

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOYOTA MOTOR CORP. AND KIA CORPORATION,
Petitioners,

v.

EMERGING AUTOMOTIVE LLC,
Patent Owner

Case IPR2024-00981
U.S. Patent No. 9,365,188

**PATENT OWNER'S
RESPONSE
UNDER 37 C.F.R. §42.107**

TABLE OF CONTENTS

	<u>Page</u>
I. Introduction.....	1
II. The '188 patent.....	3
III. The <i>Kleve</i> reference (EX1004) provides distinct, ordered operations for (1) forming a rental agreement, (2) setting up and distributing a virtual key, and finally, (3) setting user restrictions—available to a Vehicle Owner only at the beginning of the rental term after the virtual key is already sent to the vehicle.	4
A. <i>Kleve</i> 's “terms and conditions for the rental period” reflect the agreed-to terms of a rental contract.....	5
B. Neither the “set up” of a virtual key nor the distribution of a virtual key includes the rental agreement terms or any other restrictions.	8
C. To monitor and control vehicle usage, a Vehicle Owner may “set user restrictions”—an operation distinct from the rental agreement and subsequent to the “set up” and distribution of a virtual key credential.....	12
1. <i>Kleve</i> allows restrictions for monitoring and controlling usage to be set by the Owner at the beginning of the rental term.	13
2. “User Restrictions” set at step 214 may be monitored and controlled by the vehicle.....	17
3. “Rental period end time” is set by the Owner as a “user restriction” at step 214 which may be monitored, extended, and even updated by returning to step 214.....	18
D. <i>Kleve</i> 's virtual key credential is operable independent of the agreed-upon rental period; the virtual key may be terminated before, or remain in use after, the agreed-upon rental period has ended.	21

IV.	Petitioners failed to show that the challenged claims of grounds 1-3 and 7 are obvious over <i>Kleve</i> , alone or in combination.	26
A.	Each of the “restrictions” identified by Petitioners as allegedly “sent with the request to generate a virtual key” are unavailable to be set until <i>after</i> the set up and distribution of the virtual key.	29
B.	<i>Kleve</i> flatly contradicts Dr. Almeroth’s conclusion that “rental agreement restrictions were sent with the request.”	41
C.	That a virtual key credential enables the keyless drive system during a given rental period does not suggest the “rental period” is included in the virtual key itself.	43
1.	Rental agreement terms are not any “condition of use” included in the virtual key because a Temporary User uses the already-generated, already-distributed virtual key to access the vehicle and thereafter, “agree to rental terms.”	43
2.	<i>Kleve</i> cannot enforce compliance with rental agreement terms until after the virtual key is generated and distributed, where a Temporary User may “agree to rental terms” after accessing the vehicle with the virtual key.	44
3.	During cross examination, Dr. Almeroth admitted that <i>Kleve</i> ’s virtual key is not “always generated after the rental agreement.”	46
4.	<i>Kleve</i> has the Vehicle Owner send the credential to the vehicle “at rental time.”	47
5.	<i>Kleve</i> teaches a distinct solution for monitoring, controlling and updating the rental period—one that does not involve any such “restriction” in the virtual key itself.	48
6.	Dr. Almeroth’s obviousness opinions ignore and even contradict <i>Kleve</i> ’s solution for enforcing rental agreement terms and conditions.	50

a.	Dr. Almeroth ignores the enforcement solution already achieved by <i>Kleve</i> ’s steps 214-226.....	50
b.	<i>Kleve</i> ’s solution renders nonsensical Dr. Almeroth’s hindsight demands to include rental agreement restrictions in the virtual key.	54
D.	Because Petitioners rely on <i>Kleve</i> alone for alleged disclosure of “the condition of use” of independent claim elements 1[b] / 16[b] / 19[b], each of the challenged claims must be upheld.	56
E.	Claim 17 must be upheld because <i>Kleve</i> fails to disclose or suggest a server examining inputs or settings to “identify patterns,” let alone that server “learning the patterns ... to provide recommendations to the recipient...”	57
V.	The <i>Zaid</i> Reference (EX1008)	60
VI.	The <i>Zaid</i> -based grounds fail to establish obviousness because <i>Zaid</i> does not teach or suggest at least claim elements 1[a], 16[a] and 19[a].	61
A.	Petitioners fail to show that <i>Zaid</i> ’s “reservation,” made via a <i>renter</i> ’s social media account, teaches or suggests the claims’ recited elements: “a request from a user via a user account that has a vehicle associated therewith ... the request includes a condition of use of the vehicle as set by the user via the user account.”	62
1.	<i>Zaid</i> ’s disclosure of a Facebook account, accessed by a vehicle renter, does not disclose or suggest any “user account that has a vehicle associated therewith” via which a user requests a server to generate an e-key, as Petitioners allege.	63
2.	<i>Zaid</i> offers no teaching or suggestion that “the request includes a condition of use of the vehicle as set by the user via the user account.”	68
B.	Petitioners’ failure to show elements 1[a] / 16[a] / 19[a] are obvious in view of <i>Zaid</i> infects the remaining independent	

claim elements 1[b]-[e], [g] / 16[b]-[e], [g]-[h] / 19[b]-[e], [g]-[h].	71
C. Additional deficiencies of dependent claims.	72
VII. Conclusion	74

TABLE OF AUTHORITIES

	<u>Page(s)</u>
Cases	
<i>Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH</i> , IPR2019-01469 (P.T.A.B. Feb. 13, 2020)	passim
<i>Apple Inc. v. Fintiv, Inc.</i> , IPR2020-00019 (P.T.A.B. Mar. 20, 2020)	passim
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG</i> , IPR2017-01586 (P.T.A.B. Dec. 15, 2017).....	17, 22
<i>Bentley Motors Ltd., Jaguar Land Rover Ltd.</i> , IPR2019-01539 (P.T.A.B. Mar. 10, 2020)	51
<i>Code200 Uab v. Luminate Networks Ltd.</i> , IPR2020-01506 (P.T.A.B. Feb. 16, 2021)	57, 58
<i>Constant v. Advanced Micro-Devices, Inc.</i> , 848 F.2d 1560 (Fed. Cir. 1988).....	62
<i>eClinicalWorks, LLC v. Decapolis LLC</i> , IPR2022-00229 (P.T.A.B. Apr. 13, 2022).....	52, 59
<i>E-One, Inc. v. Oshkosh Corp.</i> , IPR2019-00161 (P.T.A.B. May 15, 2019).....	51, 56
<i>Force Mos Tech., Co. v. ASUSTek Comput., Inc.</i> , No. 2:22-CV-00469-JRG, 2024 WL 1586266 (E.D. Tex. Apr. 11, 2024).....	50
<i>Immersion Sys. LLC v. Midas Green Techs., LLC</i> , PGR2021-00104 (P.T.A.B. Jan. 31, 2022)	51
<i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson</i> , No. 2:21-CV-00113-JRG, 2022 WL 17484264 (E.D. Tex. July 7, 2022)	50
<i>Lynk Labs, Inc. v. Samsung Elecs. Co.</i> , No. 2023-2346 (Fed. Cir.).....	62

<i>Mylan Labs. Ltd. v. Janssen Pharmaceutica NV</i> , IPR2020-00440 (P.T.A.B. Sept. 16, 2020)	50, 55, 56
<i>Nanoco Techs. Ltd. v. Samsung Elecs. Co.</i> , No. 2:20-cv-00038-JRG, 2021 WL 3027335 (E.D. Tex. Jan. 8, 2021).....	50
<i>Nintendo Co., Ltd. et al. v. Gamevice, Inc.</i> , IPR2023-00643 (PTAB Nov. 6, 2023)	18, 22
<i>NXP USA, Inc. v. Impinj, Inc.</i> , PGR2022-00005 (P.T.A.B. May 2, 2022)	51
<i>Samsung Elecs. Co. v. Clear Imaging Research, LLC</i> , IPR2020-01401 (P.T.A.B. Feb. 17, 2021)	59, 60
<i>Samsung Elecs. Co., Ltd. v. Mojo Mobility Inc.</i> , IPR2023-01092 (P.T.A.B. Jan 8, 2024).....	51, 53
<i>Sand Revolution II, LLC v. Cont'l Intermodal Grp.</i> , IPR2019-01393 (P.T.A.B. June 16, 2020).....	53, 60
<i>Teso LT UAB v. Luminati Networks Ltd.</i> , IPR2021-00122 (P.T.A.B. Apr. 20, 2021).....	58, 59
<i>U.S. Venture, Inc. v. Sunoco Partners Mktg. & Terminals L.P.</i> , IPR2020-00728 (P.T.A.B. Oct. 1, 2020)	59
<i>Valve Corp. v. Ironburg Inventions Ltd.</i> , 8 F.4th 1364 (Fed. Cir. 2021).....	62

Statutes

35 U.S.C. § 102	60, 61
35 U.S.C. § 311(b)	1, 60, 61
35 U.S.C. § 314	1, 4, 48
35 U.S.C. § 325(d)	15, 16, 19, 24

Patent Owner's Exhibit List	
EX2001	Declaration of Dr. Sam Malek
EX2002	<i>Curriculum Vitae</i> of Dr. Malek
EX2003	Docket Control Order in <i>Emerging Auto. LLC v. Kia Corp.</i> , No. 2:23-cv-437-JRG, Dkt. No. 40 (E.D. Tex. Feb. 6, 2024)
EX2004	Cover pleading to Defendants' Preliminary Invalidity Contentions, <i>Emerging Automotive LLC v. Kia Corporation, et al., and Toyota Motor Corp. et al.</i> , No. 2:23-cv-0437-JRG (lead case), No. 2:23-cv-0434-JRG (member case), served March 28, 2024
EX2005	VentureBeat, <i>Toyota is testing a Smart Key Box that makes it easier to share your car with strangers</i> (Oct. 31, 2016)
EX2006	Judicial Caseload Profile (March 31, 2024): Table C-5, <i>U.S. District Courts—Civil Federal Judicial Caseload Statistics</i> ; Table T-3, <i>U.S. District Courts—Median Time from Filings to Trial for Civil Cases in which Trials were Completed</i>
EX2007	Civil Docket Report for <i>Emerging Automotive LLC v. Kia Corporation, et al., and Toyota Motor Corp. et al.</i> , No. 2:23-cv-0437-JRG (lead case)
EX2008	Civil Docket Report for <i>Emerging Automotive LLC v. Toyota Motor Corp. et al.</i> , No. 2:23-cv-0434-JRG (member case)
EX2009	U.S. Patent No. 11,295,564
EX2010	File History of U.S. Patent 11,295,564
EX2011	Related Applications Search results for US Patent 11,295,564 from United States Patent Office Global Dossier Public Access Portal
EX2012	U.S. Patent No. 10,493,953
EX2013	U.S. Patent No. 10,614,644
EX2014	[reserved]
EX2015	Prosecution history for U.S. Patent No. 9,189,900

Patent Owner's Exhibit List	
EX2016	Docket Navigator Median Time-to-Trial Statistics for Judge Rodney Gilstrap (excluding transfers), August 26, 2019 through September 20, 2024
EX2017	Prosecution history for U.S. Patent No. 9,499,129
EX2018	Prosecution history for U.S. Patent No. 9,663,067
EX2019	Prosecution history for U.S. Patent No. 10,407,026
EX2020	Prosecution history for U.S. Patent No. 10,442,399
EX2021	Prosecution history for U.S. Patent No. 11,104,245
EX2022	Prosecution history for U.S. Patent No. 11,738,659
EX2023	Prosecution history for U.S. Patent No. 11,132,650
EX2024	Prosecution history for U.S. Patent No. 11,305,666
EX2025	U.S. Patent No. 11,738,659
EX2026	U.S. Patent No. 11,104,245
EX2027	U.S. Patent No. 11,305,666
EX2028	U.S. Patent No. 9,189,900
EX2029	Declaration of Dr. Sam Malek in Support of Patent Owner's Response
EX2030	Deposition Transcript of Kevin C. Almeroth, Ph.D., taken April 1, 2025 in <i>Toyota Motor Corp. & Kia Corp. v. Emerging Automotive, LLC</i> , IPR2024-01167 (Excerpted)

I. Introduction

The Board’s Institution Decision found that the Petition failed to raise a reasonable likelihood of success for grounds 4, 5 and 6, each of which rely upon *Zaid* as a primary reference—crediting the evidence and testimony of Patent Owner. ID at 52-54. As demonstrated here, the remaining grounds, based on the *Kleve*, reference also fail. Petitioners cannot show that *Kleve* discloses or suggests the required “request ... to generate an ... e-key ... ***the request includes a condition of use***,” required by every challenged claim. Petitioners’ secondary references do not cure this deficiency of *Kleve*. EX1001, claims 1[a] / 16[a] / 19[a].

For this claimed functionality, Petitioners rely on *Kleve*’s “credentials” as the virtual key (e-key) and *Kleve*’s rental agreement terms as the “conditions of use.” But *Kleve*’s “virtual key credential” does not include *any* of the terms or conditions agreed to and accepted in the parties’ rental agreement. *Id.*, ¶¶ 62-64, 44, 67. Moreover, *Kleve*’s system does not incorporate any rental agreement terms in the set up or distribution of a virtual key—and thus does not include any alleged “conditions of use” in any claimed request to generate an e-key or in the e-key itself. Tellingly, *Kleve*’s virtual key is completely independent from any alleged conditions of use. Instead, *Kleve*’s system teaches (1) the formation of a rental agreement; (2) the distribution of a virtual key; and (3) “at the beginning of the

rental term,” after the virtual key has been distributed, the Vehicle Owner has the option to set “user restrictions,” including, if the Owner wishes, the *very same terms* agreed to in the rental agreement. EX1004, ¶¶ 53, 40, 43, 75, Fig. 2. This operation to “set user restrictions” at the beginning of the rental term would be wholly unnecessary were Petitioners correct that the parties’ rental agreement terms were somehow incorporated within *Kleve*’s virtual key.

In *Kleve*’s system, a rental agreement is negotiated and agreed to by both the Vehicle Owner and the renter. However, *Kleve*’s solution “to enforce compliance with rental agreement terms” does not trust *a renter* to put alleged “conditions of use” on a virtual key. Unsurprisingly, *Kleve* makes clear that its solution is intentionally designed to put its “controlling usage” mechanism *solely* in the hands of the individual who is most interested in protecting the vehicle—the *Vehicle Owner*. *Id.*, ¶¶ 51, 40, Fig. 7A. Were *Kleve*’s system modified to control vehicle usage according to *both parties*’ rental agreement terms, as Dr. Almeroth proposes, *Kleve*’s express purpose—giving the Vehicle Owner total control of their own vehicle—would be vitiated altogether.

While Petitioners add references for certain dependent claims and select limitations of the independent claims, they offer no argument that the additional references cure *Kleve*’s or *Zaid*’s deficiencies with respect to the challenged

independent claims of all grounds. As Petitioners' arguments fail, the Board should uphold all claims.

