claim is so directed—as here, the '243 Patent claims a system and process, MPEP §2106.03—the analysis moves to Step 2A, Prong One to determine if the claim recites an abstract idea that falls within the subject matter groups of abstract ideas: (a) mathematical concepts; (b) certain methods of organizing human activity such as a fundamental economic practice; and (c) mental processes. MPEP §2106.04 II.A.1, §2106.04(a).

If the claim recites an abstract idea, the analysis moves to Step 2A, Prong Two, which asks whether the recited abstract idea is integrated into a practical application. MPEP §2106.04 II.A.2. Step 2B requires evaluating whether the claim recites additional elements that provide an "inventive concept" that amounts to significantly more than the abstract idea itself. MPEP §2106 II.

Thus, Guidance Steps 2A and 2B correspond to *Alice* steps one and two, respectively.

2. Claims 1-20 Fail Under *Alice* and the Office Guidance

a. *Alice* Step One: The Claims Are Directed to an Abstract Idea

i. Representative Independent Claim 1

Alice step one requires the Board consider "whether the claims... are directed to patent-ineligible subject matter" such as "an abstract idea." *AI Visualize, Inc. v. Nuance Commc'ns, Inc.*, 97 F.4th 1371, 1378 (Fed. Cir. 2024). In computer-related inventions, the Board analyzes whether the claims are "directed to a specific improvement in computer functionality" or simply "the use of computers as a tool[.]" *Sanderling Mgmt. Ltd. v. Snap Inc.*, 65 F.4th 698, 703 (Fed. Cir. 2023). "Claims directed to generalized steps to be performed on a computer using conventional computer activity are not patent eligible." *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017).

Consistent with a long line of Federal Circuit precedent, independent claim 1 of the '243 Patent is directed to the abstract idea of accessing and updating information, using admittedly conventional computer components. In other words, the claim "as a whole" is directed to nothing more than updating stored information after verifying that the updater is allowed to do the updating. The fact this is "user profile" information (as opposed to some other type of information) and is done "at a vehicle" is of no moment when considering the nature of the claim. *Elec. Power*, 830 F.3d at 1353 ("Information as such is an intangible. Accordingly, we have

treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas."); *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258-59 (Fed. Cir. 2016) ("All that limitation does is to confine the abstract idea to a particular technological environment—in this case, cellular telephones. The Supreme Court and this court have repeatedly made clear that merely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract.").

The abstract nature of claim 1 is illustrated in the following table:

Claim 1	Description
1[pre] A system, comprising:	
1[a] memory;	Generic and conventional
1[b] machine-readable instructions; and	computer components
1[c] one or more processors to execute the	
machine-readable instructions to:	
1[c-1] receive a request to access a user profile	Receive a request to access
stored at a vehicle, the user profile including one or	stored data
more preferences associated with functions or	
settings of the vehicle;	
1[c-2] determine, by performing at least one of a	Determine whether to allow
verification process or an authentication process in	access to the data
response to the request, whether the request is	
authorized to access the user profile;	
1[c-3] in response to determining that the request is	Determine a request to
authorized to access the user profile, determine one	update the data
or more requested modifications to at least one of	
the one or more preferences; and	
1[c-4] in response to the one or more requested	Update the data
modifications, create an updated user profile at the	
vehicle, the updated user profile including one or	

Claim 1	Description
more updated preferences based on the one or	
more requested modifications.	

EX1001, 95:2-24; EX1003 ¶¶132-33, 129-31.

As the table illustrates, claim 1 simply receives a request to access stored data, authorizes the request, determines a request to update the data, and updates the data. EX1001, 95:2-24; EX1003 ¶¶133-35, 137-39, 48. The data is in the form of a "user profile" including "one or more preferences associated with functions or settings of the vehicle." EX1001, 95:7-10; EX1003 ¶¶129, 132.

The claimed steps—1[c-1] "receive" a request to access a stored "user profile," 1[c-2] "determine" whether access is allowed, 1[c-3] "determine" a request to make changes, and 1[c-4] "create an updated user profile"—amount to nothing more than "broad functions and are not directed to any technological improvement for performing those functions." *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1346 (Fed. Cir. 2018); *Beteiro, LLC v. DraftKings Inc.*, 104 F.4th 1350, 1356 (Fed. Cir. 2024) ("[T]he claims are drafted using largely (if not entirely) result-focused functional language, containing no specificity about how the purported invention achieves those results. Claims of this nature are almost always found to be ineligible for patenting under Section 101.").

Indeed, these claim steps could be conducted mentally or with pen and paper, and are simply being performed by a computer without providing any details on
"how to achieve these results in a non-abstract way." *Two-Way*, 874 F.3d at 1337; Univ. of Fla. Rsch. Found., Inc. v. Gen. Elec. Co., 916 F.3d 1363, 1368-69 (Fed. Cir. 2019); Beteiro, 104 F.4th at 1356-57; EX1003 ¶¶136-137. For example, the steps could be accomplished by unlocking a vehicle or verifying a driver's license (receiving a request to access and verifying access) and thereafter loading system settings, which settings a user remembers or writes down for future use (determining modifications and creating an update). EX1003 ¶¶136-137; EX1005, [0002]-[0003]; EX1007, 1:11-47; EX1009, 1:5-27; EX1021, [0002]; see also Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd., 955 F.3d 1317, 1327 (Fed. Cir. 2020); Intell. Ventures I LLC v. Symantec Corp., 838 F.3d 1307, 1314 (Fed. Cir. 2016). There are not even specifics provided for how these instructions must be performed; the claim repeatedly requires "determin[ing]" without any specific requirement as to how that determination is made, EX1001, 95:11-19, just like the '243 Patent, EX1001, 14:22-25 ("The terms 'determine,' 'calculate,' and 'compute,' and variations thereof, as used herein, are used interchangeably and include any type of methodology, process, mathematical operation, or technique'."); EX1003 ¶131, 50.

Beyond the above, the '243 Patent makes several statements that bear on the claims' abstract nature. It explains a "profile" can consistent of basically any data: "[t]he term 'profile,' as used herein, can refer to any data structure, data store, and/or database that includes one or more items of information associated with a vehicle, a

vehicle system, a device (e.g., a mobile device, laptop, mobile phone, etc.), or a person." EX1001, 14:50-55, 17:54-62, 18:22-36, 74:47-55; EX1003 ¶¶131, 46, 52-53. To implement its system, the patent explains that any known, conventional processor may be used. EX1001, 93:48-67 (providing "[e]xamples" of various known, off-the-shelf processors to use, *e.g.*, from Qualcomm, Intel, Apple, etc. and "other industry-equivalent processors"), 21:64-22:10 (processor "may comprise a general purpose programmable processor or controller for executing application programming or instructions" and "generally functions to run programming code or instructions implementing various functions of the vehicle control system"), 92:66-93:47, FIG. 3; EX1003 ¶¶131, 45, 54-56. The patent explains that any known, conventional memory may be used. EX1001, 11:42-12:8 (describing memory), 22:42-53 (examples), 22:19-23 (same), FIG. 3; EX1003 ¶¶131, 45, 48, 57.

The '243 Patent also explains to use known, conventional "verification" and "authentication" processes (*e.g.*, "known facial recognition techniques," other biometrics, passwords, device identification, key exchange, "and the like"). EX1001, 83:35-54, 87:54-67, 39:15-20; EX1024, [0122]-[0123]; EX1003 ¶¶131, 59. The patent explains its system is designed to aid user "experience" by addressing "a need for a vehicle ecosystem, which can integrate both physical and mental comforts, while seamlessly communicating with current electronic devices to result in a totally intuitive and immersive experience" through "user profile" access and

updating. EX1001, 3:55-4:8, Abstract, 16:66-17:11; *see also* Abstract ("A system to access one or more user profiles that govern one or more vehicle functions."); EX1003 ¶138. And, the patent confirms its system does not actually need any particular computer or component, but rather it is broadly applicable to "any device(s) or means capable of implementing the methodology illustrated herein [that] can be used to implement the various aspects of this disclosure." EX1001, 92:66-93:10; *see also* 94:1-15; EX1003 ¶138.

In other words, both claim 1 and the '243 Patent confirm the claim is directed to the abstract idea of accessing and updating information using conventional computing equipment to do so, not some technological improvement in computer capabilities. *See Trinity Info Media, LLC v. Covalent, Inc.*, 72 F.4th 1355, 1363 (Fed. Cir. 2023) (at *Alice* step one, "patents' specifications confirm... asserted claims are directed to an abstract idea that merely seeks to use computers as a tool, not on an improvement in computer capabilities."); *Chamberlain Grp., Inc. v. Techtronic Indus., Co.*, 935 F.3d 1341, 1348 (Fed Cir. 2019) ("[U]sing off-the-shelf technology for its intended purpose" is "not enough to save the claims from abstractness."); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018); *Apple Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1244 (Fed. Cir. 2016).

The Federal Circuit has held claims analogous to claim 1 to be directed to an abstract idea.

For example, claims including steps of creating, storing, displaying, and sending user profiles and associated data have been found abstract. *See Trinity Info*, 72 F.4th at 1359, 1362 (claim found abstract that required "instructions [that] cause the one or more processors to perform operations of:" "(1) *receiving* user information; (2) *providing* a polling question; (3) *receiving and storing* an answer; (4) *comparing* that answer to generate a 'likelihood of match' with other users; and (5) *displaying* certain user profiles based on that likelihood"); *Intell. Ventures I LLC v. Cap. One Bank*, 792 F.3d 1363, 1367 (Fed. Cir. 2015) ("*IV P*") (claim found abstract reciting "storing, in a database, a profile keyed to a user identity and containing one or more user-selected categories…" and "causing communication, over a communication medium and to a receiving device, of transaction summary data in the database for at least one of the one or more user-selected categories…").

Similarly, claims amounting to "collecting information, analyzing it, and displaying certain results of the collection and analysis" have been found abstract. *Elec. Power*, 830 F.3d at 1353; *AI Visualize*, 97 F.4th at 1378 (claims found abstract that "recite a system that includes the functionally-oriented steps of: *storing* data (VVD) on a server, *accepting* user requests to view a portion of that data (virtual views), *checking* for the location of all data needed for the virtual view, '*creating*' image frames from any non-locally-stored virtual view data, *transmitting* all non-locally-stored image frames to the user, *compiling* all image frames, and

sequentially *displaying* the image frames to the user.") (emphasis in original); *Beteiro*, 104 F.4th at 1356 ("The claims before us today exhibit several features that are well-settled indicators of abstractness [including that] the claims broadly recite generic steps of a kind we have frequently held are abstract: *detecting* information, *generating* and *transmitting* a notification based on the information, *receiving* a message (bet request), *determining* (whether the bet is allowed based on location data), and *processing* information (allowing or disallowing the bet).").

Further, as explained above, the Federal Circuit has repeatedly held that limiting the information to particular content (*e.g.*, user profiles) or technological environment (*e.g.*, for "vehicles") does not change the claims' abstract nature. *See IV I*, 792 F.3d at 1366 ("An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment...."); *Elec. Power*, 830 F.3d at 1353; *Affinity Labs*, 838 F.3d at 1258-59; *TLI*, 823 F.3d at 613.

Lastly, the "verification process" or "authentication process" does not affect the analysis. These steps have routinely been found abstract, especially where they rely on known, conventional techniques like claim 1 of the '243 Patent (which can be as basic as a password). EX1001, 39:15-20, 73:24-47, 83:35-54, 87:54-67; EX1003 ¶¶131, 59. *See Universal Secure Registry LLC v. Apple Inc.*, 10 F.4th 1342, 1349 (Fed. Cir. 2021) ("*USR*") (finding abstract claims including, among other steps, "*receiving*" a request, "*determining*" whether access was authorized, "*accessing*" the information, and "enabling or denying" an action as a result, where "the claims 'simply recite conventional actions in a generic way' (e.g., receiving a transaction request, verifying the identity of a customer and merchant, allowing a transaction) and 'do not purport to improve any underlying technology.""); Prism Techs. LLC v. T-Mobile USA, Inc., 696 F. App'x 1014, 1016 (Fed. Cir. 2017) (finding abstract claims reciting "receiving" identity data of a client computer, "authenticating" the identity of the data, "authorizing" the client computer, and "permitting access" to the client computer); see also Elec. Commc'n Techs., LLC v. ShoppersChoice.com, LLC, 958 F.3d 1178, 1181-82 (Fed. Cir. 2020); Secured Mail Sols. LLC v. Universal Wilde, Inc., 873 F.3d 905, 907, 910-11 (Fed. Cir. 2017). Likewise, "[a]dding one abstract idea (math) to another abstract idea (encoding and decoding) does not render the claim non-abstract." RecogniCorp. LLC v. Nintendo Co., 855 F.3d 1322, 1327 (Fed. Cir. 2017).