II. The '188 patent

U.S. Patent No. 9,365,188 issued on June 14, 2016. EX1001, Face Page. The '188 patent is titled "Methods and Systems for Using Cloud Services to Assign E-Keys to Access Vehicles" and "relates to systems and methods for generating and sharing electronic keys (e-Keys) with users and cloud-based processing systems." *Id.*, 1:1-3, 1:33-35, 1:54-63.

The '188 patent describes providing vehicle access to individuals, including an owner or "guest driver," e.g., a friend, service person, or valet. *Id.*, 8:40-51. This access can be provided by an electronic key, or e-key, which allows the holder of the e-key to use the vehicle. *Id.*, 8:52-54. An e-key may be provided by a vehicle owner to another person, such as a guest. *Id.*, 8:54-63. The e-key allows use of the vehicle and can further include conditions of use of the vehicle, including, e.g., speed limits, geographic restrictions, amount of time, as well as conditions of use defining one or more privileges associated with the use of the e-key. *Id.*; *see also id.*, 2:27-31, 3:35-39.

Each of the independent claims of the '188 patent includes "receiving, by a server, a request from a user via a user account that has a vehicle associated

therewith to generate an electronic key (e-key) ... the request includes a condition of use of the vehicle as set by the user via the user account.” *Id.*, claims 1, 16 and 19. The e-key is “generat[ed], by the server ... the e-key being assigned [associated] with the condition of use of the vehicle.” *Id.*

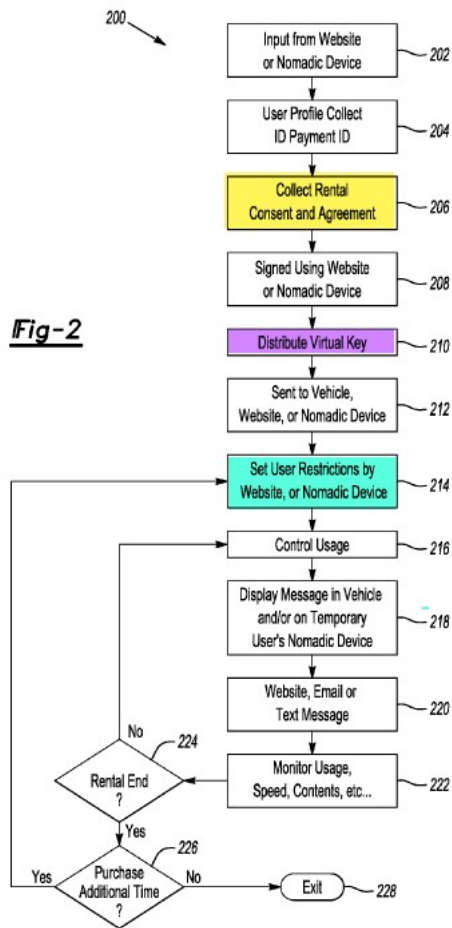
III. The *Kleve* reference (EX1004) provides distinct, ordered operations for (1) forming a rental agreement, (2) setting up and distributing a virtual key, and finally, (3) setting user restrictions—available to a Vehicle Owner only at the beginning of the rental term after the virtual key is already sent to the vehicle.

Kleve discloses a system to “check” a “credential” and use that “credential” as the “authorization” or “virtual key” for use of a “personal vehicle rental.” EX1004, face page, ¶ 36. *Kleve* discloses various operations for this personal vehicle rental system, for example, allowing the parties to negotiate and form a rental contract, allowing the parties to exchange identifying information that is used as a credential virtual key, and controlling the renter’s use of the vehicle. *Kleve* specifies an operation in which the Vehicle Owner—and only the Vehicle Owner—“may have the options [sic] to set rental restrictions” to “control[] usage to enforce compliance with the rental agreement terms.” EX1004, ¶¶ 51, 40; EX2029, ¶¶ 46-49. Using “restriction limits initially set by the Owner at the beginning of the rental term,” *Kleve*’s solution for controlling vehicle usage is not available until after the distribution of the virtual key. EX1004, ¶ 43, Fig. 2; EX2029, ¶ 46.

Unlike the rental agreement terms, agreed to *by both parties*, *Kleve*'s system teaches that only a Vehicle Owner can “set user restrictions” that will be monitored, e.g. load weight restrictions, rental end time, “no-go zones” or any other restrictions regardless of the terms of the rental agreement. EX1004, ¶¶ 40, 43, 51, 75; EX2029, ¶¶ 46-49. *Kleve*'s system allows only these Owner-set “user restrictions,” set at step 214, to be monitored and controlled by the vehicle's “VCS” (vehicle computing system), e.g., premature termination of the rental period if the usage of the vehicle is “extreme” or updating a new rental period end time restriction if additional time is paid for and authorized by the Owner. EX1004, ¶¶ 41, 43, 51.

A. *Kleve*'s “terms and conditions for the rental period” reflect the agreed-to terms of a rental contract.

Kleve provides a system whereby the Vehicle Owner and Temporary User can negotiate terms, accept agreed-to terms, and sign a rental agreement. *Id.*, ¶¶ 38, 84, 89, Fig. 2, steps 206, 208. As shown further below in Section III.C., this rental agreement procedure is distinct from, and not coextensive with, *Kleve*'s subsequent operation to “distribute virtual key” and then “set user restrictions.” *Id.*, ¶¶ 38, 40, 51, Fig. 2; *see infra*, section III.C.



EX1004, Fig. 2 (annot.).

To use *Kleve's* personal vehicle rental system, a Vehicle Owner inputs personal information including details about the vehicle they intend to rent within the system. *Id.*, ¶¶ 81, 38. A Temporary User also uses this website to input “personal information” (*id.*, ¶ 86), as well as a “unique Temporary User identification,” such as “photos of credit cards, photo of forms of ID, facial recognition, voice print recognition, matrix barcode [], code word or phrase for

speech recognition, temporary mobile web login IDs and password, or other types of unique Temporary User identification” (i.e., “credentials”) (*id.*, ¶ 37).

Kleve instructs that the parties can use the website to negotiate “terms and conditions based on the specific use and needs the Temporary User may use the vehicle for,” and ultimately accept terms and sign the agreement. *Id.*, ¶¶ 46, 84-85, 89-90, 38, Figs. 8-9. As part of this rental agreement, the parties can agree to specific conditions for the vehicle rental, for example, specifying details such as “cargo load weight restrictions, tow load restrictions, or the amount of miles that can be driven during the rental period.” *Id.*, ¶¶ 89, 84. And when the parties agree to terms, the website may generate a rental agreement and collect payment and signatures. *Id.*, ¶ 47, 90, 85, 38, Fig. 3A.

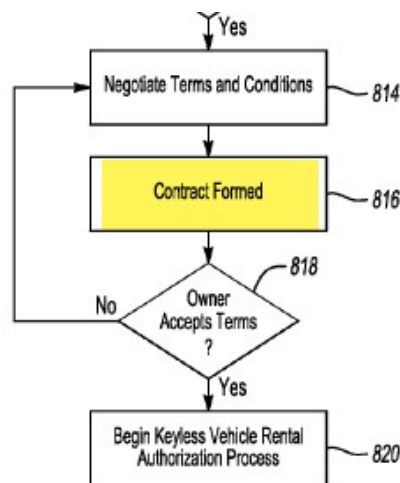


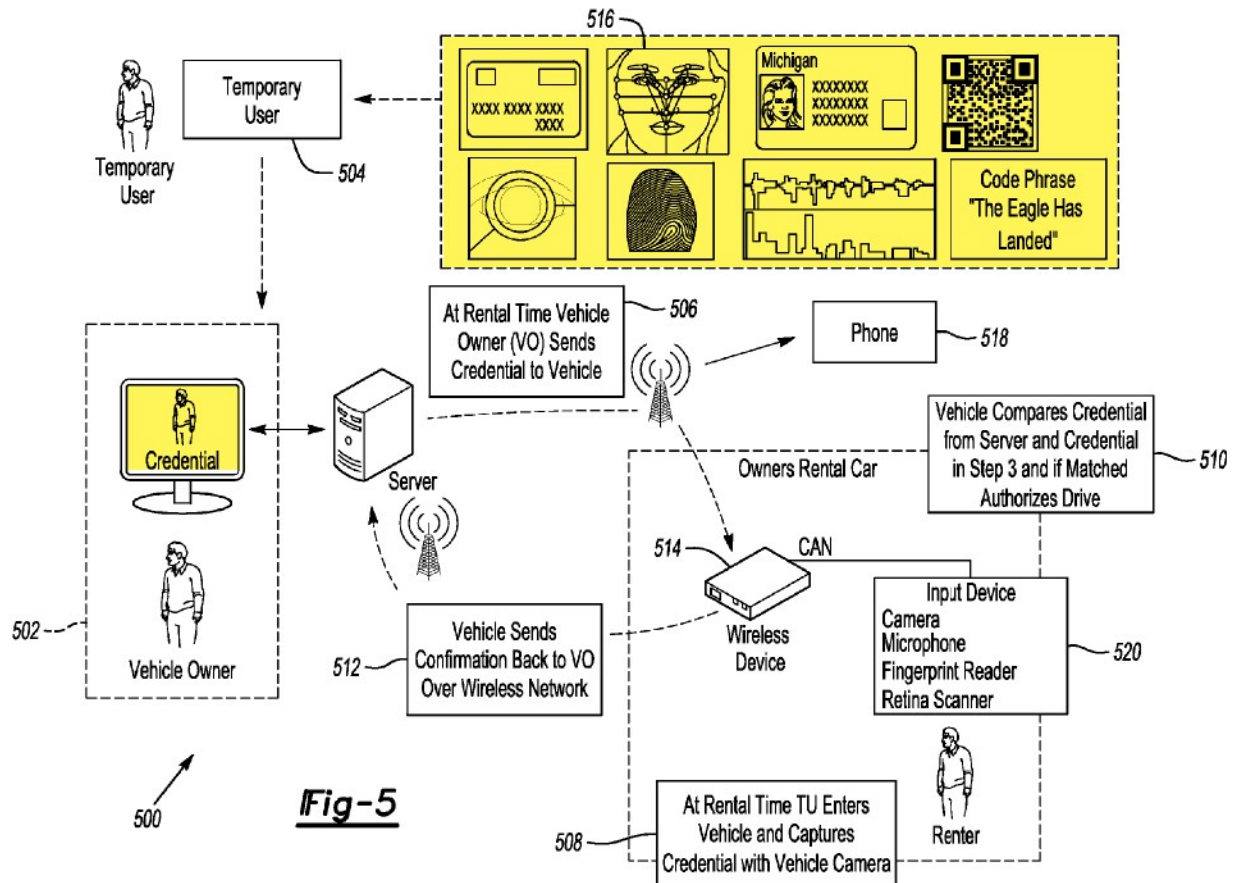
Fig-8

Id., Fig. 8 (annot.). *Kleve* does not teach any way in which the parties' agreed-upon conditions are ever included in the set up or eventual distribution of a virtual key. Instead, as detailed in Section III.C., below, *Kleve*'s system provides an Owner with the option to set user restrictions at the beginning of the rental term, *which is after the distribution of the virtual key*, wherein those restrictions will be monitored and controlled by the vehicle's VCS. *Id.*, ¶¶ 40-41, 43, 51, 75; EX2029, ¶¶ 66-70. By this solution, the Owner can enforce compliance with specific rental agreement terms, by inputting, for example, load weight restrictions, as well as set additional user restrictions that are not necessarily agreed or contemplated in the rental agreement. *Id.*, ¶¶ 40-41, 43, 51, 75; EX2029, ¶ 46.

B. Neither the “set up” of a virtual key nor the distribution of a virtual key includes the rental agreement terms or any other restrictions.

Kleve's Vehicle Owner may “set up a virtual key” to “allow a Temporary User temporary granted access to the Owner's vehicle.” *Id.*, ¶¶ 62, 48. To set up a virtual key, *Kleve* instructs that the *Temporary User* sends “information for credential verification” to “the Vehicle Owner allowing for this information to be entered into the server and used as a virtual key[.]” *Id.*, ¶ 63, Fig. 5, 516. Referring to Figure 5 below, “[a]t step 502, the Vehicle Owner may enter in vehicle

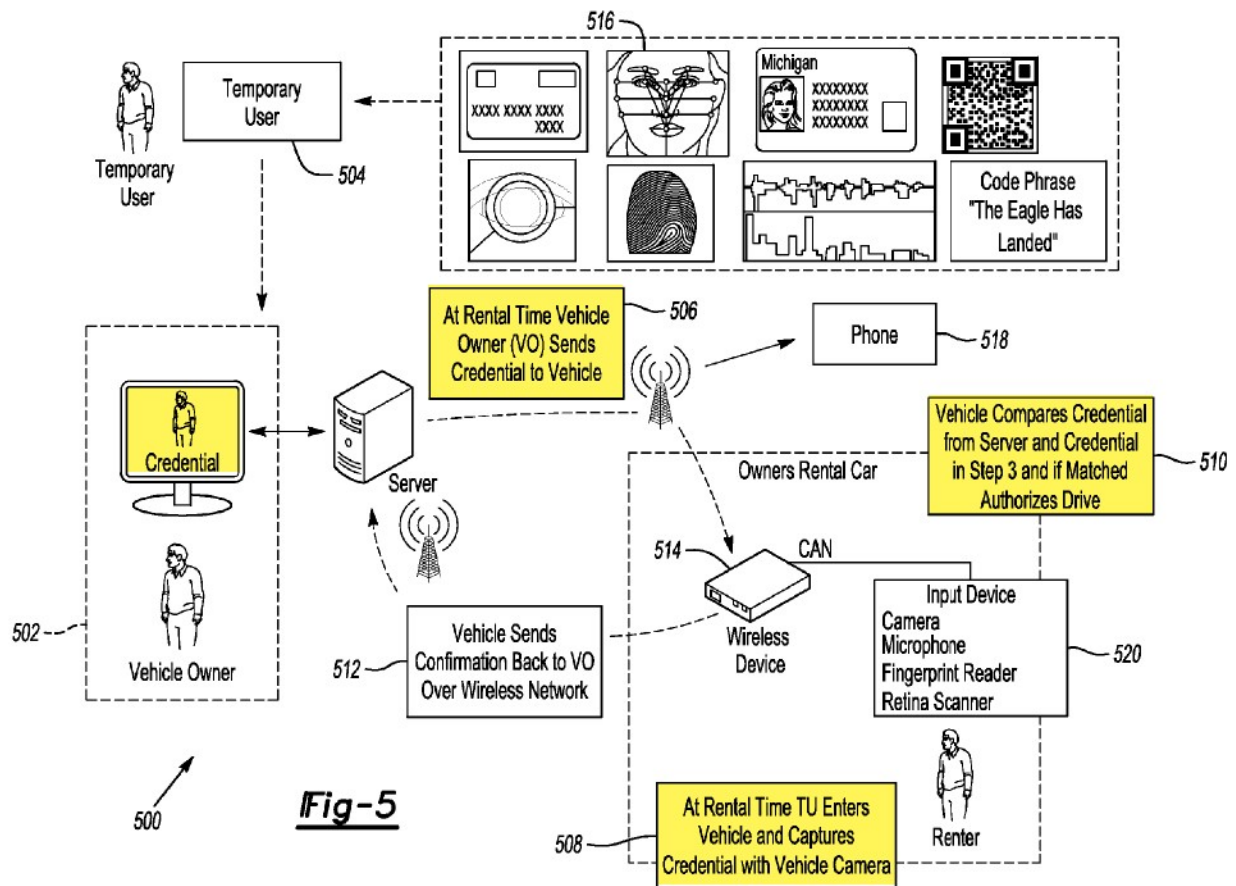
authorization credentials based on information received by the Temporary User to set up a virtual key.” *Id.*, ¶ 62, Fig. 5.



Id., Fig. 5 (annot.). This “credential” may include the information collected from the Temporary User, such as “fingerprint recognition,” “photos of credit cards, photo of forms of ID, facial recognition, voice print recognition, matrix barcode [], code word or code phrase for speech recognition,” or “other types of unique Temporary User identification.” *Id.*, ¶¶ 63-64.

It is this unique Temporary User identification or “credential” that will ultimately be “used as a virtual key.” *Id.*, ¶ 63; *see also id.*, ¶ 44 (matrix barcode as the virtual key); *id.*, ¶ 67 (“the virtual key credential”). *Kleve*’s “virtual key credential” does not incorporate or include any information about any rental period the parties had agreed to as part of the rental agreement, nor does this “credential” include *any* of the terms or conditions agreed to and accepted as the parties’ rental agreement. *Id.*, ¶¶ 62-64, 44, 67; EX2029, ¶¶ 45, 61, 66-70.

Instead, “to set up a virtual key,” the Vehicle Owner enters only the vehicle authorization credential or “unique Temporary User identification” (*id.*, Fig. 5: **504**, **516**), which was received from the Temporary User (EX1004, ¶ 62, Fig. 5; EX2029, ¶¶ 61, 45). Moreover, to authorize access to the vehicle, *Kleve* teaches that the vehicle will compare this credential sent by the Owner with the credential entered by the Temporary User. EX1004, Fig. 5, steps 506, 508, 510. More specifically, *Kleve* instructs that the Vehicle Owner sends this same “credential” to the vehicle, e.g., via a server, and the Temporary User will provide this same credential to the vehicle, e.g., captured via camera, microphone, etc. *Id.*, Fig. 5. And, as illustrated in Figure 5 below, the vehicle will compare *the credential* from the Owner and *the credential* captured from the Temporary User to authorize the Temporary User’s drive. *Id.*, Fig. 5, step 510.



Id., Fig. 5 (annot.).

Kleve does not disclose or suggest that the Owner enter a “rental time period” to “set up a virtual key,” nor does *Kleve* suggest that this “rental time” is somehow included in the transmission of the virtual key credential to the vehicle. *Id.*; see also *id.*, ¶¶ 62, 66; EX2029, ¶¶ 45, 61, 66-70. In fact, were the agreed upon “rental period” somehow included in the virtual key credential set up or distribution as an alleged “condition of use,” it would not be necessary for the Vehicle Owner to also send the credential to the vehicle “at rental time.” EX1004 at Fig. 5, ¶ 66; EX2029,

¶ 70. Instead, *Kleve* instructs: “[a]t rental time Vehicle Owner (VO) sends credential to vehicle.” EX1004 at Fig. 5 (emphasis added); *see also id.*, ¶ 66 (“[w]hen the scheduled rental period of time begins[,] the Vehicle Owner may send the credentials to the vehicle with the use of a server.”) (emphasis added). Further, *Kleve* discloses “at rental time, TU [the Temporary User] enters [the] vehicle and captures [this] credential with vehicle camera, microphone, fingerprint reader, retina scanner,” etc. *Id.*, Fig. 5 (emphasis added); *id.*, ¶ 67.

As *Kleve* illustrates, the vehicle compares the “credential,” not any “rental time” information, and based solely on this “matched” credential the vehicle “authorizes [the] drive.” *Id.*, Fig. 5, step 510; EX2029, ¶¶ 61, 70. Because the vehicle’s match of the two entries of credentials “authorizes [the] drive,” the Temporary User cannot use the virtual key to drive away a Vehicle Owner’s vehicle until after, “at rental time[,] vehicle Owner (VO) sends [the] credential to [the] vehicle.” EX1004, Fig. 5, ¶ 66.

C. To monitor and control vehicle usage, a Vehicle Owner may “set user restrictions”—an operation distinct from the rental agreement and subsequent to the “set up” and distribution of a virtual key credential.

Rather than include the parties’ rental agreement terms in the set up or distribution of a virtual key, *Kleve*’s system provides a separate, optional operation to allow only the Owner to “set user restrictions” at step 214. *Id.*, ¶¶ 51, 40, Fig. 2;

EX2029, ¶¶ 46-49. *Kleve* makes clear that these restrictions are set at the beginning of the rental term, ***after*** the distribution of a virtual key. *Id.*, ¶¶ 43, 40, Fig. 2.

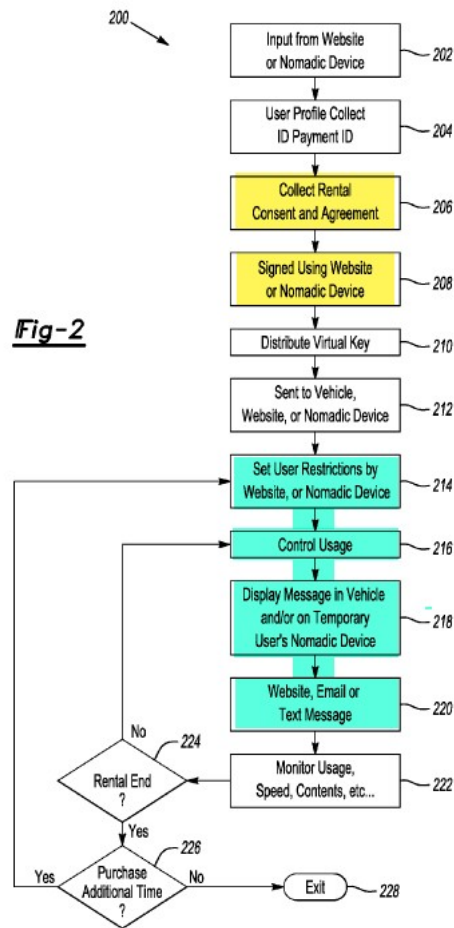
As *Kleve* explains, because a Vehicle Owner may be renting out a vehicle that “may be the only vehicle the Owner possesses,” “[c]ontrolling usage to enforce compliance with the rental agreement terms may be of more importance to a vehicle rental micro-business owner[.]” *Id.*, ¶ 51. Therefore, “at the beginning of the rental term,” *Kleve*’s system provides the Vehicle Owner with the option “to set rental restrictions,” which may be used by the vehicle’s VCS to “monitor,” “control” and/or “update” usage of the vehicle. *Id.*, ¶¶ 40-41, 43, 51.

1. *Kleve* allows restrictions for monitoring and controlling usage to be initially set by the Owner at the beginning of the rental term.

To monitor and control vehicle usage or enforce any other user restrictions, *Kleve* makes clear that any vehicle restrictions may not be set when the rental agreement is formed, nor at any other time before the distribution of a virtual key. *Id.*, ¶¶ 51, 40, 43, 75, Figs. 2, 7A; EX2029, ¶¶ 45-49. Instead, any restrictions are “***initially set*** by the Owner at the beginning of the rental term,” which undisputably occurs after distribution of the virtual key credential, as discussed above. *Id.*, ¶¶ 43 (emphases added), 40, Fig. 2. Because the Owner does not have the option to set rental restrictions until the beginning of the rental term at step 214—when those

restrictions are “initially set”—neither the rental agreement terms themselves, nor the generation of a virtual key (each of which precedes the distribution of the virtual key, at step 210) could possibly qualify as *Kleve*’s Owner-set restrictions. *Id.*, Fig. 2; ¶¶ 40-41, 43.

Specifically, at **step 214**, shown in Figure 2 below, *Kleve*’s system allows the Owner to select parameters that enforce the parties’ agreed-upon terms and conditions and/or add specific restrictions for the usage of the rental vehicle, such as cargo load weight restrictions, rental end time, or global position coordinates corresponding to restricted areas. *Id.* It would not be necessary for *Kleve* to have such a solution to “enforce” any rental agreement terms if somehow those terms were already included as some “condition of use” in *Kleve*’s “set up” or distribution of the virtual key, at step 210. *Id.*; *id.*, Fig. 2; EX2029, ¶ 49.



EX1004, Fig. 2 (annot.).

Likewise, it would not be necessary for *Kleve* to teach this distinct operation to “set user restrictions” at **step 214**—restrictions that may include *the very same restrictions* the parties had agreed to in **the rental agreement**—if somehow those rental agreement restrictions were already included as alleged “conditions of use” in *Kleve*’s “set up” or distribution of the virtual key, at step 210. *Id.*; *id.*, ¶¶ 84-85, 89-90, 40, 51; EX2029, ¶ 52.

For example, although the Vehicle Owner and Temporary User may have already agreed to specific “load weight restrictions” as part of the rental agreement signed by the parties (*id.*, ¶¶ 84-85, 89-90), *Kleve* provides for an Owner to “enforce” and “control” the agreed-upon “load weight restrictions” by inputting the “load weight restrictions” as “user restrictions” in the system’s website at step 214 (*id.*, ¶¶ 40, 51) (“owner may set user restrictions” e.g., “load weight restrictions”); EX2029, ¶¶ 50, 52.

Kleve reiterates that these restrictions cannot be set when the rental agreement is formed, or at any point before the virtual key is distributed, but are instead “restrictions assigned by the Vehicle Owner *at the start of the rental period.*” EX1004, ¶¶ 75 (emphases added); 43 (“initially set by the Owner at the beginning of the rental term”). The restrictions’ corresponding “performance limitations” for the VCS to monitor and control the vehicle’s usage are downloaded to the VCS at step 708, after “the Temporary User initiates the rental event,” at step 706. *Id.*, ¶ 75, Fig. 7A.

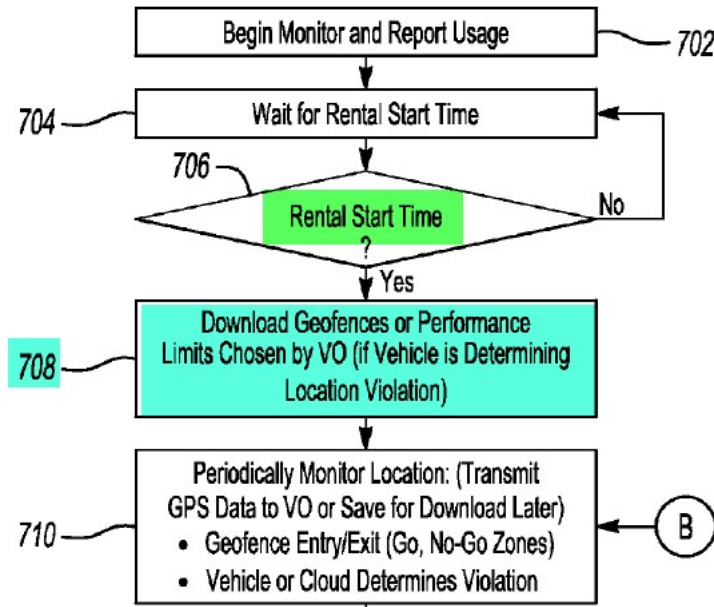


Fig-7A

716

Id., Fig. 7A (annot.).

2. “User Restrictions” set at step 214 may be monitored and controlled by the vehicle.

Kleve teaches that after setting “user restrictions” at step 214, “[a]t step 216, the control parameters use restrictions may be monitored and if a restriction exceeds a limit the Temporary User and Owner may be notified.” *Id.*, ¶¶ 40, 51, Fig. 2. For example, after the Owner’s input of “user restrictions” at step 214, “[t]he vehicle may be able to monitor and record its location, speed and driving behavior while transmitting this information to the vehicle owner.” *Id.*, ¶¶ 52, 40, Fig. 2.

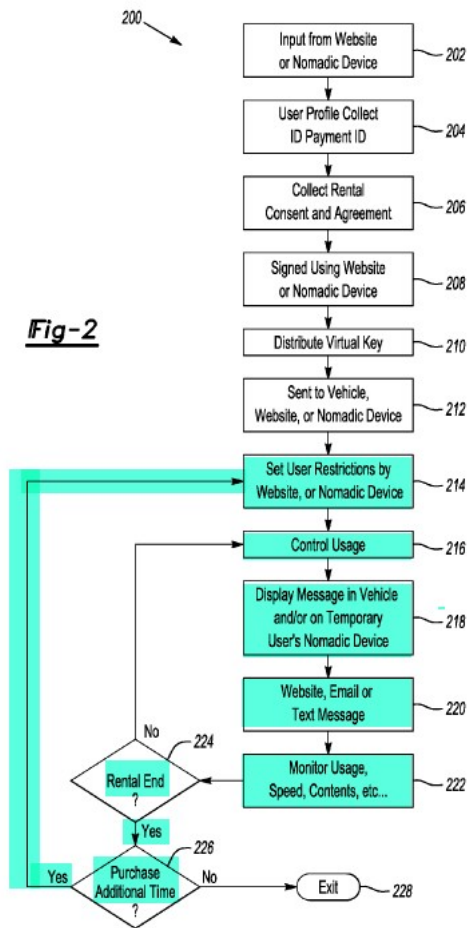
Kleve’s system teaches that the “user restrictions” set by the Owner at step 214 can be enforced by the VCS at “step 222,” where the vehicle itself performs “remedial actions,” such as slowing down or immobilizing the vehicle, to “limit the

Temporary User from exceeding the restrictions the Owner has set[.]” *Id.*, ¶¶ 41, 52.

Kleve’s “user restrictions” that control usage, may be “initially set by the Owner at the beginning of the rental term,” at step 214, *not* at any prior step pertaining to the rental agreement or distribution of a virtual key. *Id.*, ¶¶ 40-43, 51-53, Fig. 2.

3. “Rental period end time” is set by the Owner as a “user restriction” at step 214 which may be monitored, extended, and even updated by returning to step 214.