In sum, claim 1 of the '243 Patent is directed to a handful of steps for accessing and updating information. It uses generic computer components (memory and processor) in a completely generic way (store and process data). But for the generic computer components, it could be performed in the human mind or with a pencil and paper, or by talking to a car dealer after showing identification (*e.g.*, a driver's license). EX1003 ¶¶136-37. This is a classic "abstract idea." *See Beteiro*, 10 F.4th at 1355-57.

ii. Dependent System Claims 2-10

Dependent claims 2-10 add trivial details and do not change the abstract nature of the claims; they remain abstract for the same reasons discussed above in Section V.B.2.a.i. EX1003 ¶140-48; *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1348 (Fed. Cir. 2014).

Claims 2-5 specify transmitting the updated profile and determining and resolving conflicts between two versions of a profile, using the same admittedly conventional, generic "one or more processors." EX1001, 95:25-53; EX1003 ¶¶141-42; §V.B.2.a.i. This is no different than updating stored data when a change is made in claim 1-it is still collecting, sending, and storing information. EX1003 ¶141-42. Notably, neither the claims, nor the '243 Patent, provide details concerning overwriting, reconciling, or updating profiles—treating them as functional black boxes that simply happen. EX1001, 87:44-88:20, FIG. 23; see also 21:64-22:10, 92:66-93:67; EX1003 ¶¶141-42; §V.B.2.a.i; Hawk Tech., 60 F.4th at 1357 ("The claims are directed to a method of receiving, displaying, converting, storing, and transmitting digital video 'using result-based functional language."); see also Two-Way Media, 874 F.3d at 1337; Affinity Labs, 838 F.3d at 1260; see also TLI, 823 F.3d at 611-12.

Claim 6 requires performing both the unspecified "authentication process" and "verification process." EX1001, 95:54-60; EX1003 ¶144. Requiring both

processes does not change the abstract nature, especially when claim 6 (like claim 1) does not explain what those processes are or how they are implemented, and the '243 Patent relies on known verification/authentication techniques. EX1001, 83:35-54, 87:54-67; EX1024, [0122]-[0123]; EX1003 ¶¶144, 146, 131, 59; §V.B.2.a.i; *USR*, 10 F.4th at 1349; *Prism*, 696 F. App'x at 1016; *Elec. Commc 'n*, 958 F.3d at 1181-82; *Secured Mail*, 873 F.3d at 910-11.

Claims 7-8 provide examples of the "authentication process" and "verification process," such as admittedly known and conventional "biometric recognition," "facial recognition," "identification of a mobile device," and "exchange of security keys." EX1001, 83:35-54, 87:54-67, 95:61-67; EX1024, [0122]-[0123]; EX1013, [0004], [0034]; EX1014, 57-61 (Part A, §5); EX1003 ¶¶145-46, 131, 59; §V.B.2.a.i. Using conventional processes to verify/authenticate access does not change the nature of the abstract idea. *See USR*, 10 F.4th at 1357 ("While we recognize that some of the dependent claims provide more specificity on these aspects, what is claimed is still merely conventional. Indeed, the specification discloses that each authentication technique is conventional."); *Automated Tracking Sols., LLC v. Coca-Cola Co.*, 723 F. App'x 989, 994 (Fed. Cir. 2018); *Prism*, 696 F. App'x at 1016; *Elec. Commc'n*, 958 F.3d at 1181-82; *Secured Mail*, 873 F.3d at 910-11; §V.B.2.a.i.

Claims 9-10 claim that the "user profile" is based on a "template" or "global standard template." EX1001, 96:1-6; EX1003 ¶147. The '243 Patent provides no

details about a template, other than it can be used "as a starting point." EX1001, 72:35-45, 72:60-73:24; EX1003 ¶147. And, as explained in Section V.B.2.a.i, the '243 Patent discloses that a "profile" can be effectively any known data storage. EX1001, 14:50-55, 17:54-62, 18:22-36; EX1003 ¶¶131, 46-52-53; §V.B.2.a.i.

iii. Corresponding Method Claims 11-20

Claims 11-20 are the method (albeit slightly broader) version of system claims 1-10. Claims 11-20 include the same claimed steps/functions as claims 1-10, but omit certain of the generic computing components (memory) and only require certain steps be performed by conventional "one or more processors." *Compare* EX1001, 95:7-96:7 *with* 96:8-97:3; EX1003 ¶¶148, 70-71.

Thus, claims 11-20 are directed to the same abstract idea and fail under Section 101 for the same reasons as claims 1-10. EX1003 ¶148.

b. Alice Step Two: The Claims Lacks an Inventive Concept

Alice step two "looks more precisely at what the claim elements add" to determine whether "they identify an inventive concept in the application of the ineligible matter to which... the claim is directed." *SAP*, 898 F.3d at 1167. The inventive concept must do more than "invoke[] well-understood, routine, conventional components to apply the abstract idea...." *Yu*, 1 F.4th at 1045; *AI Visualize*, 97 F.4th at 1379 ("claim elements or combinations of claim elements that

are routine, conventional, or well-known [cannot] transform the claims" at *Alice* step two).

Here, no challenged claim recites an inventive concept, either considering the claim elements individually or as an ordered combination. System claims 1-10 (and method claims 11-20) invoke only computer corresponding "generic implementation, [which] is insufficient to transform a patent-ineligible abstract idea into a patent-eligible invention." Affinity Labs, 838 F.3d at 1262-63; AI Visualize, 97 F.4th at 1379. As explained in Section V.B.2.a, the '243 Patent relies on admittedly conventional components (memory and processor) in a conventional configuration (in a "vehicle"), and provides laundry lists of those known components that would be suitable to use. EX1001, 11:42-12:8, 21:64-22:10, 22:19-23, 22:42-53, 92:66-93:67, FIG. 3; EX1003 ¶129-131, 45-46, 48, 51-59; §V.B.2.a. The patent admits the "[e]xamples" of known, conventional, off-the-shelf processors "may perform computational functions using any known or future-developed standard, instruction set, libraries or architectures." EX1001, 93:48-67; EX1003 ¶¶131, 55. The patent explains that, beyond the disclosed off-the-shelf processors and memory, "*any* device(s) or means capable of implementing the methodology illustrated herein can be used to implement the various aspects of this disclosure." EX1001, 93:7-10; EX1003 ¶¶138, 55. Similarly, as explained in Section V.B.2.a, the patent teaches to use known, conventional "verification" and "authentication" processes. EX1001,

83:35-54, 87:54-67; EX1003 ¶¶130-31, 59; §V.B.2.a. The patent asserts that the "profile" is not to be limited in any meaningful way—it includes "*any* data structure" or the like. EX1001, 14:50-55, 17:54-62, 18:22-36, 74:47-55; EX1003 ¶¶131, 46, 52-53. Nor is there anything unconventional about putting these generic ideas together—requesting access to a user profile in a vehicle, and only after a generic verification/authentication process allowing access and updating—would function just the same as accessing and updating a user profile in another environment. EX1003 ¶¶129-30, 132-37, 47-48.

In other words, the '243 Patent claims do not purport to cover a new type or configuration of a computer system, memory, or processor, or otherwise affect the functionality of any computer-related product. EX1003 ¶¶129-39; *see also Affinity Labs*, 838 F.3d at 1259 ("Even if all the details contained in the specification were imported into the [claims], the result would still not be a concrete implementation of the abstract idea. In fact, the specification underscores the breadth and abstract nature of the idea embodied in the claims."); *Yu*, 1 F.4th at 1045 ("Because claim 1 is recited at a high level of generality and merely invokes well-understood, routine, conventional components to apply the abstract idea… [it] fails at step two."); *AI Visualize*, 97 F.4th at 1380 ("And a patentee that emphasizes a claim's use of certain technology, for example, a general-purpose computer, fails at step two when the

intrinsic record establishes that the technology is conventional or well-known in the art.").

Further confirming the claims lack an inventive concept, the claimed functions-receiving an access request, determining whether access is allowed, and updating data after allowing access, using a conventional processor—are an entirely conventional and generic ordering of steps to access and update data such as a user profile (and but for the generic components, could be done entirely by pen and paper). EX1003 ¶¶132-37; TLI, 823 F.3d at 612 ("the server is described simply in terms of performing generic computer functions such as storing, receiving, and extracting data"); Two-Way, 874 F.3d at 1339 ("The claim uses a conventional ordering of steps-first processing the data, then routing it, controlling it, and monitoring its reception-with conventional technology to achieve its desired result."); USR, 10 F.4th at 1353 ("There is nothing in the specification suggesting... that the claimed combination of these conventional authentication techniques achieves more than the expected sum of the security provided by each technique."); see also Content Extraction, 776 F.3d at 1348; In re Sturgeon, 839 F. App'x 517, 519 (Fed. Cir. 2021).

c. Office Guidance Confirms the Claims Fail Under Section 101

The Guidance confirms the claims fail under Section 101 for the same reasons as explained above.

i. Step 2A, Prongs One and Two

Step 2A, Prong One: The Guidance confirms that claims directed to "managing personal behavior or relationships or interactions between people," "fundamental economic practices," and "commercial or legal interactions" recite unpatentable abstract ideas. MPEP §2106.04(a)(2); *see also* §2106.04(a)(2) II.A-C (examples of same). Likewise, the Guidance confirms that claims directed to mental processes, including those requiring a computer, as here, are still abstract ideas. MPEP §2106.04(a)(2) III.C-D. Examples include "[a]n application program interface for extracting and processing information from a diversity of types of hard copy documents," "[a] computer readable medium containing program instructions for detecting fraud," "[a] self-verifying voting system," and "[a] wide-area real-time performance monitoring system for monitoring and assessing dynamic stability of an electric power grid." MPEP §2106.04(a)(2) III.D.

These abstract ideas are similar to the challenged claims' abstract idea of accessing and updating information, discussed in Section V.B.2.a, above.

<u>Step 2A, Prong Two</u>: An abstract idea may be patent eligible if it is integrated into a practical application of the judicial exception, such as "[a]n improvement in the functioning of a computer, or an improvement to other technology or technical field," using the abstract idea with "a particular machine or manufacture that is integral to the claim," or using the abstract idea "in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment." MPEP §2106.04(d) I. "Merely reciting the words 'apply it' (or an equivalent) with the judicial exception, or merely including instructions to implement an abstract idea on a computer, or merely using a computer as a tool to perform an abstract idea" are not a practical application. *Id*. Nor is "[g]enerally linking the use of a judicial exception to a particular technological environment or field of use." *Id*.

As explained above, the '243 Patent claims do not recite an improvement to any computer components, technology, or technology field; rather they rely upon admittedly conventional, off-the-shelf components and recite generic functional language linked to a technological environment or field of use (a "user profile" for a "vehicle"). §V.B.2.a.

Accordingly, the Guidance confirms the claims are directed to an abstract idea.

ii. Step 2B

Step 2B refers to the search of an "inventive concept" as discussed above under *Alice* step two. MPEP §2106.05. Examples that fail—just like here—include "[a]dding the words 'apply it' (or an equivalent) with the judicial exception, or mere instructions to implement an abstract idea on a computer, *e.g.*, a limitation indicating that a particular function such as creating and maintaining electronic records is performed by a computer," "a claim to an abstract idea requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry," and "[g]enerally linking the use of the judicial exception to a particular technological environment or field of use." MPEP §2106.05 I.A.

As explained above, the '243 Patent claims, which rely upon generic computer components to perform generic functions, lack an inventive concept. §V.B.2.b.

C. Ground 2: Hendry Renders Obvious Claims 1, 6-8, 11, and 16-18

Hendry renders obvious claims 1, 6-8, 11, and 16-18.

1. Claim 1

1[pre] "A system, comprising:"

Hendry discloses the preamble, regardless of whether it is limiting. EX1003 ¶¶150-51; *see* limitations 1[a]-1[c-4] (below).

Hendry discloses a "system," such as "user settings system" in a vehicle, as depicted in Figures 1 and 2. EX1005, [0012]-[0013], [0005], [0033], FIGs. 1-2, 5; EX1003 ¶¶150, 83-87.



1[a] "memory;"

Hendry discloses 1[a]. EX1003 ¶¶152-56.

Hendry discloses **module datastores** in the vehicle user settings system for storing user settings for vehicle functions (*e.g.*, A/V, HVAC, seat, lighting). EX1005, [0020], FIG. 2; EX1003 ¶¶153, 83, 86. Hendry explains "[e]ach datastore stores parameter values relating to the user's personal settings," EX1005, [0021]; EX1003 ¶153, and "module[s] may include *memory* (shared, dedicated, or group) that store[] code executed by the processor." EX1005, [0036], [0038]; EX1003 ¶153. Hendry discloses that datastores (in Figure 2) may be a single datastore (in Figure 5). EX1005, [0033], FIG. 5; EX1003 ¶¶154, 84, 87.





1[b] "machine-readable instructions; and"

Hendry discloses 1[b]. EX1003 ¶¶157-160.

Hendry discloses "[t]he apparatuses and methods described herein may be implemented by *one or more applications executed by one or more processors*" and "[t]he applications include *processor-executable instructions* that are stored on a non-transitory tangible computer readable medium." EX1005, [0038]; *see also* [0037] (explaining "code" is used in the system that "may include software, firmware, and/or microcode, and may refer to programs, routines, functions, classes, and/or objects"), [0036]; EX1012, 106 (defining "code"); EX1003 ¶¶158-60.

1[c] "one or more processors to execute the machinereadable instructions to:"

Hendry discloses 1[c]. EX1003 ¶161-64.

Hendry discloses "[t]he apparatuses and methods described herein may be implemented by one or more *applications executed by one or more processors*," which "*applications include processor-executable instructions* that are stored on a non-transitory tangible computer readable medium." (*e.g.*, such as in Figures 2 and 5). EX1005, [0038], FIG. 2; *see also* [0036] (code executed by processor), [0037] (explaining "code"), [0027]-[0028], [0033], FIG. 5 ("control module"); EX1003 ¶¶162-64; §V.C.1 (1[b]).

Based on Hendry's disclosure (including in [0027]-[0028], [0033], and [0036]-[0038]), a POSA would have understood that the disclosed processors

executing machine-readable instructions would implement the various steps and functions disclosed in Hendry's system (including those in independent claim 1 and its dependents). EX1003 ¶164.

1[c-1] "receive a request to access a user profile stored at a vehicle, the user profile including one or more preferences associated with functions or settings of the vehicle;"

Hendry discloses 1[c-1], *e.g.*, receiving a request from an external device to establish a communications link to access a user profile stored in a vehicle including various vehicle settings and functions for the user. EX1005, [0004]-[0005], [0012]-[0014], [0019]-[0021], [0027]-[0028], [0031], [0033], FIGs. 2, 3A-3B, 4B, 5; EX1003 ¶¶165-74.

Hendry discloses, in Figure 2, that "user settings system 102 uses a request from an external device 100 to establish the communications link to determine the identity of the user or the device," and "[i]n essence, the user settings system 102 piggybacks the request to establish a communication link into a request to reinstate the personal settings of the user...." EX1005, [0019], [0012] (explaining "user settings system" (and thus datastores) are in vehicle), [0005] ("data store resides in the vehicle"); EX1003 ¶[167-70.



Hendry similarly discloses "receiving a request to establish a communications link between a communications module of the vehicle and an external device associated with a user of the vehicle from the external device" and "retrieving settings of the at least one vehicle component of the vehicle from a data store." EX1005, [0004], [0014] ("[u]pon receiving notification of the user or external device 100, each of the modules 104, 112, 116, and 120, will retrieve user settings corresponding to the user or external device 100 from a respective datastore" in the vehicle, such as HVAC, etc.), [0021] ("Each datastore stores parameter values relating to the user's personal settings"), [0027]-[0028]; EX1003 ¶171. Hendry discloses various user settings stored in the vehicle datastores that are retrieved by the vehicle component modules—for various vehicle functions and settings including HVAC, seats, lighting, etc. EX1005, [0012]-[0014], [0005], [0020]-[0021], FIGs. 1-2, 3A-3B, 4B, 5; EX1003 ¶¶165-74.

Thus, a POSA would have understood that Hendry discloses that the retrieved user settings, stored at the vehicle and making up a user profile, are associated with a particular user (or an external device of the user). EX1003 ¶172.

This is illustrated in Figures 3A and 3B, where a request is received to establish communication (steps 212 and 252, respectively) to access and restore "a user's personal settings" stored in the vehicle datastore(s) for the associated user (using "a device identifier" in Figure 3A and "user identifier" in Figure 3B). EX1005, [0027]-[0028]; *see also* [0013]-[0014], [0019]; EX1003 ¶¶173, 88-92.



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This is also illustrated in Figure 4B, step 352. EX1003 ¶174, 93-94.





Hendry discloses 1[c-2], *e.g.*, in response to the request in 1[c-1], performing an authentication and/or verification process to authenticate/verify the external device (and/or user) to determine whether access to the user profile is authorized. EX1005, [0017]-[0021], [0027]-[0028], [0031], FIGs. 3A-3B, 4B; EX1003 ¶¶175-81.

Hendry discloses, in Figures 3A-3B, a verification/authentication process for restoring a user's personal settings, where the process determines the identity of the external device (Figure 3A) and/or user (Figure 3B). EX1005, [0027]-[0028], FIGs. 3A-3B; EX1003 ¶¶176-78.

In Figure 3A, Hendry "illustrates an exemplary method for restoring a user's personal settings, which is executed by the user settings system 102." EX1005, [0027]; EX1003 ¶¶177, 88-89, 91. As explained for 1[c-1], Hendry discloses, at step 212, receiving a request to establish a communication link (and thereby access the stored user settings as discussed above), where the request includes "a key and a device identifier." EX1005, [0027], FIG. 3A; EX1003 ¶177. "Once the communications module 104 receives the request to establish a communications link, the communications module 104 will *verify/authenticate* the external device 100 by checking the communications module datastore 106, as shown at step 214." EX1005, [0027]; EX1003 ¶177. Hendry further discloses "communications module 104 will *verify* that a device having the received device identifier and key is represented in the communications module datastore 106" and "[i]f so, the communications module 104 will establish a communications link with the external

device 100" and authorize access to the stored user profile. EX1005, [0027]; EX1003 ¶177.

Once the verification/authentication occurs, "in the configuration shown in FIG. 2, the communications module 104 will communicate the device identifier or an indicator thereof to the various vehicle components," and "[b]ased on the device identifier, the vehicle components will retrieve the personal settings associated with the device identifier from an associated datastore, as shown at step 216." EX1005, [0027]; EX1003 ¶177.

Figure 3B is a "variation of the method in FIG. 2A [sic: FIG. 3A]," where a "user identifier is used to retrieve the settings rather than a device identifier." EX1005, [0028]; EX1003 ¶178, 90, 88 n.2. Also as explained for 1[c-1], Hendry discloses, at **step 252**, receiving a request to establish a communication link, and "[w]hen the communications module 104 receives a request to establish a communication link with one of the listed external devices 100, the communication module will retrieve a user identity associated with the device identifier of the external device 100... as shown at **step 254**." EX1005, [0028]; EX1003 ¶178. "The user identity can be communicated to the various vehicle components (FIG. 2) or a control module (FIG. 5)" and "[b]ased on the user identity, the preferred user settings are retrieved from the data stores of the vehicle components (FIG. 2) or from a

control module datastore (FIG. 5), as shown at step 256." EX1005, [0028], FIG. 3B;





Hendry further discloses that "the Bluetooth® protocol" may be used, whereby "during pairing state, the communications module 104 will generate and assign a key to the external device 100 and the external device 100 will verify the key." EX1005, [0017]; EX1003 ¶181. Hendry explains "the term key refers to any suitable code, password, passcode, or string used to authenticate a device" and "any suitable means for generating a key can be used and the key can be formatted in any suitable fashion." EX1005, [0017]; EX1003 ¶181. Per Hendry, "communications module datastore 106 [of FIG. 2] can be further configured to associate a user

identity with the device and/or key." EX1005, [0018]; EX1003 ¶181. Hendry discloses checking a stored key against a transmitted key to determine a match. EX1005, [0019]; EX1003 ¶181.

Once "verify[ing] and/or authenticat[ing]" using the external device key and device identifier occurs, the "store[d] parameter values relating to the user's profile settings" are retrieved from the datastores. EX1005, [0018]-[0021]; *see also* [0031] (retrieving user profile settings after "verify and/or authenticate" occurs); FIG. 4B (**step 354**); EX1003 ¶¶179-81, 93-95.





Hendry discloses, or it would have been obvious to include in Hendry, 1[c-3],

e.g., after authorization is confirmed in 1[c-2], that a user may change one or more settings, which are then updated and stored in the vehicle datastores. EX1005, [0010], [0029]-[0031], FIGs. 4A-4B; EX1003 ¶¶182-86.

In Figure 4B, Hendry "illustrates an exemplary method that is executed by the user settings system after a device has been learned by the user settings system." EX1005, [0031], [0010]; EX1003 ¶183. That is, Hendry discloses, in Figure 4B, updating settings for a previously saved user profile already associated with an external device and/or user (*e.g.*, those retrieved in the context of Figures 3A-3B). EX1005, [0031]; *see also* [0029]-[0030] (discussing initial set-up in FIG. 4A); EX1003 ¶183, 93-95.

Hendry discloses, regarding Figure 4B, that (i) "[a]s discussed above, the external device 100 will request to establish a communications link, and the communications module 104 will receive the request and verify and/or authenticate the external device 100, as shown at steps 352 and 354" and (ii) then "[t]he user *at any given time* may opt to change the settings of one or more of the vehicle components, as shown at step 356." EX1005, [0031]; EX1003 ¶184. Per Hendry, "[i]f the user does so, the user may be prompted by the user interface 122 to indicate if the adjusted settings of the one or more vehicle components are to be saved," and if yes, "the adjusted settings are saved in a datastore associated with the vehicle component, as shown at step 358." EX1005, [0031]; EX1003 ¶184. "[T]he new settings are associated with the device identifier or the user identifier in the datastore for later retrieval, as shown at step 358" and "[i]f the user has changed more than

one setting, the method continues to reiterate, as shown at step 362, until no more settings are to be saved." EX1005, [0031]; EX1003 ¶184.

A POSA would have understood that changing settings "at any given time" would encompass doing so at varying times (*e.g.*, directly in response to determining the request is authorized, as well as when the user later modifies a setting, such as moving a seat forward, lowering the temperature, etc.). EX1003 ¶¶185-86; *see also* EX1025, 4 (Patent Owner infringement theory whereby "processor receives input from the vehicle display" by a user). Indeed, Hendry discloses just that: verifying the external device and identity based on the request (steps **352** and **354**, which, per Hendry, are "as discussed above [in Hendry]," *e.g.*, as in its above-discussed Figures 3A-3B), followed directly by receiving a setting modification for a vehicle component (step **356**). EX1005, [0031], FIG. 4B; EX1003 ¶¶184-85, 95.



1[c-4] "in response to the one or more requested modifications, create an updated user profile at the vehicle, the updated user profile including one or more updated preferences based on the one or more requested modifications."

Hendry discloses 1[c-4], *e.g.*, updating and storing the settings of the user profile in the vehicle datastores in response to the user requesting setting modifications. EX1005, [0031], FIG. 4B; EX1003 ¶¶187-89.

As discussed for 1[c-3], Hendry explains, regarding Figure 4B, (i) "the user at any given time may opt to change the settings of one or more of the vehicle components, as shown at step 356," (ii) "[i]f the user does so, the user may be prompted by the user interface 122 to indicate if the adjusted settings of the one or more vehicle components are to be saved," (iii) "[i]f the user responds affirmatively, the *adjusted settings are saved in a datastore* associated with the vehicle component, as shown at **step 358**," (iv) "the new settings are associated with the device identifier or the user identifier in the datastore for later retrieval, as shown at **step [360]**," and (v) "[i]f the user has changed more than one setting, the method continues to reiterate, as shown at step 362, until no more settings are to be saved." EX1005, [0031]; EX1003 ¶188; §V.C.1 (1[c-3]).

A POSA would have understood that this process results in an updated user profile containing the changed settings for the associated vehicle components in Hendry. EX1003 ¶189.



2. Claim 6

"The system of claim 1, wherein the one or more processors are to perform both the verification process and the authentication process, and wherein the one or more processors are to determine that the request is authorized to access the user profile in response to successfully verifying the request via the verification process and successfully authenticating the request via the authentication process."