Kleve teaches that the “rental period end time” is one of the “user restrictions” which is set by the Owner at the beginning of the rental term, at step 214, where *Kleve*’s system enforces compliance with this restriction by monitoring usage of the vehicle, controlling actions to put the vehicle in a remedial action, and updating the rental period end time restriction. *Id.*, ¶ 43. Specifically, “[a]t step 226, if the Temporary User decides that he may need to purchase additional rental time, the system may **update the new rental period end time restriction** and continue to monitor usage of the vehicle.” *Id.*, ¶¶ 43, 54; *see id.*, Fig. 2. Referring to Figure 2, the system will return to **step 214**, to “update the new rental period end time restriction.” *Id.*; EX2029, ¶¶ 51, 53.

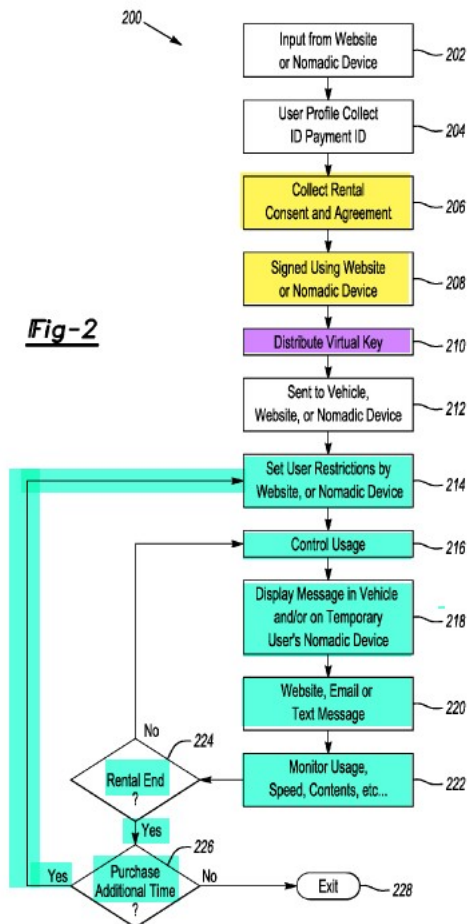


EX1004, Fig. 2 (annot.).

Accordingly, *Kleve*'s system expressly links step 214, where the Vehicle Owner initially “set user restrictions,” with the updated “new rental period end time restriction” that has been extended by the user’s purchase at step 226. *Id.*, ¶¶ 43, 54, Fig. 2.

By contrast, *Kleve* offers no mechanism to “update” the rental period via the rental agreement (steps 206, 208) or the virtual key (step 210)—because *Kleve*

teaches that only by the “user restrictions,” set **at step 214**, may rental agreement terms or other restrictions, such as rental time, be enforced or controlled. *Id.*



Id., Fig. 2 (annot.).

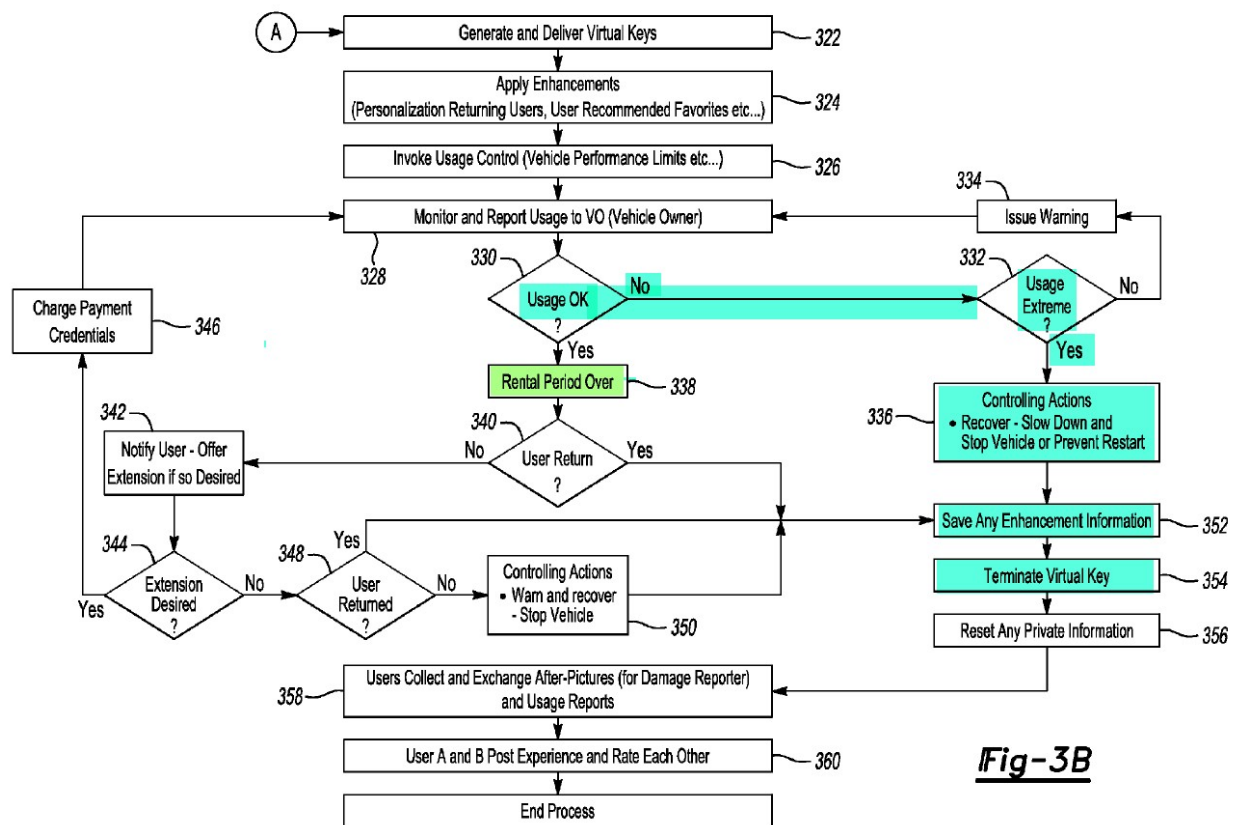
D. *Kleve's* virtual key credential is operable independent of the agreed-upon rental period; the virtual key may be terminated before, or remain in use after, the agreed-upon rental period has ended.

As detailed in Section III.C.4., above, the virtual key is not only operable during the agreed-upon rental period; instead, *Kleve's* system enables the Temporary User to extend the rental period “if the rental period has ended,” allowing the Vehicle Owner to update the “rental period end time restriction.” *Id.*, ¶ 43, Fig. 2. The virtual key is not only operable outside of the agreed-upon rental period, e.g., via a rental end time *update*, but may also be *terminated* either before or after the end of the agreed-upon rental period. EX2029, ¶¶ 53-61.

Kleve's system teaches several examples by which the vehicle rental “exit mode process,” which includes “terminating the virtual key” (*id.*, ¶ 80), is undertaken before or after the agreed-upon rental period expiration (*id.*, ¶¶ 43, 53-55, 79-80). These examples further demonstrate that the virtual key is *not* “only operable during a rental period.” Paper 10 at 40 (citing Pet. 16).

For example, if the Temporary User's usage of the vehicle exceeds the “user restrictions” set by the Vehicle Owner (e.g., EX1004, Fig. 2, step 214), the system may undertake remedial actions and terminate the virtual key—regardless of the parties' agreed-upon rental period. *Id.*, ¶ 53, Fig. 3B. As *Kleve* explains, if “a restriction threshold has been violated,” and the usage is “extreme,” the VCS may

“put the vehicle in a remedial action,” such as engine shut down and immobilization. *Id.* The system will then “save any enhancement information” and “terminate [the] virtual key,” regardless of whether the agreed-to rental period has ended. *Id.* As illustrated in Figure 3B, the detection of “extreme” usage prompts the system to “terminate virtual key,” even before the “rental period [is] over.” *Id.*



Id., Fig. 3B.

As another example, if the vehicle detects an accident which renders the vehicle unsafe to drive, *Kleve*’s system will undertake the same vehicle rental exit

mode process, thereby terminating the virtual key—independent of “rental end” time. *Id.*, ¶¶ 79-80, 53, Fig. 7B.

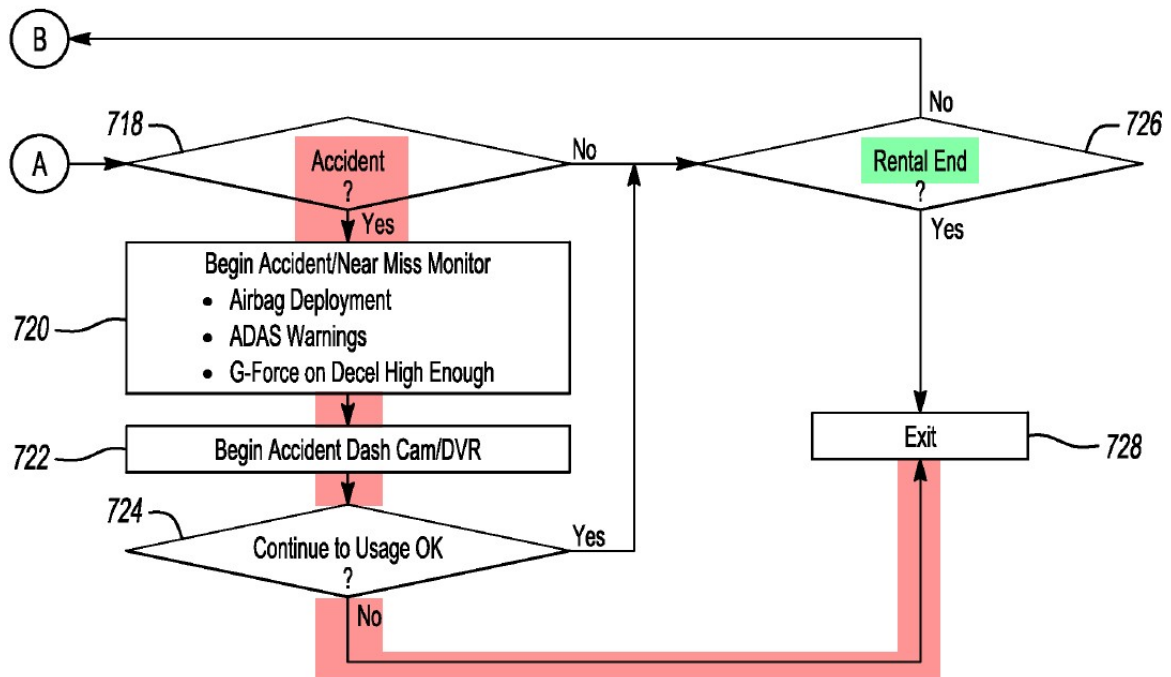
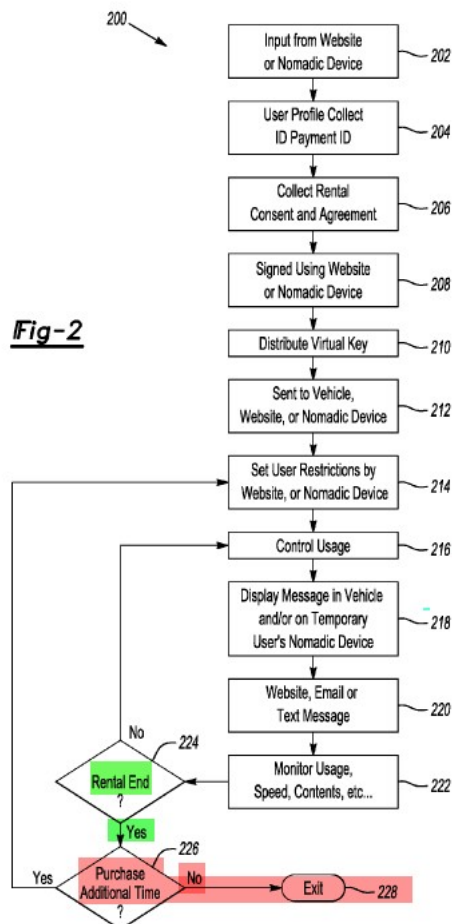


Fig-7B

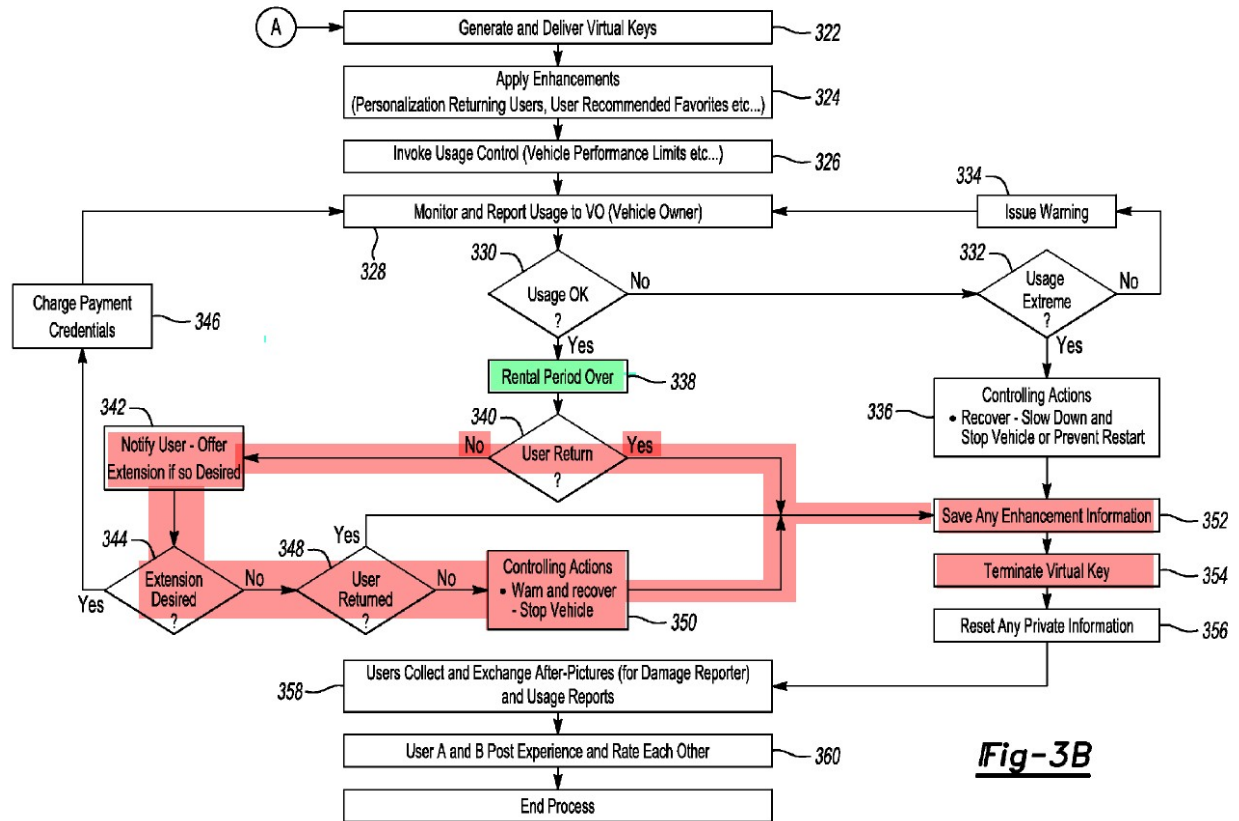
Id., Fig. 7B (annot.).