Hendry discloses and renders obvious claim 6 for the reasons explained regarding 1[c-2], including that the processors perform "verify[ing] and/or authenticat[ing]" to allow access to the associated user profile (*i.e.*, one or both of a

verification and authentication process). EX1003 ¶¶190-96; *see also* EX1005, [0017]-[0019], [0031], [0033]; §V.C.1 (1[c-2]).

By way of further example, Hendry discloses to use "the Bluetooth® protocol" to establish communication between communication module 104 in the vehicle and external device 100. EX1005, [0017]; EX1003 ¶192. Per Hendry, "during the pairing state, the communications module 104 will generate and assign a key to the external device 100 and the external device 100 will verify the key." EX1005, [0017]; *see also* [0019] (checking stored and transmitted key to determine match); EX1003 ¶¶193, 195.

Per Hendry, "[t]he communications module 104 stores the key and a device identifier in a communications module datastore 106" and "[i]n some instances, the communications module datastore 106 can be further configured to associate a user identity with the device and/or key." EX1005, [0017]; EX1003 ¶193. Hendry explains "any suitable pairing means can be used," and "[f]or instance, legacy pairing or *secure simple pairing* can be implemented...." EX1005, [0017]; EX1003 ¶193.

A POSA would have understood Hendry's reference to "secure simple pairing" to (i) refer to Bluetooth protocol v2.1's secure simple pairing ("SSP"), and (ii) include the exchange of security keys between Bluetooth compliant devices (such as communication module 104 and external device 100 in Hendry). EX1003

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¶194; EX1014, 57-61 (Part A, §5 of Bluetooth specification providing "overview" of SSP's security keys exchange); EX1013, [0004], [0034] (explaining same).

During the authentication and verification processes, Hendry discloses "[t]he request will include the key of the external device 100 and a device identifier," "[t]he communications module 104 will receive the request and verify and/or authenticate the external device 100," and "[o]nce verified and/or authenticated, the communications module 104 will establish a communications link between the external device 100 and the communications module 104." EX1005, [0018]; EX1003 ¶196. As explained in 1[c-2], successful authentication and verification result in access to the corresponding stored user profile. EX1005, [0017]-[0021], [0027]-[0028], [0031]; §V.C.1 (1[c-2]).

3. Claim 7

"The system of claim 1, wherein the verification process includes at least one of biometric recognition, gesture recognition, facial recognition, or identification of a mobile device."

Hendry discloses and renders obvious claim 7 for the same reasons as 1[c-2] and claim 6, *e.g.*, a "device identifier" of an external device, which may be "a Bluetooth® enabled mobile telephone" (*i.e.*, the claimed "*identification of a mobile device*"). EX1003 ¶197; *see also* EX1005, [0015], [0017]-[0018]; §V.C.1 (1[c-2]); §V.C.2.

4. Claim 8

"The system of claim 1, wherein the authentication process includes an exchange of security keys between the vehicle and a mobile device."

Hendry discloses and renders obvious claim 8 for the same reasons as 1[c-2] and claim 6, *e.g.*, exchanging security keys between a vehicle communication module and an external device (which may be a "mobile telephone"), whereby keys are generated, exchanged, and verified (*e.g.*, using Bluetooth v2.1's SSP). EX1003 ¶198; EX1005, [0015]-[0019], [0031], [0033]; EX1014, 57-61; §V.C.1 (1[c-2]); §V.C.2.

5. Claims 11 and 16-18

Claims 11 and 16-18 are the method versions of system claims 1 and 6-8. *See* §V.B.2.a.iii; EX1003 ¶¶199, 70-71. Hendry—which discloses a corresponding method "implemented by one or more processors," EX1005, [0038]; EX1003 ¶158—renders obvious claims 11 and 16-18 for the same reasons as claims 1 and 6-8. EX1003 ¶¶199, 70-71.

D. Ground 3: Hendry in view of Poulsen Renders Obvious Claims 2-7 and 12-17

Hendry in view of Poulsen renders obvious claims 2-7 and 12-17.

1. Motivation to Combine and Reasonable Expectation of Success

A POSA would have been motivated to apply, and had a reasonable expectation of success in applying, Poulsen's disclosure of creating, updating,

sharing, and reconciling user profiles across multiple vehicles with Hendry's system and method for managing and reinstating user profiles in a vehicle. EX1003 ¶¶201-11.

First, Hendry and Poulsen are in the same field as each other and the '243 Patent and its claims (vehicular data management including, *e.g.*, user profile management including for vehicle settings). EX1003 ¶¶202, 80-95, 97-100; EX1005, Abstract, [0001]-[0006]; EX1006, Abstract, [0002]-[0006]; EX1001, Abstract. A POSA would have known of, and naturally looked to, their complementary teachings when constructing a system and method for managing user profiles for vehicle settings (including, *e.g.*, creating, applying, retrieving, using and updating user profiles and enabling the profiles to be shared across vehicles). EX1003 ¶¶203, 201; §§VA.1, 3.

Second, Hendry and Poulsen are directed to the same problem: improved systems and methods for increased user convenience and ease for creating, saving, updating, and restoring user preferences including for vehicle settings—like the '243 Patent. EX1003 ¶204; EX1005, Abstract, [0001]-[0006]; EX1006, Abstract, [0002]-[0006], [0086]-[0087]; EX1001, Abstract, 3:20-64; §§VA.1, 3.

Third, Hendry and Poulsen share highly similar and complementary disclosures. See §§VA.1, 3; EX1003 ¶¶203, 81-95, 98-100.
Fourth, a POSA would have been motivated to transmit and save profiles to an external location (such as to a server, mobile device, database, etc.) for various purposes (e.g., as a back-up in the event that the local vehicle copy is deleted or corrupted; so that the profile can be remotely updated and stored for future use by a user while not located within the vehicle; and so that the profile can be shared with, and applied to, other vehicles that the user may own, lease, rent or otherwise use, thereby eliminating or minimizing the need for the user to manually set preferences and settings each time the user uses a different vehicle). EX1003 ¶¶205-10; EX1007, 1:11-56 (explaining desirability of enabling adjustments to vehicle settings to be automatically applied to different vehicles including transferring profiles between vehicles via server); EX1009, 1:15-40, 6:13-34, 7:45-67, 12:13-30, 13:15-31 (explaining need to allow a user profile to be recalled in multiple vehicles, including those user does not typically operate); EX1006, [0002], [0037]-[0038], [0042], [0085]-[0087] (storing user profile at vehicle and external location including updates or changes and using profiles increases convenience and saves time); EX1015, Abstract, 1:24-2:19 (transferring and sharing user profile across vehicles); EX1016, [0005], [0014] (explaining importance of centralized backup files to enable synchronization and restoration including if local original is corrupted); §§VA.1, 3.

And, as evidenced by the state of the art, a POSA would have understood that it would have been a simple modification to transmit and share user profiles among devices, including vehicles and servers, mobile devices, etc., using conventional techniques such as the Internet, Bluetooth, a wireless network and the like (including, as discussed above, to enable the same user profile to be used across different vehicles a user may own, lease, rent, or otherwise use). EX1003 ¶¶211, 76; EX1006, [0086]-[0087]; EX1007, 1:11-56, 3:54-4:7, 8:60-9:64, FIG. 1; EX1009, 1:15-40, 5:37-53, 6:13-34, 7:45-67, 12:13-30; §§VA.1, 3.

Further confirming there would be no technical difficulties, the '243 Patent relies on known, conventional components and techniques for transmitting, storing, and updating user profiles (such as known servers, memory, processors, communication networks, etc.). EX1001, 19:30-20:11, 92:66-93:67; EX1003 ¶211, 45-48, 54-58.

The obviousness of combining Hendry and Poulsen, and of the claims, is discussed further below.

2. Claim 2

Hendry in view of Poulsen renders obvious claim 2. EX1003 ¶¶212-24.

2[a] "The system of claim 1, wherein the one or more processors are to execute the machine-readable instructions to transmit the updated user profile from the vehicle to at least one of a mobile device, a cloud server, a remote server, or another vehicle,"

Hendry in view of Poulsen discloses, and it would have been obvious to include in Hendry to enable remote user-profile storage and transfer of user profiles among vehicles, 2[a]. EX1003 ¶¶212-22.

Initially, Petitioner notes the claims include "one or more processors..." for performing the claimed functions; in other words, different processors (or a combination thereof) can perform the various functions. EX1003 ¶213. This is consistent with Patent Owner's infringement contentions. EX1025, 1 n.1, 10 n.23; EX1003 ¶213.

Turning to Poulsen, Poulsen discloses, in Figure 15, that a user may select a profile, such as "for an automobile" with various settings (seat, climate control, audio, etc.) and then select attributes of the same "to be stored for future use." EX1006, [0085], [0037]-[0038]; EX1003 ¶214. Poulsen discloses a process to "save internally" (*e.g.*, at a vehicle) a profile (step 1530). EX1006, [0045], [0042] (explaining that profiles can be accessed and updated via an interface "in the vehicle" and "can be stored on the hard drive or other non-volatile memory in the automobile

computer"); EX1003 ¶215. If yes, "the process proceeds to step 1536, where the system automatically selects the vehicle engine computer as the storage destination," which Poulsen explains means "the profile attributes are stored as part of the vehicle's settings." EX1006, [0086]; EX1003 ¶215. "The process proceeds to step 1538 where the system stores the profile information within the vehicle engine computer." EX1006, [0086]; EX1003 ¶216. Poulsen explains that, if the "profile has been previously stored... the user may be prompted to confirm... the profile should be changed or updated...." (*i.e.*, an updated profile is saved at the vehicle). EX1006, [0086]; EX1003 ¶216.

The process continues to **step 1540** "to determine if the profile should be stored externally." EX1006, [0086]; EX1003 ¶217. If yes, the process will save the updated profile at **step 1548** "to an external location such as a database, file system, etc." EX1006, [0087]; *see also* [0045]-[0047], [0070-0071], FIGs. 1A, 10; EX1003 ¶217.



A POSA would have understood, or at least found obvious, that such external locations would encompass various remote devices, such as a remote server (*e.g.*, the remote "profile server" in Poulsen that sends/receives profiles to/from a "client" such as a "car, boat, other vehicle," etc.), consistent with the '243 Patent's disclosure of "server." EX1006, [0105]-[0110], FIG. 22; EX1009, Abstract, 1:5-2:54, 12:13-

30; EX1001, 19:58-60 ("server 228 can include a computer processor and memory and be similar to any computing system as understood to one of skill in the art"); EX1003 ¶¶218-19. A POSA would have similarly understood, or at least found obvious, that such external locations would encompass other devices such as a mobile device (*e.g.*, external device 100 in Hendry), thereby likewise enabling transfer of the profile to other vehicles. EX1005, [0015]; EX1001, 10:59-11:3; EX1003 ¶220. A POSA would further have understood that saving to an external location would involve transmitting the profile from the local location (*e.g.*, vehicle) to the external source, consistent with Poulsen's disclosure (and as was common in the art) to transmit the profile between a client to a profile server or mobile device. EX1006, [0107]-[0110], FIG. 22; EX1009, Abstract, 1:5-40, 2:30-40, 6:14-18, 12:13-30, 13:15-30, 14:62-15:10, FIGs. 2, 4 (steps 240, 250); EX1003 ¶221.

As to the claimed "*one or more processors*," Poulsen discloses a "controller" (also referred to as a "processor") to perform the various system functions. EX1006, [0036]-[0037], [0041], [0044], [0069], [0101]; EX1003 ¶222. A POSA would have understood that such a controller/processor would execute machine-readable instructions to perform the various functions, consistent with typical processors known in the art (including as explained in Hendry and elsewhere) and the '243 Patent's admissions regarding the same. EX1005, [0036]-[0038]; EX1001, 92:67-93:67, 11:42-12:8, 21:64-22:10; EX1003 ¶222, 76, 162-64.

2[b] "wherein a local user profile including one or more local preferences is stored at the at least one of the mobile device, the cloud server, the remote server, or the other vehicle prior to transmission of the updated user profile to the at least one of the mobile device, the cloud server, the remote server, or the other vehicle."

Hendry in view of Poulsen discloses, and it would have been obvious to include in Hendry to enable remote user-profile storage and transfer of user profiles among vehicles, 2[b]. EX1003 ¶223-24.

Poulsen discloses an "existing profile" at the "external location" and that "[i]f the selected profile has been previously stored in the external location, the user may be prompted to confirm that the profile information should be changed or updated, as well as to determine whether the profile should be completely overwritten or if only the attributes selected for storage should be updated...." (*i.e.*, the external location already has a stored "*local user profile including one or more local preferences*" as claimed). EX1006, [0087], FIG. 15 (step 1548) (below); *see also* [0046], FIG. 1A (step 148), FIG. 10; §V.D.2 (2[a]); EX1003 ¶224.



3. Claim 3

"The system of claim 2, wherein the one or more processors are to execute the machine-readable instructions to determine whether any conflicts exist between the updated preferences of the updated user profile and the local preferences of the local user profile."

Hendry in view of Poulsen renders obvious claim 3 for effectively the same reasons as claim 2. EX1003 ¶225-28; §V.D.2.

As explained regarding claim 2, Poulsen discloses "that if the selected profile has been previously stored in the external location, the user may be prompted to confirm that the profile information should be changed or updated, as well as to *determine* whether the profile should be completely overwritten or if only the attributes selected for storage should be updated (allowing the user to easily update a small number of settings without having to redefine the entire profile)." EX1006, [0087], FIG. 15 (step 1548) (below); EX1003 ¶ 226-27; §V.D.2. That is, Poulsen discloses determining any changes made resulting in differences (the claimed "conflicts") between the profile information (such as attributes/settings) for the updated profile transmitted to the external location (the claimed "updated preferences of the updated user profile") and the profile information for the "previously stored" "selected profile" (the claimed "local preferences of the local *user profile*"). EX1003 ¶227.



A POSA would have understood the function of claim 3 would be performed by the one or more processors executing the machine readable instructions, for the

same reasons explained regarding claims 1-2. EX1003 ¶ 228, 76, 162-64; §V.D.1-

2.

4. Claim 4

"The system of claim 3, wherein, in response to determining that one or more conflicts exist between the updated preferences and the local preferences, the one or more processors are to execute the machine-readable instructions to overwrite conflicted ones of the local preferences with corresponding conflicting ones of the updated preferences."

Hendry in view of Poulsen renders obvious claim 4 for effectively the same reasons as claims 2-3. EX1003 ¶¶229-32; §V.D.2-3.

As explained regarding claims 2-3, Poulsen discloses "that if the selected profile has been previously stored in the external location, the user may be prompted to confirm that the profile information should be changed or updated, as well as to *determine* whether the profile should be completely *overwritten* or if only the attributes selected for storage should be *updated* (allowing the user to easily update a small number of settings without having to redefine the entire profile)." EX1006, [0087], FIG. 15 (step 1548) (above); EX1003 ¶¶230-31; §V.D.2-3. That is, Poulsen discloses to overwrite entirely or selectively conflicting preferences (such as those that were updated). EX1003 ¶¶230-31.

A POSA would have understood the function of claim 4 would be performed by the one or more processors executing the machine readable instructions, for the same reasons explained regarding claims 1-2. EX1003 ¶ 232, 76, 162-64; §V.D.1-

2.

5. Claim 5

"The system of claim 3, wherein, in response to determining that one or more conflicts exist between the updated preferences and the local preferences, the one or more processors are to execute the machine-readable instructions to perform a reconciliation process that allows selective determination of which conflicted ones of the local preferences should be overwritten by corresponding conflicting ones of the updated preferences."

Hendry in view of Poulsen renders obvious claim 5 for effectively the same reasons as claims 2-4. EX1003 ¶¶233-36; §V.D.2-4.

As explained regarding claims 2-4, Poulsen discloses "that if the selected profile has been previously stored in the external location, the user may be prompted to confirm that the profile information should be changed or updated, as well as to *determine* whether the profile should be completely *overwritten or if only the attributes selected for storage should be updated* (allowing the user to easily update a small number of settings without having to redefine the entire profile)." EX1006, [0087], FIG. 15 (step 1548) (above); EX1003 ¶¶234-35; §V.D.2-4. That is, Poulsen discloses a reconciliation process that enables selective determination of overwriting particular conflicting preferences. EX1003 ¶¶234-35.

A POSA would have understood the function of claim 5 would be performed by the one or more processors executing the machine readable instructions, for the same reasons explained regarding claims 1-2. EX1003 ¶¶236, 76, 162-64; §V.D.1-2.

6. Claim 6

Hendry discloses and renders obvious claim 6, for the reasons as explained for claims 1 and 6 in Ground 2. EX1003 ¶237; §§V.C.1-2. Hendry in view of Poulsen likewise renders obvious claim 6. EX1003 ¶¶237-39.

Poulsen discloses a multi-factor authentication and verification process employing various known processes used to prevent unauthorized access to a user profile: "the stored profile can be encrypted and/or locked (such as with a password) when stored to prevent unauthorized or unintentional changes and/or usage. This security may include *one or more authentication methods and technologies* such as biometric identification (retinal scan, fingerprint, voice authentication, etc.), SmartCards, USB keys, etc." EX1006, [0045]; EX1003 ¶238.

A POSA would have understood, and found it obvious, to apply various authentication and verification processes—including those known to be used in a variety of applications including vehicles (biometrics, passwords, security keys, etc. as known in the art and disclosed in Hendry, Poulsen and other state of the art)—to beneficially increase security and decrease the likelihood of unauthorized access if one method becomes compromised (including the benefit of using "fingerprints" specifically due to them being "unique"). EX1003 ¶239; EX1008, [0002]-[0003], [0022]-[0023], [0038]-[0039], [0066]-[0067] (explaining benefit of using both password and fingerprint such that if a password is improperly obtained, access to vehicle and profile will be denied unless fingerprint is verified); EX1007, 9:27-64, 10:35-57 (disclosing "several different ways" to identify user at vehicle including biometrics, mobile device key, etc.); EX1011, [0024]-[0025], [0035], [0042], [0050]-[0051] (biometrics, keys, and other methods); EX1017, 14:48-15:3, 17:57-18:8 (multi-factor process including biometrics, signatures, certificates, passwords, etc. to provide increased security depending on application/access); EX1024, [0122]-[0123]; EX1001, 39:15-20 ('243 Patent explaining biometrics include fingerprints, etc.).

7. Claim 7

Hendry discloses and renders obvious claim 7, for the reasons as explained for claims 1 and 7 in Ground 2. EX1003 ¶240; §V.C.1, 3. Hendry in view of Poulsen likewise renders obvious claim 7 for the same reasons discussed for claim 6 (*e.g.*, biometrics such as fingerprints). EX1003 ¶240; §§V.C.1-2, V.D.6.

8. Claim 12-17

Claims 12-17 are the method versions of system claims 2-7. §V.B.2.a.iii; EX1003 ¶¶241, 70-71. Hendry in view of Poulsen renders obvious claims 12-17 for the same reasons as claims 2-7. EX1003 ¶¶241, 70-71.

E. Ground 4: Hendry in view of Rovik Renders Obvious Claims 9-10 and 19-20

Hendry in view of Rovik renders obvious claims 9-10 and 19-20.

1. Motivation to Combine and Reasonable Expectation of Success

A POSA would have been motivated to apply, and had a reasonable expectation of success in applying, Rovik's disclosure of sharing of using settings across multiple vehicles using common settings with Hendry's system and method for managing and reinstating user profiles in a vehicle. EX1003 ¶¶243-53.

First, Hendry and Rovik are in the same field as each other and the '243 Patent and its claims (vehicular data management including, *e.g.*, user profile management including for vehicle settings). EX1003 ¶¶244, 80-95, 102-09; EX1005, Abstract, [0001]-[0006]; EX1007, Abstract, 1:6-2:29; EX1001, Abstract. A POSA would have known of, and naturally looked to, their complementary teachings when constructing a system and method for managing user profiles for vehicle settings (including, *e.g.*, creating, applying, retrieving, using and updating user profiles). EX1003 ¶¶244-45; §§V.A.1, 4.

Second, Hendry and Rovik are directed to the same problem: improved systems and methods for increased user convenience and ease for creating, saving, updating, and restoring vehicle settings—like the '243 Patent. EX1003 ¶246; EX1005, Abstract, [0001]-[0006]; EX1007, Abstract, 1:6-2:29; EX1001, Abstract, 3:20-64; §§V.A.1, 4.

Third, Hendry and Rovik share highly similar and complementary disclosures. *See* §§V.A.1, 4; EX1003 ¶¶245, 81-95, 102-109.

Fourth, a POSA would have been motivated to apply a common database architecture (e.g., in a standardized format and common settings) to user profiles such that the profiles can be used and applied across vehicles (e.g., so that settings can be carried over from vehicle-to-vehicle for different makes and models, as well as vehicle types without requiring a user to manually reset preferences each time the user utilizes a different vehicle, such as owned, leased, rented, or borrowed). EX1003 ¶¶247-52; EX1007, 1:11-2:5, 3:18-31, 9:14-53, FIG. 5 (explaining desirability of enabling adjustments to vehicle settings to be automatically applied to different vehicles including transferring profiles between vehicles via server, including "different makes and models" and "types" such as "trucks" and "boats," with a standard set of adjustable user preferences for vehicle settings); EX1009, 1:15-40, 6:13-34, 7:45-67, 12:13-30, 13:15-31 (explaining need to allow a user profile to be recalled in multiple vehicles, including those user does not typically

operate); EX1006, [0037]-[0038], [0042], [0086]-[0087] (storing user profile at vehicle and external location including updates or changes); EX1015, Abstract, 1:24-2:19, 2:52 (transferring and sharing user profile across vehicles); §§V.A.1, 4.

As an example, Rovik discloses the desirability of sharing user settings across vehicles via a remote server:

One limitation of the foregoing automatic adjustment is that the settings are only available in one vehicle. If a user drives a different vehicle, they must adjust the settings for many of the adjustable components. In addition, if the different vehicle is unfamiliar to the driver, such as a rental car that is a different make or model from the user's usual vehicle, the user will likely spend more time searching for their preferred settings. In view of these problems, one aspect of the present disclosure involves storing user settings at a server remote from a vehicle so that the user settings can be transmitted to different vehicles for the user.

EX1007, 1:21-32; EX1003 ¶248. Rovik discloses the user profiles are intended to be applied to "vehicles of different makes and models," EX1007, 2:1-5, and also various "types of vehicles," *e.g.*, "passenger automobiles," "trucks", "boats," etc. EX1007, 3:20-31; EX1003 ¶¶248-49. Rovik further explains, regarding Figure 5, to have user profiles (such as 510 and 512) that include common setting options and common organization (namely, in a template format) such that they can be used to generate user settings for different vehicles. EX1007, 9:3-51, FIG. 5 (disclosing

common setting options that may be updated for a particular user including, *e.g.*, so that "[a]s with the physical attributes ... the user preferences can also be used to generate new user settings for vehicles or vehicle types not driven by the user before"); EX1003 ¶249.

And, the state of the art demonstrates a POSA would have understood that it would have been a simple modification to transmit and share user profiles including with a common data structure—among devices, such as vehicles and servers, mobile devices, etc., using conventional techniques such as the Internet, Bluetooth, a wireless network and the like (including to enable the same user profile to be used across different vehicles). EX1003 ¶¶253, 76; EX1006, [0086]-[0087]; EX1007, 1:11-56, 3:54-4:7, 8:60-9:64, FIGs. 1, 5; EX1009, 1:15-40, 5:37-53, 6:13-34, 7:45-67, 12:13-30; §§V.A.1, 4.

The obviousness of combining Hendry and Rovik, and of the claims, is discussed further below.

2. Claim 9

"The system of claim 1, wherein the user profile is based on a template for the one or more preferences, and the updated user profile is created relative to the template."

Hendry in view of Rovik renders obvious claim 9. EX1003 ¶254-61.

As explained in Section V.E.1, Rovik discloses "example user profiles 510 and 512" stored in a hard disk drive (HDD) in Figure 5 that include **common setting**

options and common organization, such as "Preferred Music Genre," "Default Volume Level," among other common attributes and preferences, which can be updated for particular users (*e.g.*, user 10 for profile 510 and user 12 for profile 512). EX1007, 9:3-54; *see also* 7:8-37; EX1003 ¶¶255, 109, 249.