Kleve also provides examples where the virtual key remains operable *after* the rental term has ended and will not be terminated until the vehicle rental exit process, after the rental period is over. *E.g., id.*, ¶ 54. In each of these scenarios, terminating the virtual key is one step of *Kleve*’s vehicle rental exit process—occurring (1) *after the rental period ends*, (2) *after* the user has either returned the vehicle, or having failed to return it, *after* controlling actions of the VCS warn the user and/or stop the vehicle, and (3) *after* the system saves “any enhancement

information” based on the Temporary User’s settings. *Id.*; *id.*, ¶¶ 80, 49. Then, after terminating the virtual key, the system will “reset private information stored on the vehicle-based computing system.” *Id.*, ¶¶ 80, 49 (same). For example, “[i]f the rental term has ended, and no additional time is purchased, the system may begin the vehicle rental exit process within the VCS.” *Id.*, ¶ 43, Fig. 2. This vehicle rental exit process, at step 228, occurs after the rental period has expired, as detailed further below. *Id.*



Id., Fig. 2 (annot.). It is after “the rental period has ended, [that] the monitoring and control system of the vehicle rental micro-business may begin to start its Temporary User vehicle rental exit mode process.” *Id.*, ¶ 80. As illustrated in Figure 3B, after “the Temporary User has completed the rental period” and after the Temporary User “has returned the vehicle to the appropriate drop off, the virtual key may terminate.” *Id.*, ¶¶ 55, 49 (same), Fig. 3B.



Id., Fig. 3B (annot.).

Alternatively, if “the rental period has expired,” but the Temporary User has not yet returned the vehicle, and an extension of time is not desired or authorized,

“the system may transmit controlling action to warn and induce remedial actions at step 350.” *Id.*, ¶ 54, Fig. 3B. Then, after terminating the virtual key, the system will reset any private information stored on the VCS. *Id.*, ¶¶ 80, 49, Fig. 3B.

With each of the aforementioned examples, *Kleve*’s system refutes the notion that its virtual key is “only operable during a rental period.” Paper 10 at 40 (citing Pet. 16); EX2029, ¶¶ 53-61. Indeed, these examples affirm that it is *Kleve*’s operation to “set user restrictions,” available to the Vehicle Owner initially at step 214, which puts the power to dictate usage in the hands of the Owner and gives the Owner flexibility to terminate usage (1) before the agreed-upon rental period ends, (2) after the agreed-upon rental period ends, and/or (3) update the rental period end time.

IV. Petitioners failed to show that the challenged claims of grounds 1-3 and 7 are obvious over *Kleve*, alone or in combination.

The claims require “a request from a user ... to generate an ... e-key ... [that] includes a condition of use of the vehicle” and “generating ... the e-key being assigned with the condition of use of the vehicle.” Claim 1[a], 1[b]. In *Kleve*, however, the alleged e-key, a “virtual key,” is merely a credential, such as a user’s face, fingerprint, or other identifying information. The credential and alleged request for the credential is independent of any alleged “conditions of use.” Petitioners failed to show that *Kleve*’s system includes any “condition of use” in an

alleged request, the set up or distribution of its virtual key. This deficiency is fatal to the *Kleve*-based grounds, grounds 1-3 and 7, as Petitioners rely on *Kleve* alone for alleged disclosure of this independent claim element for all ground 1-3 and 7 challenged claims. Each of these grounds fails. Pet. 8-16 (claim 1[a]), 30 (claim 16[a]), 33 (claim 19[a]).

Petitioners point to *Kleve*'s disclosures to "set up a virtual key" as the alleged "request ... to generate an electronic key." Pet. 10-11. But no alleged "conditions of use"—"restriction," "rental agreement terms," or "rental period"—are included in *Kleve*'s set up or distribution of a virtual key. The Board preliminarily credited Dr. Almeroth's testimony, "who opines that *Kleve* discloses that certain restrictions are sent with the request to generate a virtual key." Paper 10 at 40 (citing EX1003, ¶¶ 118-123). However, Dr. Almeroth's testimony is incorrect and contrary to the express disclosures of *Kleve*. Unlike Patent Owner's Preliminary Response, which did not delve into the details of *Kleve*'s "credential check and authorization solution for personal vehicle rental," Patent Owner does so here, demonstrating below that each of the premises on which Dr. Almeroth and Petitioners base their obviousness conclusions are directly refuted by *Kleve* itself.

At bottom, *Kleve* teaches that the set up and distribution of the virtual key both occur *before*, and independently of, any input of "user restrictions" at step 214

(section III.B.-C., *supra*). Therefore no “such restrictions are sent with the request to generate a virtual key,” as Dr. Almeroth incorrectly opines. EX1003, ¶ 120.

Dr. Almeroth attempts to suggest that the rental agreement terms are included in the request and distribution of the virtual key. But as shown below, not a single one of Dr. Almeroth’s alleged examples of “restrictions,” e.g., the agreed-upon “rental period,” is “sent with a request to generate an e-key.” EX1003, ¶¶ 119-120. As an alternative theory, Dr. Almeroth claims that a POSITA would have *understood* that the rental agreement restrictions are included in the virtual key request, even if *Kleve* does not actually disclose their inclusion in any virtual key request. *Id.*, ¶¶ 120-121. But this opinion is directly refuted by *Kleve*’s discrete solution “to enforce compliance with rental agreement terms”—a solution that (1) would be unnecessary were the rental agreement terms already included in the virtual key, (2) requires the Vehicle Owner to input as “user restrictions” the very same restrictions/conditions already agreed to by the parties’ rental agreement, (3) gives the Vehicle Owner (and the Owner alone) full discretion, flexibility and control to set “user restrictions” that *Kleve*’s system will use to monitor, control and update the vehicle usage, and (4) updates the “rental period end time” as a “user restriction,” input at step 214, not involving the virtual key or rental agreement at all.

As detailed below, Dr. Almeroth's obviousness opinion ignores that *Kleve's* system already achieves the very benefits and efficiencies alleged as motivations to modify *Kleve's* virtual key. And further, Dr. Almeroth's proposed modification disregards and contradicts the very purpose and design of *Kleve's* solution—to allow the Vehicle Owner *alone* the power to control usage of their own vehicle. Ultimately, *Kleve* proves that each of these opinions are wrong.

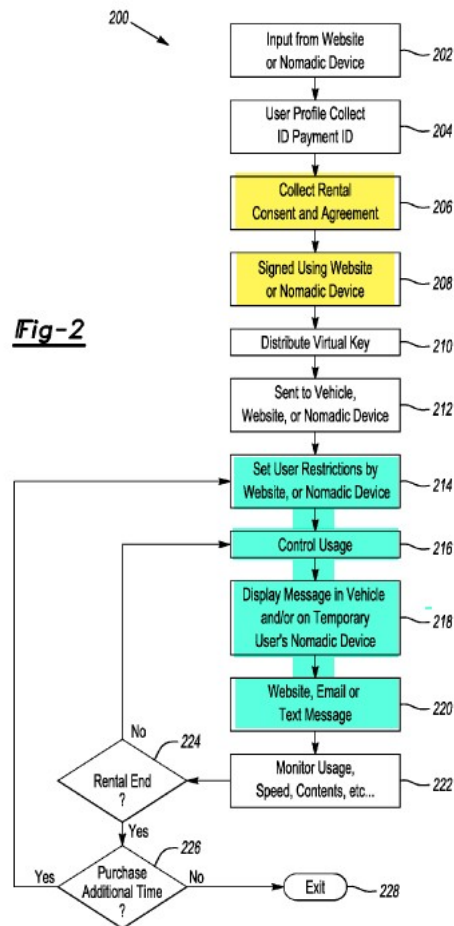
Though the Petition adds references *Sekiyama*, *Mottla* and *Patenaude* to grounds 2-3 and 7, these references do not cure *Kleve's* failures for these elements, and Petitioners offer no argument to the contrary.

A. Each of the “restrictions” identified by Petitioners as allegedly “sent with the request to generate a virtual key” are unavailable to be set until *after* the set up and distribution of the virtual key.

As the alleged request to generate an e-key, Petitioners rely on *Kleve's* disclosure that “the Vehicle Owner may enter in vehicle authorization credentials based on information received by the Temporary User to set up a virtual key.” Pet. 10-11 (citing EX1004, ¶ 62). *Kleve* teaches that the “distribution” of this virtual key credential, e.g. emailing to the Temporary User, occurs at step 210. EX1004, ¶¶ 62, 39, Fig. 2. As the alleged “conditions of use,” Petitioners and Dr. Almeroth cite a variety of “restrictions,” but *Kleve* teaches such restrictions are *initially* set by the Vehicle Owner “at the beginning of the rental term,” *after* the virtual key has been

created and distributed, at step 210. Pet. 15 (citing EX1004, ¶¶ 38, 40, 51, 73, 75); EX1003, ¶¶ 119-120 (verbatim). Accordingly, the alleged “request” does not include any of the alleged “conditions of use,” as required by the claims. EX2029, ¶¶ 66-67.

Petitioners and Dr. Almeroth repeatedly conflate *Kleve*’s “user restrictions”—set by the Owner at step 214—with *Kleve*’s rental agreement terms—negotiated and agreed to by *both parties* at steps 206 and 208—because *Kleve* teaches the set up and distribution of a virtual key before step 214. Pet. 15; EX1003, ¶¶ 118-120.



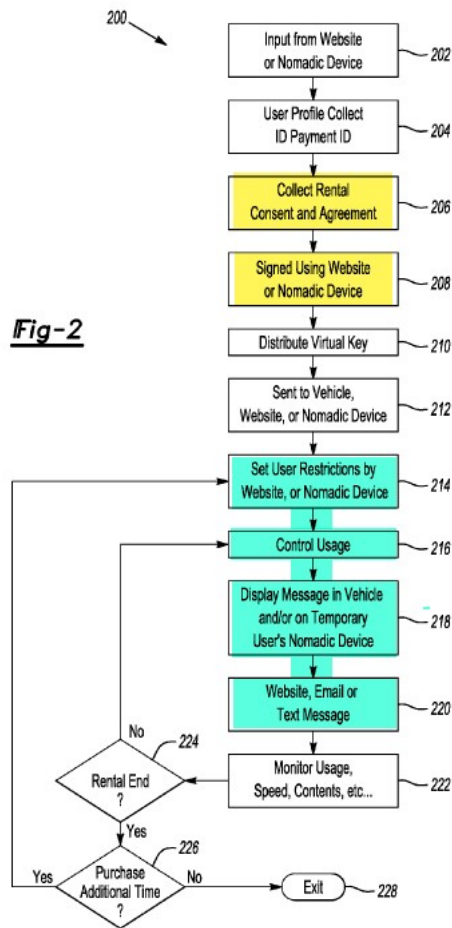
Id., Fig. 2 (annot.).

Unlike the claimed inventions of the '188 Patent, which require a “request to generate” an e-key, “the request includ[ing] a condition of use,” and “generating ... the e-key being assigned with the condition of use,” *Kleve* teaches a different solution “to enforce compliance with the rental agreement terms.” EX1004, ¶ 51. In *Kleve* the “Owner may have the options [sic] to set rental restrictions,” and

Kleve's system can "monitor" and "control usage of the vehicle" according to those "user restrictions" set by the Owner. EX1004, ¶¶ 51-53, 40.

But those restrictions are not predicated on any rental agreement. As detailed above in sections III.A., C.-D., *supra*, *Kleve* teaches that among the terms that may be agreed to as part of the parties' rental agreement are "load weight restrictions" (*id.*, ¶¶ 84, 89) and "rental period" (*id.*, ¶ 38). However, *Kleve* never discloses or suggests that **any rental agreement terms**, such as load weight restrictions or rental period, are somehow "included" in the set up or distribution of the virtual key or otherwise "enforced" by the virtual key itself. *Id.*, ¶ 51; EX2029, ¶¶ 46, 50, 52.

In fact, it would be wholly unnecessary for *Kleve* to teach "load weight restrictions" (*id.*, ¶ 40) and "rental end time restriction" (*id.*, ¶ 43) as express examples of how the parties' *already agreed to rental agreement terms* may be "enforce[d]" (*id.*, ¶¶ 51, 40, 43) by the Owner setting "user restrictions" **at step 214**, were these terms (*id.*, ¶¶ 84, 89, 38) somehow included in the set up and/or distribution of the virtual key, at step 210. *See also id.*, Fig. 2; EX2029, ¶¶ 49, 52; *and see, supra*, sections III.C.1.-4.

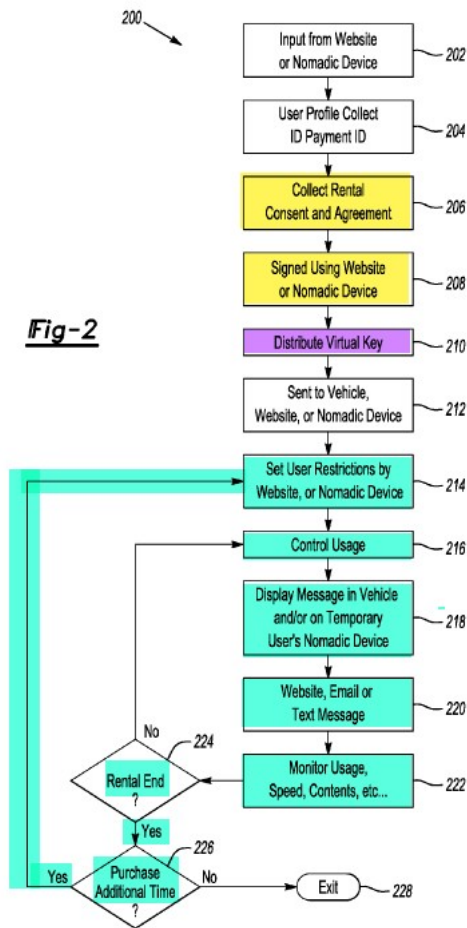


Id., Fig. 2 (annot.).

As the “restrictions” allegedly “sent with the request to generate a virtual key,” Dr. Almeroth first points to “the ‘rental period’ (¶ [0038]) [and] ‘what can and cannot be transported’ (*id.*)” (EX1003, ¶¶ 119-120). But *Kleve*, at paragraph 38, describes **steps 206 and 208** (EX1004, ¶ 38, Fig. 2), in which the “terms and conditions for the rental period” may be agreed to by the parties, and the rental agreement may even be “tailor[ed]” “to include what can and cannot be

transported” (*id.*, ¶ 38). “The rental period” described in paragraph 38 is not disclosed or suggested to be “sent with the request to generate a virtual key,” and in fact, there is no mention in paragraph 38 of any “virtual key” whatsoever. *Id.*; *see also* sections III.A.-D., *supra*; EX2029, ¶ 68. Moreover, there can be no restriction on vehicle use before the distribution of the virtual key (step 210), since *Kleve* is clear that user restrictions for monitoring and controlling vehicle usage cannot even be set until “the beginning of the rental term.” EX1004, ¶¶ 43 (“initially set ... at the beginning of the rental term”), 75 (“restrictions assigned ... at the start of the rental period”).