User Profile 510		
User Key	CB1906X	
User Eye Point	1.1	
User Hip Point	2.4	
Recline Value	3.6	
Lumbar Value	5.0	
Mirror 1 Value	0.82	
Mirror 2 Value	0.71	
Arm Length	2.1	
Preferred Music Genre	Classic Rock	
Default Volume Level	4.2	
Scheduled Location	L1:0800 M-F	
Background Image		
Language	English	
Units	English	
Location 1	Home: 1060 W. Addisor	
Location 2	Work: 600 Anton	
Mobile Device 1	John's Phone	
Temperature Setpoint	73° F	

User Profile 512		
User Key	WS2005Y	
User Eye Point	-0.8	
User Hip Point	-0.9	
Recline Value	4.1	
Lumbar Value	0.0	
Mirror 1 Value	0.74	
Mirror 2 Value	0.76	
Arm Length	1.2	
Preferred Music Genre	Hip Hop	
Default Volume Level	4.9	
Scheduled Location	_	
Background Image	sox.jpg	
Language	English	
Units	English	
Location 1	Home: 333 W. 35th St.	
Mobile Device 1	Bob's Phone	
Mobile Device 2	Bob's Laptop	
Temperature Setpoint	71° F	

FIG.	5
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Rovik explains that, in Figure 5, "these user preferences represent settings made by the user... have been *standardized* by the server 400 so as to apply to a standard vehicle" (which a POSA would have understood to indicate that they are based on a template, and as per Rovik, then updated for a particular user). EX1007, 9:37-40; EX1003 ¶¶256, 109. This is also consistent with Patent Owner's infringement theory. EX1025, 10 (Patent Owner in district court asserting "template" simply requires "a database with a consistent structure so that settings

and preferences can be associated with a user profile across different devices, systems, or vehicles"); EX1003 ¶257. A POSA would have understood the well-known and advantageous nature of including a datafile with consistent structure for user profiles such that—as explained in Rovik and known in the art—the profiles could readily be transferred and applied to a new vehicle or vehicle type. EX1003 ¶258; EX1007, 1:21-2:5, 3:20-31, 9:3-51; EX1018, Abstract, [0020]-[0021], [0046] (explaining to use "predefined template" that "may define formatting rules, including organizational structure and content" and "define entry formatting for individual entries" that facilitates document creation and management); EX1009, 1:15-36, 3:49-67, 9:2-4 (use of common settings that are updated for each user and applied across vehicles); EX1012, 141; §V.E.1.

This is also consistent with Hendry, which includes the same user setting options that may then be personalized and stored in datastores (*e.g.*, HVAC, seat, A/V, lighting). EX1005, [0012]-[0014], FIGs. 1, 2, 5; EX1003 ¶259. Hendry explains that "[e]ach datastore stores parameters relating to the user's personal settings" EX1005, [0021]-[0024], FIGs. 1-2; and alternatively, a "central data store stores... the value parameters associated with the various devices or users having preferred settings stored," EX1005, [0033], FIG. 5; EX1003 ¶259. It is also consistent with the state of the art that such user-profile databases were organized consistently with the various settings and then updated. EX1020, [0006], [0023],

FIG. 2 (common updateable user settings for vehicle features); EX1015, 7:32-45 ("customiz[able] profile" for a "vehicle manufacturer" saved to a "database"); EX1012, 141 (defining "database" and "database structure"); EX1009, 13:15-30 (user profile with common settings that are adjustable); EX1003 ¶260. And it is also consistent with the '243 Patent, which discloses that a "template" is a "starting point" and a "profile" can be effectively any known data storage. EX1001, 14:50-55, 17:54-62, 72:35-45, 72:60-73:24; EX1003 ¶260.

A POSA would have understood, or at least found obvious, that such storage in Hendry of the various parameters would be based on a template (including for the reasons explained above, as well as to enable efficient and consistent access and reinstatement of user settings as explained in Hendry and the state of the art). EX1003 ¶261.

3. Claim 10

"The system of claim 9, wherein the template is a global standard template that is common among at least two vehicle manufacturers."

Hendry in view of Rovik renders obvious claim 10 for effectively the same reasons as claim 9. EX1003 ¶262-66.

As explained in Sections V.E.1-2, Rovik discloses "example user profiles 510 and 512" stored in an HDD in Figure 5 that include common setting options and common organization that were standardized to apply to a standard vehicle. EX1007, 9:3-54; EX1003 ¶¶263, 109. Also as explained, Rovik discloses the user profiles are intended to be applied to "vehicles of different makes and models," EX1007, 2:1-5, and various "types of vehicles," *e.g.*, "passenger automobiles," "trucks", "boats," etc. EX1007, 3:20-31; EX1003 ¶¶263, 109, including a "different vehicle [that] is unfamiliar to the driver, such as a rental car that is a different make or model from the user's usual vehicle...." EX1007, 1:25-32; EX1003 ¶¶263, 109.

Accordingly, a POSA would have understood that the user profiles (and underlying common template) are designed to be used with a variety of vehicles and types (including rental cars from various manufacturers), which would indicate to a POSA that it would logically encompass vehicles from different manufacturers and EX1003 ¶264-66; EX1023, 137-39 (disclosing importance brands. of interoperability, standards, uniform components, and common onboard electronic specifications across shared vehicles from different automakers); EX1015, 15:52-58 (disclosing common access management system for different vehicle manufacturers), 18:1-4, FIG. 7 (standard user interfaces across automakers); EX1009, 1:5-2:54 (common user profile for different vehicles and types); see also EX1025, 10 (Patent Owner contending that two brands from the same manufacturer (Toyota and Lexus) qualify as the claimed "at least two vehicle manufacturers");

EX1026, 7 (confirming Toyota and Lexus are "brands"); EX1001, 14:50-55, 17:54-62, 72:35-45, 72:60-73:24, 74:47-55.³

A POSA would have understood the advantages of including such a global standard template: enabling the user profile to be successfully used across various vehicles (consistent with Rovik's stated goals discussed above). EX1003 ¶265; *see also* EX1019, [0067] (disclosing a "single universal template" which "contains all document elements" and results in a "master template [that] can be used as a market standard"); EX1012, 141; EX1007, 1:23-2:29, 3:20-31, 9:3-54; EX1009, 1:5-44; EX1015, 1:45-2:14.

4. Claims 19-20

Claims 19-20 are the method versions of system claims 9-10. *See* §V.B.2.a.iii; EX1003 ¶¶267, 70-71. Hendry in view of Rovik renders obvious claims 19-20 for the same reasons as claims 9-10. EX1003 ¶¶267, 70-71.

³ Patent Owner's apparent construction based on its infringement theory—brands from a single manufacturer—contrasts the '243 Patent, which describes a "car brand" as being from "a specific vehicle manufacturer." EX1001, 76:35-50 ("Example of the Global Standard Template"). Regardless, the claims are obvious both under the plain meaning and Patent Owner's incorrect theory.

F. Ground 5: Singh Renders Obvious Claims 1, 6-7, 11, and 16-17 Singh renders obvious claims 1, 6-7, and 16-17.

1. Claim 1

Preamble 1[pre]

Singh discloses the preamble, regardless of whether it is limiting. EX1003 ¶269-70; *see* limitations 1[a]-1[c-4] (below).

Singh discloses "an intelligent vehicle that allows multiple drivers to drive the vehicle and provides customized settings and services for each of them" where "the vehicle [includes] the operating system that allows multiple drivers to use the vehicle by authenticating them with their finger impressions which are saved by means of databases installed in the operating system." EX1008, Abstract, [0003]; EX1003 ¶269.

Limitation 1[a]

Singh discloses 1[a], *e.g.*, a vehicle's hard drive or storage media. EX1008, [0004], [0033], [0041], [0058], [0063]-[0064], cl. 1; EX1003 ¶¶271-75.

Limitation 1[b]

Singh discloses 1[b], *e.g.*, software programs (which a POSA would have understood to be machine-readable instructions). EX1008, [0022], [0039], [0049]-[0054]; EX1003 ¶276-78; EX1012, 424 (defining "program").

Limitation 1[c]

Singh discloses 1[c]. EX1003 ¶279-83.

Singh discloses a "controller" (also referred to as a "controller unit") that "acts like a central unit which will control the entire process from validating the finger impression of the driver to setting the attributes or preferences of the driver who will be driving the vehicle," including running various programs to perform the various disclosed steps in Singh. EX1008, [0034]; *see also* [0004], [0022]-[0023], [0033], [0039], [0041], [0049]-[0054]; EX1003 ¶¶280-82; EX1006, [0036] (referring to "controller or processor" interchangeably); EX1001, 21:64-22:10 ('243 Patent referring to terms interchangeably).

Based on Singh's disclosure (including that the controller unit "controls the entire process"), a POSA would have understood that the disclosed controller/controller unit executing machine-readable instructions would implement the various steps and functions disclosed in Singh's system (including those in independent claim 1 and its dependents). EX1003 ¶283.

Limitation 1[*c*-1]

Singh discloses 1[c-1], *e.g.*, a multi-factor authentication/verification process to initiate a request to access a user profile stored at the vehicle, after which the profile is loaded with particular user preferences/settings for the vehicle (for seats, mirrors, temperature, etc.). EX1008, [0034], [0038]-[0039], [0041]; EX1003 ¶¶284-91.

Singh discloses "[t]he Controller Unit will control the validation of the driver by verifying his password, finger impression recording and matching process, accessing the operator database to locate the user files based on the User Profile and then applying the settings according to the preferences of the driver." EX1008, [0034], [0041] ("Once the Program retrieves the file name, it opens the program from the file hard drive of the vehicle and applies the settings customized by the driver."); see also [0058] (saving user settings to vehicle hard drive), [0063]-[0064] (same); EX1003 ¶¶285-88. "Once the verification has been performed and the vehicle started, the Controller Unit of the current invention loads the essential vehicle features for the driver. The Controller Unit initiates a Features Loading Program which installs all the essential features of the vehicle pertaining to the preferences of the driver and forwards a copy of the scanned finger impression to the Features Loading Program." EX1008, [0041]; EX1003 ¶288.

Limitation 1[*c*-2]

Singh discloses 1[c-2], *e.g.*, in response to the request in 1[c-1], performing the multi-factor authentication/verification process (password and fingerprint) to authenticate/verify a user to determine whether access to the vehicle and associated user profile is authorized. EX1008, [0034], [0038]-[0039], [0041], FIGs. 1, 3; EX1003 ¶[289-91.

Singh discloses, in Figure 3, determining whether passwords and thumbprints match, which results in the controller initiating a "Features Loading Program," to access and apply user settings (such as for seat, mirror, etc.) based on the thumb impression profile. EX1008, [0034], [0038]-[0039], [0041]; EX1003 ¶291.



Limitation 1[c-3]

Singh discloses, or it would have been obvious to include in Singh, 1[c-3], *e.g.*, after authentication/verification is confirmed in 1[c-2], a user may change one or more settings, which are then updated and stored in the vehicle memory. EX1008, [0060], [0062]-[0064], FIGs. 3, 8; EX1003 ¶¶292-99.

Singh discloses "[t]he vehicle features tab will allow each driver to modify or change their current seating arrangements to their liking." EX1008, [0060]; EX1003 ¶293. Singh explains the process for modifying various settings:

When the driver will press on the Car Features tab on the graphic display shown by FIG. 8, the different vehicle settings will be displayed on the screen. *Using the touch screen the driver will be able to make changes to those settings*. The last set of settings that will be used and saved by the driver will become the current settings for the driver when he or she uses the vehicle next time. *Along with seat settings, the driver will also be able to change the settings of the mirrors and the settings of the steering wheel.*

EX1008, [0060], FIG. 8; EX1003 ¶294.

Singh further discloses its "invention enables each driver of the vehicle to make changes to their preference files by means of the Graphical User Interface," where "[t]he driver can make changes to any or all of the files as per the requirements" (*e.g.*, addresses, telephone list, music preferences). EX1008, [0062]-[0064]; EX1003 ¶295. Singh explains that the controller unit records the modifications via the control program, and prompts the user to save the changes, *e.g.*, "just when the driver completes the task." EX1008, [0062]-[0064]; EX1003 ¶295-96. Singh further discloses that the changes can be saved at the end of the process (*e.g.*, at termination) to update the stored profile. EX1008, [0033]-[0034], cl. 3, FIG. 3; EX1003 ¶297.

A POSA would have understood that modifying settings at various times would logically encompass doing so in response to determining the request is authorized, among others, such that the user could immediately update any settings that may be necessary (*e.g.*, if the weather or season has changed, immediately changing the default temperature setting to adjust for the new weather/season). EX1003 ¶¶295-98. Doing so would have simply been adjusting the timing of when the modification occurs, consistent with Singh's disclosure and the state of the art. EX1003 ¶298; *see also* EX1005, [0031], FIG. 4B.

And Singh's disclosure that a user uses a graphical interface to input modifications after the user is authorized/verified is also consistent with Patent Owner's infringement theory. EX1025, 4 (1[c-3] met "if the processor determines that the request to access the user profile is authorized, the processor receives input from the vehicle display, information associated with vehicle components and sensors, such as seat, steering wheel, and mirror positions, and/or buttons, to determine requested modifications to be made to one or more of the preferences saved to the user profile"); EX1003 ¶299.

Limitation 1[c-4]

Singh discloses 1[c-4], *e.g.*, updating and storing user profile settings in the vehicle memory. EX1008, [0033]-[0034], [0060], [0062]-[0064], cl. 3, FIG. 3; EX1003 ¶¶300-01.

As discussed for 1[c-3], Singh explains the updated profile with the modified settings is created and saved to the vehicle memory after the modifications are requested by the user. EX1008, [0033]-[0034], [0060], [0062]-[0064], cl. 3, FIG. 3; EX1003 ¶301; §V.F.1 (1[c-3]).

2. Claim 6

Singh discloses and renders obvious claim 6, for the reasons explained above regarding 1[c-2], including that the processor performs a multi-factor authentication and verification process (password and fingerprint). EX1003 ¶¶302-33; *see also* EX1008, [0034], [0038]-[0039], [0041], FIGs. 1, 3; §V.F.1 (1[c-2]).

3. Claim 7

Singh discloses and renders obvious claim 7 for the same reasons as 1[c-2], *e.g.*, fingerprints (*i.e.*, the claimed "*biometric recognition*"). EX1003 ¶¶304-05; *see also* EX1008, Abstract, [0003], [0023], [0034], [0039]; EX1001, 39:15-20; §V.F.1 (1[c-2]).

4. Claims 11 and 16-17

Singh—which likewise discloses a method—renders obvious claims 11 and 16-17 for the same reasons as claims 1 and 6-7. EX1003 ¶¶306, 70-71; §V.B.2.a.iii.

G. Ground 6: Singh in view of Cazanas and Forstall Renders Obvious Claims 2-8 and 12-18

Singh in view of Cazanas and Forstall renders obvious claims 2-8 and 12-18.

1. Motivation to Combine and Reasonable Expectation of Success

A POSA would have been motivated to apply, and had a reasonable expectation of success in applying, Cazanas's disclosure of transferring a user profile from a vehicle to a server for purposes of facilitating sharing profiles among vehicles and Forstall's disclosure of synchronizing stored data between a vehicle and remote device with Singh's system and method for managing and updating user profiles in a vehicle. EX1003 ¶¶308-18.

First, Singh, Cazanas, and Forstall are in the same field as each other and the '243 Patent and its claims (vehicular data management including, *e.g.*, user data management such as vehicle settings). EX1003 ¶¶309, 111-17, 119-24, 126-28; EX1008, Abstract, [0001]-[0004]; EX1009, Abstract, 1:5-2:11; EX1010, Abstract, [0006]-[0013], [0092]; EX1001, Abstract. A POSA would have known of, and naturally looked to, their complementary teachings when constructing a system and method for managing user profiles for vehicle settings (including, *e.g.*, creating, applying, retrieving, using and updating user profiles and enabling the profiles to be shared across vehicles). EX1003 ¶¶310, 308; §§V.A.2, 5-6.

Second, Singh, Cazanas, and Forstall are directed to the same problem: improved systems and methods for increased user convenience and ease for creating, saving, updating, and restoring user preferences and data, such as for vehicle settings—like the '243 Patent. EX1003 ¶311; EX1008, Abstract, [0001]-[0004]; EX1009, Abstract, 1:5-2:11; EX1010, Abstract, [0006]-[0013], [0092]; EX1001, Abstract, 3:20-64; §§V.A.2, 5-6.

Third, Singh, Cazanas, and Forstall share highly similar and complementary disclosures. *See* §§V.A.2, 5-6; EX1003 ¶¶310, 111-17, 119-24, 126-28.

Fourth, a POSA would have been motivated to transmit and save profiles to an external location (such as to a server, mobile device, database, etc.) for various purposes (*e.g.*, as a back-up in the event that the local vehicle copy is deleted or corrupted; so that the profile can be remotely updated and stored for future use by a user while not located within the vehicle; and so that the profile can be shared with, and applied to, other vehicles that the user may own, lease, rent or otherwise use, thereby eliminating or minimizing the need for the user to manually set preferences and settings each time the user uses a different vehicle). EX1003 ¶¶312-17; EX1007, 1:11-56; EX1009, 1:15-40, 5:37-53, 6:13-34, 7:45-67, 12:13-30; EX1006, [0037]-[0038], [0042], [0086]-[0087]; EX1015, Abstract, 1:24-2:19, 2:52; EX1016, [0005], [0014]; §§V.A.2, 5-6.

And, as evidenced by the state of the art, a POSA would have understood that it would have been a simple modification to transmit and share user profiles among devices, including vehicles and servers, mobile devices, etc., using conventional techniques such as the Internet, Bluetooth, a wireless network, and the like (including to enable the same user profile to be used across different vehicles). EX1003 ¶¶318, 76; EX1006, [0086]-[0087]; EX1007, 1:11-56, 3:54-4:7, 8:60-9:64, FIG. 1; EX1009, 1:15-40, 5:37-53, 6:13-34, 7:45-67, 12:13-30, 13:15-31; §§V.A.2, 5-6.

Further confirming there would be no technical difficulties, the '243 Patent relies on known, conventional components and techniques for transmitting, storing, and updating user profiles (such as known servers, memory, processors, communication networks, etc.). EX1001, 19:30-20:11, 92:66-93:67; EX1003 ¶318.

The obviousness of combining the references, and of the claims, is discussed further below.

2. Claim 2

Singh in view of Cazanas and Forstall renders obvious claim 2. EX1003 ¶¶319-29.

Limitation 2[a]:

Singh in view of Cazanas and Forstall discloses, and it would have been obvious to include in Singh to enable remote user-profile storage and transfer of user profiles among vehicles, 2[b]. EX1003 ¶¶319-27.

Initially, Petitioner again notes that the claims include "one or more processors..." for performing the claimed functions (*i.e.*, different processors, or a combination, can perform the functions). EX1003 ¶320; §V.D.2; EX1025, 1 n.1, 10 n.23.

Cazanas discloses transmitting user profile data between the vehicle and server using the vehicle's telematic unit, *e.g.*, "a user profile having settings for a number of user configurable features 62 of the vehicle 14 may be transmitted to or from the unit 16 or 16b in the vehicle through the network 10," where "[a]n uploaded user profile is stored on the customer account web server 41, which... is connected to an IP Multimedia Subsystem (IMS) server 42" (*i.e.*, transmitting user profiles to a remote server). EX1009, 12:13-30; *see also* Abstract, 1:5-40, 2:30-40, 6:14-18, 13:15-30, 14:62-15:10, FIGs. 2, 3 (steps 240, 250, below); EX1003 ¶321. Such "features 62" including various vehicle settings (seat, mirror, HVAC, radio, etc.). EX1009, 12:30-45; EX1003 ¶321.



Cazanas further discloses a "processor" (including in the vehicle), whereby "[e]xecution of the program by the processor configures the system to perform functions." EX1009, 1:55-2:28; *see also* 5:24-36, FIG. 2; EX1003 ¶322. Cazanas explains that telematics unit 16 includes a "telematic control unit" (TCU) 61 which "may be implemented as a microprocessor" 74 and "programming in the memory 76 of the TCU 61 further enables the TCU microprocessor 74 to operate through NAD 63 to transmit or receive a user profile." EX1009, 8:1-27, FIG. 2; EX1003 ¶322.



Forstall discloses a system whereby "mobile device 100 is operable to update the vehicle device(s) with any information identified and/or stored by the device 100." EX1010, [0079]; EX1003 ¶323. Forstall further discloses an "autoupdate device or vehicle with new information," whereby "when this button is active new information stored in the mobile device 100 and/or vehicle device(s) 405 will automatically be provided to the other device" and thus "new information is information stored in the mobile device 100 and/or vehicle device(s) 405 since the last synchronization of the mobile device 100 and vehicle device(s) 405" (namely, updated settings). EX1010, [0090]-[0091]; EX1003 ¶¶324-25. Like Singh and Cazanas, Forstall discloses processors to execute programs stored in memory. EX1010, [0012], [0046]; EX1003 ¶326.

A POSA would have understood, or at least found obvious, that transmission of the user profiles to a remote device, such as a remote server or mobile device, would logically encompass the applicable user profile to be shared with other vehicles (including, *e.g.*, an updated user profile as in Singh or Forstall stored at the vehicle). EX1003 ¶327. A POSA would also have understood that the disclosed processors would execute machine-readable instructions to perform the various functions, consistent typical processors known in the state of the art (including as explained in Singh, Cazanas, Forstall, and elsewhere) and the '243 Patent's
admissions regarding the same. EX1003 ¶327; see also EX1001, 92:67-93:67, 11:42-12:8, 21:64-22:10.

Limitation 2[b]:

Singh in view of Cazanas and Forstall discloses, and it would have been obvious to include in Singh, 2[a]. EX1003 ¶¶328-29.

Forstall discloses that "when conflicts occur between information stored in the mobile device 100 and vehicle device(s) 405, the 'resolve conflict in favor of' selection 616 determines which device's information is copied onto the other device." EX1010, [0090]; EX1003 ¶329. "[W]hen conflicts between data on the vehicle device(s) 405 and mobile device 100 occur, the user may be alerted," and "[t]he user may be able to resolve the conflict in favor of either the vehicle device(s) 405 or mobile device 100 on an item by item basis, or based on a category of information (e.g., telephone numbers, calendar entries, etc.)." (i.e., the external location already has a stored "local user profile including one or more local preferences" as claimed). EX1010, [0091]; see also [0099] ("The information received from the vehicle device is compared to information stored in the mobile device (904).... If any information is different (906), the device that controls conflict resolution is identified (908)"), [0092]; EX1003 ¶329.

Singh in view of Cazanas and Forstall renders obvious claim 3 for effectively the same reasons as claim 2. EX1003 ¶¶330-32; §V.G.2.

As explained regarding claim 2, Forstall discloses resolving conflicts between the received user profiles and the previously stored profile. EX1010, [0090]-[0092], [0099]; EX1003 ¶331; §V.G.2. Forstall further discloses advanced synchronization settings, enabling "a user to configure advanced synchronization settings, including reconciliation settings when conflicts occur." EX1010, [0092]; EX1003 ¶331. "For instance, a user may select, on an item by item basis, whether the mobile device 100 or vehicle device(s) 405 should govern in the event of a conflict," and "[i]tems may be individually toggled, such as contacts, calendar entries, telephone numbers, destinations, points of interest, and the like." EX1010, [0092]; EX1003 ¶331.

A POSA would have understood the function of claim 3 would be performed by the one or more processors executing the machine readable instructions, for the same reasons explained regarding claims 1-2. EX1003 ¶¶332, 76, 280-83; §V.G.1-2.

4. Claim 4

Singh in view of Cazanas and Forstall renders obvious claim 4 for effectively the same reasons as claims 2-3. EX1003 ¶¶333-35; §§V.G.2-3.

As explained for claims 2-3, when a conflict is determined, Forstall provides for selective overwriting between received and local preferences that conflict. EX1010, [0090]-[0092], [0099]; EX1003 ¶334; §§V.G.2-3.

A POSA would have understood the function of claim 4 would be performed by the one or more processors executing the machine readable instructions, for the same reasons explained regarding claims 1-2. EX1003 ¶¶335, 76, 280-83; §§V.G.1-2.

5. Claim 5

Singh in view of Cazanas and Forstall renders obvious claim 5 for effectively the same reasons as claims 2-4. EX1003 ¶¶336-38; §§V.G.2-4.

As explained for claims 2-4, when a conflict is determined, Forstall provides a reconciliation process for selective determination of which preferences should be overwritten. EX1010, [0090]-[0092], [0099]; EX1003 ¶337; §§V.G.2-4.

A POSA would have understood the function of claim 5 would be performed by the one or more processors executing the machine readable instructions, for the same reasons explained regarding claims 1-2. EX1003 ¶¶338, 76, 280-83; §§V.G.1-

2.

Singh discloses and renders obvious claim 6, for the reasons as explained for claims 1 and 6 in Ground 5. EX1003 ¶339; §V.F.1-2. Singh in view of Cazanas and Forstall likewise renders obvious claim 6. EX1003 ¶¶339-41.