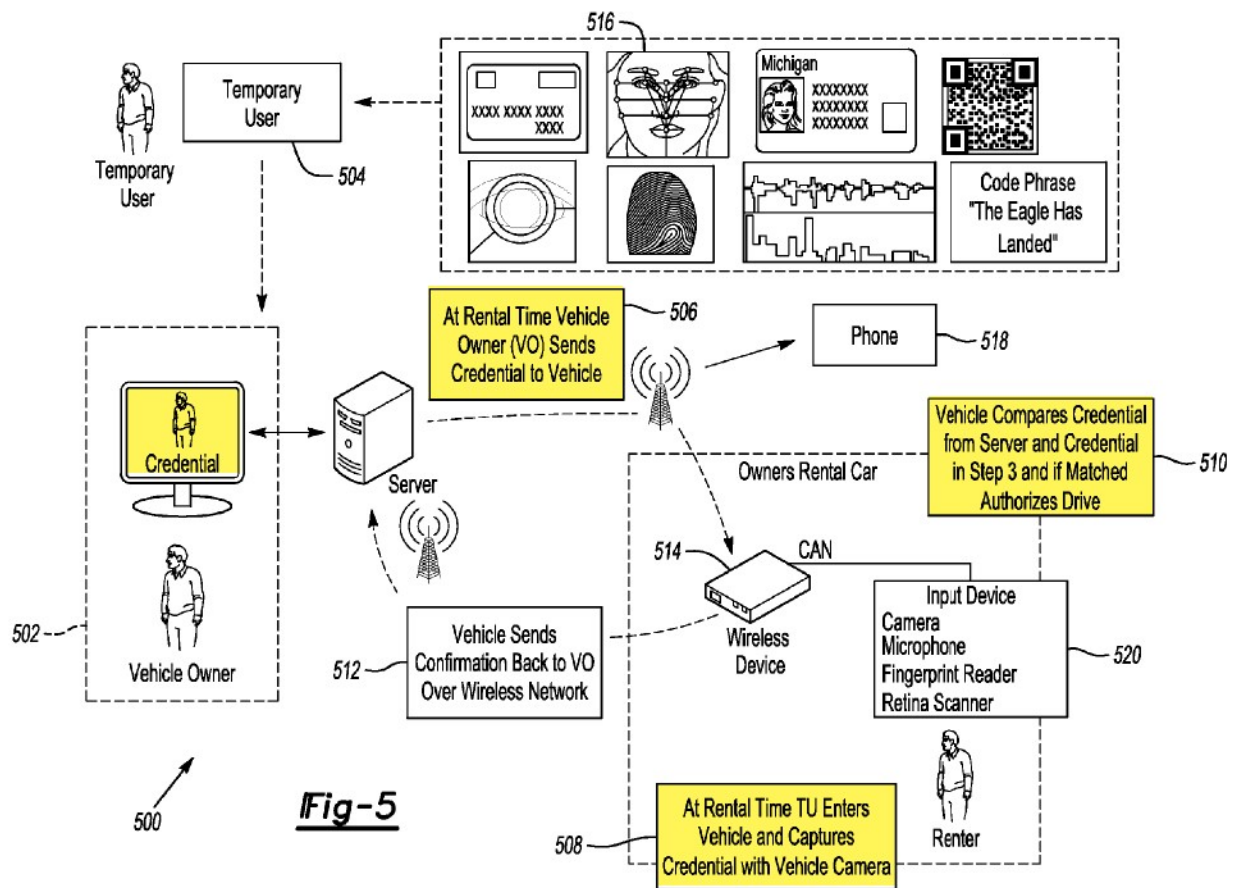
To “enforce” any “rental end time restriction” which may have been agreed to by the parties in their rental agreement, this “rental period end time” is a separate “restriction” that may be set by the Owner, at 214, and, if extended, the “system may update the new rental period end time restriction”—in step 214—and “continue to monitor usage of the vehicle.” *See* section III.C.4.; EX2029, ¶ 69; *see also* EX1004, ¶ 43, Fig. 2. Again, were the “rental period” somehow included in the virtual key, at step 210 (or even earlier, i.e. at steps 206 or 208), as Dr. Almeroth opines, it would make no sense for *Kleve* to update only step 214, in order to “update the new rental period end time restriction,” step 226 → step 214, but not at step 210 or steps 206 or 208. EX1003, ¶¶ 119-120; EX1004, ¶ 43, Fig. 2.



Id., Fig. 2 (annot.).

Moreover, by sending the authorization “credential” to the vehicle “at Rental Time,” the Owner ensures “the scheduled rental period of time begins” (*id.*, ¶ 66, Fig. 5) according to the agreed-upon rental period (*id.*, ¶ 62, Fig. 5). “At Rental Time” the Temporary User enters the vehicle, the vehicle captures the User’s credential, the vehicle compares the two credentials, and “if matched authorizes drive.” *Id.*, ¶ 66, Fig. 5. Were this “rental time” somehow included in the set up or

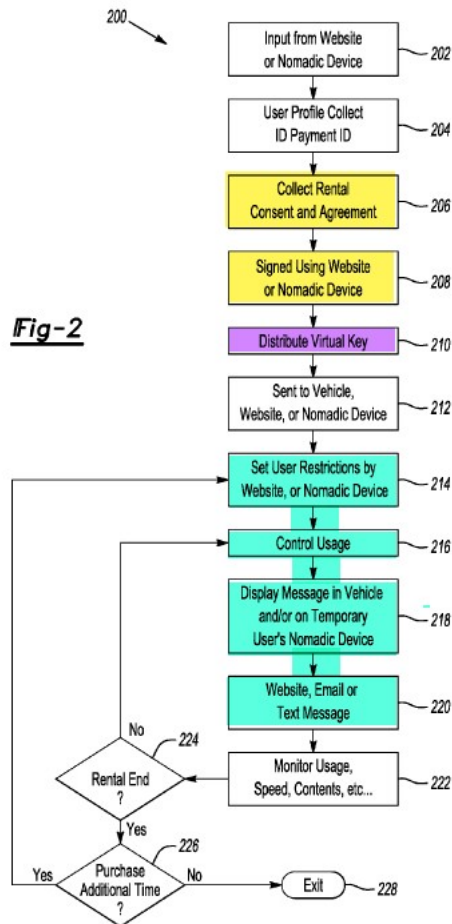
distribution of the virtual key, as Dr. Almeroth contends, it would be unnecessary that the “Vehicle (VO) Owner sends [the] credential to [the] vehicle” (*id.*, Fig. 5, ¶ 66) “[w]hen the scheduled rental period of time begins” (*id.*, ¶ 66, Fig. 5); EX2029, ¶ 70.



EX1004, Fig. 5 (annot.).

Dr. Almeroth also points to *Kleve*’s description of “speed, global position coordinates, or load weight restrictions,” at paragraph 40, as alleged “restrictions” “sent with the request to generate a virtual key.” EX1003, ¶¶ 119-120. But at

paragraph 40, *Kleve* describes steps 214, 216, 218 and 220—all of which are steps *subsequent to* the set up and distribution of the virtual key. EX1004, ¶ 40, Fig. 2.



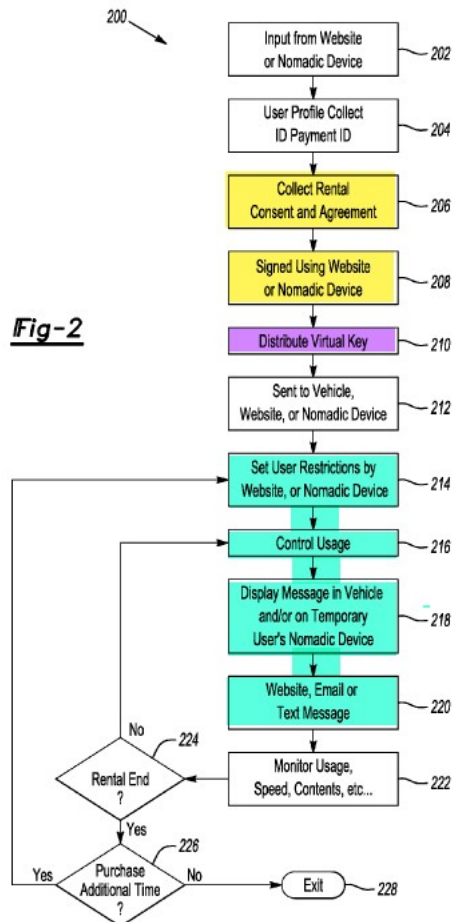
Id., Fig. 2 (annot.); EX2029, ¶71. Indeed, at paragraph 40, *Kleve* describes how, starting with step 214, an “Owner may set user restrictions,” how these “use restrictions may be monitored,” and how, when usage exceeds those restrictions, notifications are sent. EX1004, ¶ 40. Moreover, these are “restriction limits initially

set by the Owner at the beginning of the rental term,” not at any time prior. *Id.*, ¶ 43; EX2029, ¶ 72.

Dr. Almeroth erroneously cites to a “destination location” as a “restriction” allegedly “sent with the request to generate a virtual key.” EX1003, ¶¶ 119-120. But this “destination location,” along with other “set rental restrictions” set forth in paragraph 51, is set by the Owner, monitored by the vehicle and controlled via remedial actions, according to **steps 214, 216, 218, and 220**. EX1004, ¶¶ 51 (“Owner may ... set rental restrictions based on ... destination location”), 46 (Fig. 3 illustrates vehicle monitoring and control features), 40 (set user restrictions, monitoring and control features, at steps 214, 216, 218, 220); EX2029, ¶ 73. Again, these “set rental restrictions” are input by the Owner *after* the set up and distribution of the virtual key, since they are “initially set ... at the beginning of the rental term,” and therefore cannot be sent or “include[d]” as an alleged “condition of use” in any set up or distribution of that virtual key. EX1004, ¶¶ 51, 43, Fig. 2; EX2029, ¶ 73; EX1001, claims 1[a], 16[a], 19[a].

Likewise incorrect is Dr. Almeroth’s opinion that “prohibited areas where the owner does not want their vehicle to be used” is a “restriction[] sent with the request to generate a virtual key.” EX1003, ¶¶ 119-120. At paragraph 73, *Kleve* refers to “prohibited areas” as among the “parameters” that may be monitored

during the Temporary User's utilization of the vehicle—these are the same “parameters” used to set restrictions at step 214. EX1004 ¶¶ 73, 40; EX2029, ¶ 74. These restrictions may “enforce compliance with the rental agreement terms,” but are not set by the Owner until **step 214**, at “the beginning of the rental term,” *after* the set up and distribution of a virtual key. EX1004, ¶¶ 73, 40, 51, 43, Fig. 2; EX2029, ¶ 74.



EX1004., Fig. 2 (annot.).

Equally wrong is Dr. Almeroth's allegation that "top vehicle speed, limiting the cargo load, and alerting the vehicle owner if the driver enters an area deemed to be prohibited by the owner" are "restrictions [that] are sent with the request to generate a virtual key." EX1003, ¶¶ 119-120. At paragraph 75, *Kleve* describes the vehicle's "monitoring process," using the restrictions or limits that were already "chosen by VO [the Vehicle Owner]" **at step 214**, to monitor and report vehicle usage. EX1004, Fig. 7A, ¶¶ 75, 40; EX2029, ¶ 75. And only after the rental period has begun, that is, *after* the Temporary User has successfully accessed the vehicle, will the vehicle's VCS system "download performance limitations and restrictions *assigned by the Vehicle Owner at the start of the rental period*, at step 708." EX1004, ¶ 75 (emphases added); EX2029, ¶ 75.

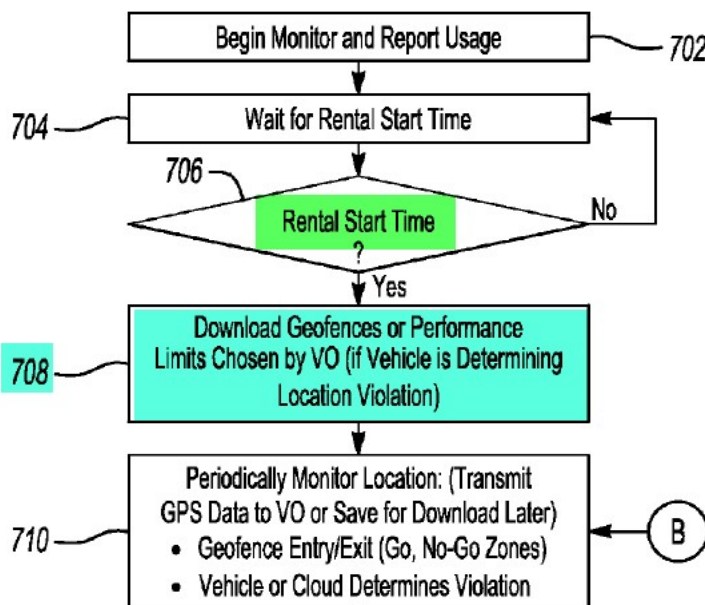


Fig-7A

71A

EX1004, Fig. 7A (annot.).

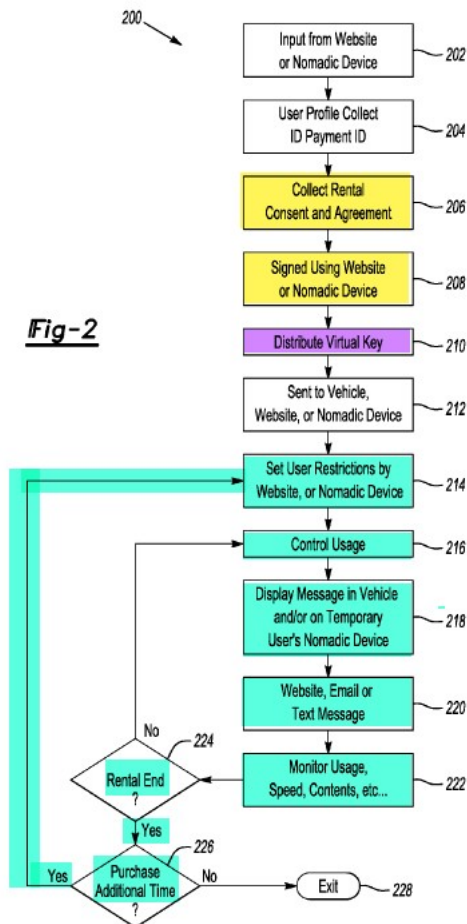
Accordingly, not one of the alleged “restrictions” identified by Petitioners and Dr. Almeroth “are sent with the request to generate a virtual key.” Pet. 15 (citing EX1004, ¶¶ 38, 40, 51, 73, 75); EX1003, ¶¶ 119-120 (verbatim); EX2029, ¶ 76.

B. *Kleve* flatly contradicts Dr. Almeroth’s conclusion that “rental agreement restrictions were sent with the request.”

Petitioners and Dr. Almeroth repeatedly err in concluding that “rental agreement restrictions were sent with the request” this notion is fundamentally belied by *Kleve*’s specific and discrete solution “to enforce compliance with rental agreement terms.” Pet. 15; EX1003, ¶¶ 120-121; EX1004, ¶ 51. This independent functionality would be wholly unnecessary were those terms somehow included in the set up or distribution of the virtual key. EX2029, ¶ 49.

Likewise, it would not be necessary for *Kleve* to have the Vehicle Owner input “user restrictions” at **step 214**—such as “load weight restrictions” (*id.* ¶ 40) and the “rental period end time restriction” (*id.* ¶ 43)—if those *same restrictions*, agreed to as part of the parties’ **rental agreement**—*id.*, ¶¶ 84 (“terms and conditions of the rental period include “load weight restrictions”), 89 (same), 38 (parties may agree to “terms and conditions for the rental period”)—were already sent in *Kleve*’s set up and distribution of a virtual key, at step 210. *See* sections III.C.-D., *supra*; EX2029, ¶ 52.

Further, as described in section III.C.4., above, Dr. Almeroth's conclusion makes no sense where *Kleve* teaches that in order to *extend* a rental period, a user may purchase additional time at step 226, and, by doing so, at step 214, "a new rental period end time restriction" is "update[d]." *Id.*, ¶ 43, Fig. 2; EX2029, ¶ 51.



EX1004, Fig. 2 (showing arrow linking step 226, "yes," back to step 214). By contrast, *Kleve*'s extension of the rental period, at step 226, does not "update"

Kleve's virtual key (step 210) or its rental agreement (steps 206, 208). *Id.*; EX2029, ¶ 69.

C. That a virtual key credential enables the keyless drive system during a given rental period does not suggest the “rental period” is included in the virtual key itself.

As detailed above, *Kleve*'s system includes solutions for the Owner to allow access and/or a drive-away, during the rental period, without having “the rental period” included in the set up or distribution of a virtual key. *See* sections III.B.-D., *supra*; EX2029, ¶¶ 77-83.

1. Rental agreement terms are not any “condition of use” included in the virtual key because a Temporary User uses the already-generated, already-distributed virtual key to access the vehicle and thereafter, “agree to rental terms.”

Rental agreement terms cannot be included in either a request for a virtual key or the generation of a virtual key where *Kleve* teaches that a Temporary User need not “agree to rental terms” until *after* the virtual key has been generated and distributed. EX1004, ¶ 65; EX2029, ¶¶ 77-78. Petitioners point to a Vehicle Owner's entry of authorization credentials “to set up a virtual key” (step 502) (Pet. 10-11), and “[a]t step 508, the Temporary User may use their virtual key credential to access the vehicle” (Pet. 14; EX1004, ¶ 67). However, *Kleve* explicitly discloses that the Temporary User may “agree to rental terms” *at the vehicle—after* the virtual key has been distributed to the Temporary User, and *after* the Temporary

User has utilized the virtual key to access the Owner's vehicle. EX1004, ¶¶ 65, 67; EX2029, ¶ 78.

There is no dispute that by the time the virtual key is distributed to the Temporary User the virtual key has already been generated (EX2030, 58:8-59:10), and there is no dispute that Temporary User cannot access the Owner's vehicle without first having received and used the already-distributed "virtual key credential" (Pet. 13-14 (citing EX1004, ¶ 67)). Accordingly, where a Temporary User may "agree to rental terms" *after* accessing the vehicle, there can be no rental agreement terms in this already-generated, already-distributed, and already-used virtual key. EX2029, ¶¶ 77-78.

2. *Kleve* cannot enforce compliance with rental agreement terms until after the virtual key is generated and distributed, where a Temporary User may "agree to rental terms" after accessing the vehicle with the virtual key.

As detailed in Section III.C., above, *Kleve* discloses a solution "to enforce compliance with the rental agreement terms," in which the Owner has "the options to set rental restrictions," at step 214, after the virtual key has been generated and distributed. EX1004, ¶¶ 51, 40; *see supra* sections III.C. By contrast, the virtual key itself cannot "enforce compliance with the rental agreement terms," where the virtual key is already generated, distributed to the Temporary User, and used by the Temporary User to access the vehicle—all *before* the Temporary User has even

agreed to rental terms. EX1004, ¶¶ 67 (“Temporary User may use their virtual key credential to access the vehicle”), 65 (Temporary User “may agree to rental terms” “at a vehicle with the use of hardware integrated with the VCS”); EX2029, ¶ 79.

Apart from the optional Owner-set restrictions, “chosen by VO” and “set” by the Owner at step 214—*after* the generation and distribution of the virtual key—*Kleve* offers no other option for “controlling usage to enforce compliance with rental agreement terms.” EX1004, ¶¶ 51, 40, 75, Figs. 7A, 2. Indeed, those “vehicle restrictions,” *Kleve* instructs, are not set before the virtual key is distributed, but are instead “initially set by the Owner at the beginning of the rental term.” *Id.*; *id.*, ¶¶ 43, 75 “restrictions assigned by the Vehicle Owner at the start of the rental period”). The performance limits chosen by the Owner are downloaded to the VCS at **step 708**, *after* “the Temporary User initiates the rental event,” at **step 706**. *Id.*, ¶ 75, Fig. 7A.

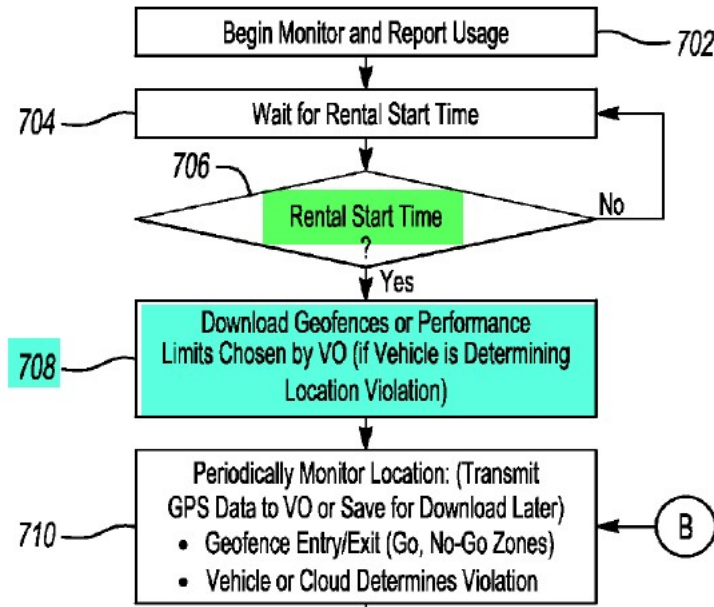


Fig-7A

716

Id., Fig. 7A (annot.). Because the virtual key is already generated, distributed to the Temporary User, and used by the Temporary User to access the vehicle—all before the beginning of the rental term—the virtual key cannot include any restrictions, let alone any rental agreement restrictions. *Id.*, ¶¶ 43, 51, 75, Figs. 7A; EX2029, ¶ 79. *Kleve*’s system will monitor and control usage—i.e. enforce any rental agreement terms—according to the “vehicle restriction limits initially set by the Owner at the beginning of the rental term.” EX2029, ¶ 80.

3. During cross examination, Dr. Almeroth admitted that *Kleve*’s virtual key is not “always generated after the rental agreement.”

Kleve teaches that its “system *may* generate a virtual key” after the parties sign a consent agreement. EX1004, ¶ 68. By *Kleve*’s express disclosure, the virtual key is not “always generated after the rental agreement,” as Dr. Almeroth initially

claimed (EX1003, ¶ 120). On cross examination, Dr. Almeroth conceded that the key is not always generated after the rental agreement. EX2030, 27:5-10 (“I don’t think Kleve is limited in all of its embodiments where a POSITA reading Kleve would understand that every embodiment, the only way the e-key could be generated is after the rental agreement”); *id.*, 27:21-28:1.

Kleve’s system expressly teaches that a virtual key is generated and distributed to the Temporary User *before* there is a rental agreement between the parties. EX2029, ¶ 80. For example, after step 502, relied upon by Petitioners as the alleged request to generate an e-key, *Kleve*’s system has already generated and distributed the virtual key used by a Temporary User to access the vehicle at which the Temporary User agrees to rental terms. *Id.*; EX1004, ¶¶ 65, 67; Pet. 10-11.

Accordingly, *Kleve* itself belies the notion that a virtual key is “always generated after the rental agreement.” Paper 10 at 41.

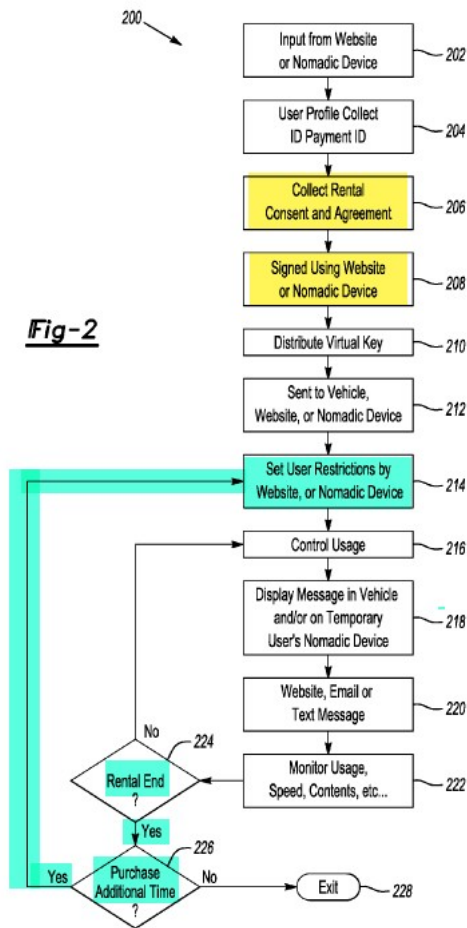
4. *Kleve* has the Vehicle Owner send the credential to the vehicle “at rental time.”

As described above, *Kleve*’s disclosure that the Vehicle Owner send the virtual key credential “at rental time,” would be wholly unnecessary were the “rental period” itself already included in the request for, or distribution of, a virtual key. *See* sections III.B., IV.A.-B., *supra*; EX2029, ¶ 82. *Kleve* teaches that a virtual key credential may allow “entry of the vehicle.” EX1004, ¶¶ 48, 67. *Kleve* teaches

that the “Vehicle Owner sends the credential to [the] vehicle” (e.g., by the server) “at rental time,” (*id.*, Fig. 5, ¶ 66). Had the request for a virtual key already included the agreed-upon rental period, it would be unnecessary for *Kleve* to direct the Vehicle Owner to send the virtual key credential “at rental time.” *Id.*; EX2029, ¶ 82.

5. *Kleve* teaches a distinct solution for monitoring, controlling and updating the rental period—one that does not involve any such “restriction” in the virtual key itself.

As shown in section III.D., above, *Kleve* offers numerous examples in which the virtual key’s operability is not at all dependent on the “rental period” agreed upon in the rental agreement, but instead: (1) the virtual key is terminated before a rental end time, e.g., due to extreme usage which exceeds a “user restriction” set after the set up and distribution of the virtual key (*id.*, ¶ 53, Fig. 3B) or due to a detected accident (*id.*, ¶¶ 79, 53, Fig. 7B), (2) the rental period end time may be updated where extended time is purchased and authorized (*id.*, ¶ 43, Fig. 2), or (3) the virtual key is terminated *after* the agreed upon rental period has expired (*id.*, ¶¶ 43, 53-55, 79-80); EX2029, ¶ 83. At bottom, *Kleve*’s solution enforces the end of the rental period, not by including the agreed upon period into the virtual key itself, but by the Owner’s input, **at step 214**, of a “rental period end time restriction.” EX1004, ¶ 43; EX2029, ¶ 83.



EX1004 at Fig. 2 (annot.). Accordingly, while *Kleve* teaches that a virtual key credential allows the Temporary User to access and/or drive the vehicle, the rental period is not restricted or enforced via the virtual key itself, but is controlled by the Vehicle Owner alone, when the “rental period end time restriction” is “set” by the Owner as a “user restriction,” “at the beginning of the rental term.” *Id.* at Fig. 2, ¶¶ 43, 40; EX2029, ¶ 83.

6. Dr. Almeroth’s obviousness opinions ignore and even contradict *Kleve*’s solution for enforcing rental agreement terms and conditions.

By its express disclosure of a solution “to enforce compliance with the rental agreement terms”—i.e., setting “user restrictions” at step 214, which may be monitored, controlled and updated—*Kleve* itself flatly contradicts Dr. Almeroth’s obviousness opinions. *E.g., id.*, ¶¶ 40-41, 43, 51.

a. Dr. Almeroth ignores the enforcement solution already achieved by *Kleve*’s steps 214-226.

Dr. Almeroth’s logic is fundamentally flawed. While he opines that “a POSITA would have understood that the rental agreement restrictions are also sent with the request *so that* the virtual key could be associated with said restrictions” (EX1003, ¶ 120 (emphasis added)), *Kleve*’s solution already “associates” the “user restrictions”—initially set at the beginning of the rental term—with the system’s functions to control, monitor and update restrictions, via steps 214, 216, 218, 220, 224, and 226. *Id.*, ¶¶ 40-43, Fig. 2; *see* section III.C., *supra*; EX2029, ¶ 84. Apart from hindsight knowledge that the ’188 Patent successfully included a “condition of use” in the request to generate and the generation of the e-key itself, Dr. Almeroth never offers any benefit that would be achieved by “associating” *Kleve*’s restrictions with its virtual key on top of *Kleve*’s already-existing solution to control usage according to restrictions initially set at the beginning of the rental term. *Id.*;

EX2029, ¶ 85. Citing to benefits already achieved by *Kleve's* solution is “insufficient to present a prima facie case of obviousness.” *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992); *see also Opticon Medical AB v. Cochlear Ltd.*, IPR2019-00975, Paper 154 at 29-30 (P.T.A.B. Oct. 14, 2020) (finding that the Petition’s proposed modification was based on improper hindsight and had not persuasively proven its stated rationale for the proposed modification).