Cazanas discloses "the user profile processing and vehicle configuration functions may use a variety of different types of user identification techniques," among them, device information, biometrics (*e.g.*, facial recognition), Bluetooth, and key fob radio signal comparison. EX1009, 6:50-7:7, 7:45-67; EX1003 ¶340.

A POSA would have understood, and found it obvious, to apply various authentication and verification processes—including those known to be used in various applications including vehicles (biometrics, passwords, security keys, etc. as known in the art and disclosed in Singh, Cazanas, Hendry, Poulsen and others)—to beneficially increase security and decrease the likelihood of unauthorized access if one method becomes compromised (including the benefit of using biometrics specifically due to them being "unique"). EX1003 ¶341; EX1008, [0002]-[0003], [0022]-[0023], [0038]-[0039], [0066]-[0067]; EX1007, 9:27-64, 10:35-57; EX1009, 6:50-7:7, 7:45-67; EX1011, [0024]-[0025], [0035], [0042], [0050]-[0051]; EX1017, 14:48-15:3, 17:57-18:8; EX1024, [0122]-[0123].

Singh discloses and renders obvious claim 7, for the reasons as explained for claims 1 and 7 in Ground 5. EX1003 ¶342; §V.F.1, 3. Singh in view of Cazanas and Forstall likewise renders obvious claim 7 for the same reasons discussed for claim 6 (*e.g.*, biometrics). EX1003 ¶342; §§V.F.1, V.G.6.

8. Claim 8

Singh in view of Cazanas and Forstall renders obvious claim 8 for effectively the same reasons as claim 6 (*e.g.*, Bluetooth pairing or key fob radio signal exchange). EX1003 ¶343; §V.G.7; EX1013, [0004], [0034]; EX1014, 57-61.

9. Claim 12-18

Singh in view of Cazanas and Forstall renders obvious claims 12-18 for the same reasons as claims 2-8. EX1003 ¶¶344, 70-71; §V.B.2.a.iii.

H. Ground 7: Singh in view of Rovik Renders Obvious Claims 9-10 and 19-20

Singh in view of Rovik renders obvious claims 9-10 and 19-20.

1. Motivation to Combine and Reasonable Expectation of Success

A POSA would have been motivated to apply, and had a reasonable expectation of success in applying, Rovik's disclosure of sharing of using settings across multiple vehicles using common settings with Singh's system and method for managing and updating user profiles in a vehicle. EX1003 ¶¶345-56.

First, Singh and Rovik are in the same field as each other and the '243 Patent and its claims (vehicular data management including, *e.g.*, user data management such as vehicle settings). EX1003 ¶¶347, 102-09, 111-17; EX1008, Abstract, [0001]-[0004]; EX1007, Abstract, 1:6-2:29; EX1001, Abstract. A POSA would have known of, and naturally looked to, their complementary teachings when constructing a system and method for managing user profiles for vehicle settings (including, *e.g.*, creating, applying, retrieving, using and updating user profiles). EX1003 ¶¶347-48; §§V.A.2, 4.

Second, Singh and Rovik are directed to the same problem: improved systems and methods for increased user convenience and ease for creating, saving, updating, and restoring user preferences and data, such as for vehicle settings—like the '243 Patent. EX1003 ¶348; EX1008, Abstract, [0001]-[0004], [0033]-[0034]; EX1007, Abstract, 1:6-2:29; EX1001, Abstract, 3:20-64; §§V.A.2, 4.

Third, Singh and Rovik share highly similar and complementary disclosures. See §§V.A.2, 4; EX1003 ¶¶348, 102-09, 111-17.

Fourth, a POSA would have been motivated to apply a common database architecture (*e.g.*, in a standardized format and common settings) to user profiles such that the profiles can be used and applied across vehicles (*e.g.*, so that settings can be carried over from vehicle-to-vehicle for different makes and models, as well as vehicle types without requiring a user to manually reset preferences when the user utilizes different vehicles). EX1003 ¶¶350-55; EX1007, 1:11-2:5, 3:18-31, 9:14-53, FIG. 5; EX1009, 1:15-40, 6:13-34, 7:45-67, 12:13-30, 13:15-31; EX1006, [0037]-[0038], [0042], [0086]-[0087]; EX1015, Abstract, 1:24-2:19, 2:52; §§V.A.2, 4.

As an example (and as explained in Section V.E.1), Rovik discloses the desirability of sharing user settings across vehicles via a remote server, including various vehicle makes, models, and types. EX1007, 1:21-32, 2:1-5, 3:20-31; EX1003 ¶¶351-52; §V.E.1. Also as explained in Section V.E.1, Rovik discloses user profiles (such as 510 and 512) that include common setting options and common organization (namely, in a template format) such that they can be used to generate user settings for different vehicles. EX1007, 9:3-51, FIG. 5; EX1003 ¶352; §V.E.1.

And, as evidenced by the state of the art, a POSA would have understood that it would have been a simple modification to transmit and share user profiles including with a common data structure—among devices (*e.g.*, vehicles and servers, mobile devices, etc.), using conventional techniques (*e.g.*, the Internet, Bluetooth, a wireless network, etc.), including to enable the same user profile across different vehicles. EX1003 ¶¶356, 76; EX1006, [0086]-[0087]; EX1007, 1:11-56, 3:54-4:7, 8:60-9:64, FIGs. 1, 5; EX1009, 1:15-40, 5:37-53, 6:13-34, 7:45-67, 12:13-30; §§V.A.2, 4.

The obviousness of combining Singh and Rovik, and of the claims, is discussed further below.

Singh in view of Rovik renders obvious claim 9. EX1003 ¶¶357-64.

As explained in Sections V.E.1 and V.H.1, Rovik discloses "example user profiles 510 and 512" stored in an HDD in Figure 5 that include **common setting options and common organization**, such as "Preferred Music Genre," "Default Volume Level," among other common attributes and preferences, which can be updated for particular users (such as user 10 for profile 510 and user 12 for profile 512). EX1007, 9:3-54, 7:8-37; EX1003 ¶358.

User Kev	CB1906X
User Eve Point	1.1
User Hip Point	2.4
Recline Value	3.6
Lumbar Value	5.0
Mirror 1 Value	0.82
Mirror 2 Value	0.71
Arm Length	2.1
Preferred Music Genre	Classic Rock
Default Volume Level	4.2
Scheduled Location	L1:0800 M-F
Background Image	
Language	English
Units	English
Location 1	Home: 1060 W. Addison
Location 2	Work: 600 Anton
Mobile Device 1	John's Phone
Temperature Setpoint	73° F

Jser Key	WS2005Y
User Eye Point	-0.8
User Hip Point	-0.9
Recline Value	4.1
Lumbar Value	0.0
Mirror 1 Value	0.74
Mirror 2 Value	0.76
Arm Length	1.2
Preferred Music Genre	Hip Hop
Default Volume Level	4.9
Scheduled Location	_
Background Image	sox.jpg
Language	English
Units	English
Location 1	Home: 333 W. 35th St.
Mobile Device 1	Bob's Phone
Mobile Device 2	Bob's Laptop
Temperature Setpoint	71° F

Rovik explains that, in Figure 5, "these user preferences represent settings made by the user... have been **standardized** by the server 400 so as to apply to a standard vehicle" (which a POSA would have understood to indicate that they are

FIG. 5

based on a template, and as per Rovik, then updated for a particular user). EX1007, 9:37-40; EX1003 ¶359. This is like Patent Owner's infringement theory. EX1025, 10; EX1003 ¶360. A POSA would have understood the well-known and advantageous nature of including a consistent datafile structure for user profiles such that—as explained in Rovik and known in the art—the profiles could readily be transferred and applied to a new vehicle or vehicle type. EX1003 ¶361; EX1007, 1:21-2:5, 3:20-31, 9:3-51; *see also* EX1018, Abstract, [0020]-[0021], [0046]; EX1009, 1:15-36, 3:49-67, 9:2-4; EX1015, 7:32-45; EX1012, 141; §§V.E.1, V.H.1.

This is also consistent with Singh, which includes the same user setting options that may then be modified and stored (*e.g.*, "CarSettings File Name"). EX1008, [0024]-[0034]; *see also* [0004]; EX1003 ¶362. Singh explains that "[t]he user profile will contain files with information and preferences of different drivers for features like Car Settings, Address List, Telephone List, Music List and other functions" and that "[a]ll the information related to driver preferences will be saved in the files and saved onto the storage media which will be accessed by The Controller Unit." EX1008, [0033]; EX1003 ¶362. Singh discloses the user interface is the same for each user (such as in Figure 8), further indicating that the same settings are available for each user. EX003 ¶362.

leicome	YOUR PERSONAUZED CAR SETTINGS	
Address List	SEAT SETTINGS	MIRROR SETTINGS
()	Seat Setting 1	Left Mirror Setting
Telephone List	Seat Setting 2	Right Mirror Setting
	Seat Setting 3	Rear View Mirror Setting
Musica	Change; and Save Settings	Change and Save Settings
	TEMPERATURE SETTINGS	STEERING WHEEL SETTINGS
E-MOILS	Driver Side	Setting 1
	Front Passanger	Setting 2
Car Solings	Side	Setting 3
Weather	Change and Sove Settings	Change and Save Settings

This is also consistent with the state of the art that user profile databases were organized consistently with the various settings and then updated for particular users. EX1020, [0006], [0023], FIG. 2; EX1015, 7:32-45; EX1012, 141; EX1009, 13:15-30; EX1003 ¶363; *see also* EX1001, 14:50-55, 17:54-62, 72:35-45, 72:60-73:24.

A POSA would have understood, or at least found obvious, that such storage in Singh of the various settings would be based on a template (including for the reasons explained above, as well as to enable efficient and consistent access and reinstatement of user settings as explained in Singh and the state of the art). EX1003 ¶364.

3. Claim 10

Singh in view of Rovik renders obvious claim 10 for effectively the same reasons as claim 9. EX1003 ¶¶365-70.

As explained in Sections V.H.1-2, Rovik discloses "example user profiles 510 and 512" in Figure 5 that include common setting options and common organization, including where the "user preferences represent settings made by the user that have been standardized by the server 400 so as to apply to a standard vehicle." EX1007, 9:3-54; EX1003 ¶366. Also as explained, Rovik discloses the user profiles are intended to be applied to different vehicle makes, models, and types. EX1007, 1:21-32, 2:1-5, 3:20-31; EX1003 ¶366. Rovik further explains that its system and method is intended to apply to a "different vehicle [that] is unfamiliar to the driver, such as a rental car that is a different make or model from the user's usual vehicle...." EX1007, 1:25-27; EX1003 ¶366.

Accordingly, a POSA would have understood that the user profiles (and underlying common template) are designed to be used with a variety of vehicles and types, which would indicate to a POSA that it would logically encompass vehicles from different manufacturers and brands. EX1003 ¶¶367-70; EX1007, 1:23-2:29, 3:20-31, 9:3-54; EX1023, 137-39; EX1015, 15:52-58, 18:1-4, FIG. 7; EX1009, 1:5-2:54; *see also* EX1025, 10; EX1026, 7; EX1001, 14:50-55, 17:54-62, 72:35-45, 72:60-73:24, 74:47-55.

A POSA would have understood the advantages of including such a global standard template: enabling the user profile to be successfully used across various vehicles (consistent with Rovik's stated goals discussed above). EX1003 ¶368; *see*

also EX1019, [0067]; EX1012, 141; EX1007, 1:23-2:29, 3:20-31, 9:3-54; EX1009, 1:5-44; EX1015, 1:45-2:14.

4. Claims 19-20

Singh in view of Rovik renders obvious claims 19-20 for the same reasons as claims 9-10. EX1003 ¶¶371, 70-71; §V.B.2.a.iii.

VI. Conclusion

The challenged claims are unpatentable. Petitioner requests cancellation.

Respectfully submitted,

REICHMAN, JORGENSEN, LEHMAN & FELDBERG LLP

Dated: April 7, 2025

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CERTIFICATE OF COMPLIANCE

I hereby certify that this paper complies with the type-volume limitation of 37 C.F.R. §42.24 (as determined by the Microsoft Word word-processing system used to prepare this paper) because it contains 18,254 words, excluding the parts of the paper exempted by 37 C.F.R. §42.24(a).

Dated: April 7, 2025

<u>/Patrick Colsher/</u> Patrick Colsher (Reg. No. 74,955) Lead Counsel for Petitioner

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Petition for Post-Grant Review, the Exhibits

listed on the List of Exhibits, and Power of Attorney were served on April 7, 2025,

pursuant to 37 C.F.R. §§42.6 and 42.105 via Federal Express, upon the following at

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