Nor does Dr. Almeroth explain how modifying *Kleve's* virtual key, to associate restrictions from the parties’ agreed-upon rental agreement, would ensure the Owner retains the full discretion and control over vehicle usage, which is already taught by *Kleve's* solution. *See id.*; *see also In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988) (“[t]here must be a reason or suggestion in the art for selecting the procedure used, other than the knowledge learned from the applicant's disclosure”); *In re Ratti*, 270 F.2d 810, 813 (CCPA 1959) (holding the suggested modifications “would require a substantial reconstruction and redesign of the elements shown in [a prior art reference] as well as a change in the basic principles under which [that reference’s] construction was designed to operate”); EX2029, ¶ 86.

Also flawed is Dr. Almeroth’s conclusion that “the rental agreement restrictions are also sent with the request ... *which allows* the restrictions to be

monitored and enforced.” EX1003, ¶ 121 (emphasis added). This statement is contradicted by *Kleve*. *Kleve*’s system *already* “allows restrictions to be monitored and enforced;” that is, *Kleve*’s system monitors and enforces the “user restrictions” that are set by the Owner at step 214. EX1004, ¶¶ 40-43, 51, Fig. 2; *see supra*, section III.C.; EX2029, ¶ 87.

Dr. Almeroth repeats this error when he opines that including restrictions with the virtual key request would “allow[] the server to monitor and enforce the restrictions, which [] are important aspects of *Kleve*’s system.” EX1003, ¶ 122. But again, because *Kleve*’s system already “allows” the monitoring and enforcement of the “user restrictions” set by the Vehicle Owner at step 214, Dr. Almeroth’s opinion here serves no purpose but to improperly reconstruct elements of the ’188 Patent. EX2029, ¶ 88.

Dr. Almeroth again ignores the existence of *Kleve*’s solution to “enforce compliance with the rental agreement terms” (EX1004, ¶¶ 51, 40-43, Fig. 2), for example, when he concludes that “a POSITA would have been motivated by the well-known benefits of monitoring and enforcement, including increased reliability and efficient [sic] of the rental system by encouraging and inducing renters to comply with the restrictions or pay a penalty if the restrictions are violated.” EX1003, ¶ 122. Dr. Almeroth failed to offer any explanation of why, despite

Kleve's preexisting solution “to enforce compliance with the rental agreement terms,” a POSITA would “increase[] reliability and efficien[cy]” by *adding a second means of “monitoring and enforcement”* to *Kleve's* solution. EX2029, ¶ 89. This is because, apart from hindsight reasoning, there is no such explanation.

Similarly, Dr. Almeroth proposes to “include the restrictions with the virtual key request,” “because that would provide the well-known benefits of associating the virtual key with the restrictions such that the central system knows which restrictions must be enforced with which virtual keys.” EX1003, ¶ 122. But as described above at section III.C., *Kleve's* system already “*knows* which restrictions must be enforced,” according to each of the “user restrictions” input by the Vehicle Owner at step 214, and any “control parameters” on which those restrictions may be based. *E.g.*, EX1004, ¶¶ 40-41, 51, Figs. 2, 3B, 7A, 7B; EX2029, ¶ 90. For example, *Kleve's* solution enforces those restrictions and parameters by “remedial actions” undertaken by the vehicle. *Id.* It makes no sense to include *another means of enforcing restrictions*, i.e., by including restrictions in the virtual key. EX1003, ¶ 122; EX2029, ¶ 90.

b. *Kleve's* solution renders nonsensical Dr. Almeroth's hindsight demands to include rental agreement restrictions in the virtual key.

Kleve's system of enforcing compliance with rental agreement terms ensures that *only the Vehicle Owner* may set user restrictions that the vehicle will monitor and/or control via remedial actions. EX1004, ¶¶ 40, 51, Fig. 7A; EX2029, ¶ 92. While *Kleve's* system provides both parties—the Temporary User and the Vehicle Owner—with the opportunity to negotiate, agree to and ultimately sign a rental agreement (EX1004, ¶¶ 38, 84, 89), *Kleve* puts the “controlling usage” discretion solely in the hands of *the Vehicle Owner* (*id.*, ¶¶ 40-41, 51, Figs. 2, 7A); EX2029, ¶ 92.

First, *Kleve* allows only the Vehicle Owner to decide whether to control usage, by inputting “user restrictions,” available at step 214, and second, *Kleve* lets only the Vehicle Owner choose which “user restrictions” will best protect the Vehicle Owner's asset. EX1004, ¶¶ 40-41, 51, Figs. 2, 7A; EX2029, ¶ 92. *Kleve* makes clear that this system design is not the result of any mere coincidence, but is instead purposefully designed to permit *only Vehicle Owners* to input restrictions to control usage. *Id.*, ¶¶ 51, 43 (restriction limits initially set *by the Owner* at the beginning of the rental term”), 75 (“restrictions assigned *by the Vehicle Owner* at the start of the rental period”); EX2029, ¶¶ 91-92. As *Kleve* explains, “[c]ontrolling

usage to enforce compliance with the rental agreement terms may be of more importance to a vehicle rental micro-business owner as this may be the only vehicle the Owner possesses.” EX1004, ¶ 51.

For example, *Kleve* dictates that the “performance limits *chosen by the VO [Vehicle Owner]*” (*id.*, Fig. 7A) (emphasis added) are downloaded by the vehicle, and monitored by the vehicle, “alerting the vehicle owner if the driver enters an area *deemed to be prohibited by the owner*” (*id.*, ¶ 75) (emphasis added). Likewise, *Kleve* teaches that “the monitoring of the vehicle’s location may be done to reassure the Vehicle Owner that their asset is being driven in an approved manner and area.” *Id.*, ¶ 76. *Kleve* leaves no room for ambiguity that the “user restrictions,” which may be set by the Vehicle Owner, are intended to provide the Vehicle Owner alone with the discretion and flexibility to monitor and control their asset in the manner the Vehicle Owner deems appropriate. EX2029, ¶ 91.

To accept Dr. Almeroth’s opinion, therefore, would ignore *Kleve*’s express design and purpose of having the Vehicle Owner—and the Vehicle Owner alone—control vehicle usage. EX2029, ¶¶ 91-92.

D. Because Petitioners rely on *Kleve* alone for alleged disclosure of “the condition of use” of independent claim elements 1[b] / 16[b] / 19[b], each of the challenged claims must be upheld.

Kleve also fails to teach or suggest “generating, by the server, the e-key, the e-key being assigned with the condition of use of the vehicle,” as required by elements 1[b] and 19[b] or “generating, by the server, the e-key, the e-key being associated with the condition of use of the vehicle,” as recited by element 16[b]. EX1001, claim elements 1[b], 16[b], 19[b]; EX2029, ¶ 93. For both grounds 1 and 2, Petitioners rely on *Kleve* alone for alleged disclosure of the recited “condition of use of the vehicle” and Petitioners rely on the very same “restrictions” of *Kleve*—restrictions which may not be set until after the distribution of the virtual key—as the antecedent “the condition of use of the vehicle” for elements 1[b] / 16[b] / 19[b]. EX1001, claims 1, 16, 19; *see* Sections IV.A.-C., *supra*. For ground 2, Petitioners propose to add the *Sekiyama* reference for alleged disclosure of a server’s generation of an e-key, but even if *Sekiyama* did disclose that limitation, Petitioners still rely on *Kleve* alone for the recited “the e-key being assigned / associated with *the condition of use of the vehicle*.” Pet. 16 (ground 1, element 1[b]), 36-37 (ground 2, element 1[b]); Pet. 35 (“[t]o the extent that PO argues *Kleve*’s server does not generate e-keys...”), 37 (“*Sekiyama* discloses a server that generates an e-key”); EX2029, ¶ 94.

For each of the same reasons set forth in Sections IV.A.-C., above, Petitioners have failed to show that *Kleve*'s "restrictions" are included in any virtual key, let alone assigned or associated with that virtual key. Petitioners' addition of the *Mottla* and *Patenaude* references for grounds 3 and 7 do not cure *Kleve*'s failure for this element, and Petitioners offer no argument or analysis to the contrary. EX2029, ¶ 95.

Petitioners' failure to demonstrate any teaching or suggestion of independent claim elements 1[b], 16[b] and 19[b] therefore provides an independent basis for upholding each of the claims challenged by grounds 1-3 and 7.

E. Claim 17 must be upheld because *Kleve* fails to disclose or suggest a server examining inputs or settings to "identify patterns," let alone that server "learning the patterns ... to provide recommendations to the recipient..."

In addition to *Kleve*'s failure to disclose elements 1[a-b], 16[a-b], and 19[a-b], as demonstrated in Sections IV.A.-D., above, claim 17 must be upheld because *Kleve*'s "stored frequent destinations," along with "radio presets, and seat and mirror position" are merely the Temporary User's "vehicle preset settings," "preset" by the User and transferred directly from the User's phone. EX1004, ¶¶ 50, 72; EX2029, ¶¶ 96-97. These "preset settings" fail to disclose or suggest that "inputs or settings" had been "examined to identify patterns," let alone a server "learning the patterns"

to provide recommendations ... for settings,” as recited in claim 17. EX1001, 51:39-47; EX2029, ¶¶ 96-98.

While Dr. Almeroth makes the unsupported claim that *Kleve*’s “frequent destinations” (EX1004, ¶ 50) is somehow “indicative of settings made during use with the e-key,” (EX1003, ¶170), *Kleve* teaches the opposite. EX2029, ¶ 97. As an initial matter *Kleve* makes clear “frequent destination” are “preset settings” as opposed to settings “made during use with the e-key.” EX1004, ¶ 50; EX2030, 88:2-5 (agreeing these are “preset settings”); EX2029, ¶ 97. *Kleve*’s use of the term “preset” also militates against any teaching or suggestion that these settings are somehow examined, identified, learned and recommended by a server. EX1004, ¶ 50; EX2029, ¶ 97.

Moreover, *Kleve* makes clear that the Temporary User’s settings are sent to the vehicle when the Temporary User pairs their nomadic device (e.g. phone) with the VCS of the vehicle, as opposed to suggesting any server operation involving the Temporary User’s settings. EX1004, ¶ 72; EX2029, ¶ 98. Indeed, Dr. Almeroth states that “*Kleve* discloses that the server can provide stored frequent destinations sent to the [vehicle],” but *Kleve* never discloses or suggests the server “storing” the Temporary User’s settings. EX1003, ¶ 171. Instead, as explained by *Kleve*, these

preset settings are transferred *directly from the Temporary User's phone*—by pairing the nomadic device to the vehicle's VCS. EX1004, ¶ 72; EX2029, ¶ 98.

Equally unsupported is Dr. Almeroth's conclusion that “a POSITA would have considered it obvious for the server to identify patterns in the vehicle location data to learn frequent destinations.” EX1003, ¶ 171. But *Kleve* teaches away from such an idea, relying instead on the Temporary User to already have “preset settings,” which are stored to their phone, and directly transferred to the vehicle from that phone. EX1004, ¶¶ 50, 72; EX2029, ¶¶ 99-100. Rather than suggest any operation to examine or learn a Temporary User's “frequent destinations,” *Kleve* discloses that the Temporary User's stored “navigation routes,” saved to their phone, are to be sent to the vehicle when the Temporary User pairs their phone with the vehicle's VCS. EX1004, ¶ 72; EX2029, ¶¶ 99-100.

Accordingly, *Kleve*'s “frequent destinations,” relied upon by Petitioners and Dr. Almeroth, are merely “preset settings,” not “made during use with the e-key,” and those preset settings are transferred directly from the User's phone to the vehicle, negating any suggestion that the server examines, identifies, learns or recommends these settings. EX1004, ¶¶ 50, 72; EX2029, ¶¶ 96-100. Claim 17 must be upheld because *Kleve* fails to disclose or otherwise render obvious the recited server

operations of examining inputs or settings to identify patterns, learning the patterns, or providing recommendations based on those learned patterns. EX1001, 51:39-47.

V. The *Zaid* Reference (EX1008)

Zaid (EX1008) is a patent publication titled “Vehicle Access Control Services and Platform.” The inapplicability of *Zaid* is manifest in the reference itself. *Zaid* is not directed to any request to a server to generate an e-key, let alone any request to generate an e-key “from a user via a user account that has a vehicle associated therewith.” EX1001, claims 1, 16, 19; EX2029, ¶ 63. Nor does *Zaid* disclose or suggest a request to generate an e-key that includes a condition of use of the vehicle, which is set by the user via the user account that has a vehicle associated therewith. *Id.* Instead, *Zaid* discloses that a prospective vehicle renter can log into their Facebook or a similar social networking site, view an ad for a vehicle placed by a vehicle owner, and if interested, the renter can click on that ad and make a reservation. EX1008, ¶ 72. Once the renter makes the reservation, that reservation is relayed as an encrypted message. *Id.*, ¶¶ 125-127. But, contrary to the Petition’s argument, this encrypted reservation message, relayed from the server, is not the generation of an e-key. EX2029, ¶¶ 63, 102, 104-109. Instead, the encryption disclosed by *Zaid* merely converts the reservation message from one form to another. *Id.* Nor is the renter of *Zaid*, who makes a reservation by first

clicking on an ad on their Facebook page, a “user” making a request to generate an e-key via a “user account that has a vehicle associated therewith.” *Id.*, ¶¶ 112-118. And there is nothing in *Zaid* suggesting that this renter—or *any* user—has the capability to set a condition of use of the vehicle via that same user account that has a vehicle associated therewith, as the challenged claims require. *Id.*, ¶¶ 119-122.

As the Board agreed in its Institution Decision, *Zaid* does not disclose or suggest any “request from a user via a user account that has a vehicle associated therewith... to generate an ... e-key” recited by all independent claims of the ’188 patent. *See* Section VI.

VI. The *Zaid*-based grounds fail to establish obviousness because *Zaid* does not teach or suggest at least claim elements 1[a], 16[a] and 19[a].

For grounds 4-6, the Petition relies on *Zaid*’s “vehicle reservation” as the claimed “request from a user via a user account that has a vehicle associated therewith ... to generate an electronic key.” Pet. 44 (citing EX1008, ¶¶ 72, 77, 79, 125). This underlying premise fatally infects Petitioners’ effort to satisfy independent claim elements 1[a], 16[a], and 19[a], because *Zaid*’s reservation—made by a potential renter’s Facebook or other social networking site, not any account of a vehicle owner—fails to disclose or suggest “the request from a user via a user account that has a vehicle associated therewith ...,” required by claims 1, 16 and 19.

As the Board already agreed, “the vehicle renter uses their own account to make a reservation,” but *Zaid* provides no “teaching or suggestion that such a user account would encompass the vehicle owner, nor [] any suggestion that request would emanate from the vehicle owner.” Paper 10 at 53. Further, “to the extent Petitioners point to some different request sent by a vehicle owner, Petitioners failed to show that *Zaid* teaches or suggests such a request, must less one that meets all of the other requirements of element 1[a] / 16[a] / 19[a]. *Id.* at 53.

For grounds 4-6, Petitioners add *Harris*, *Mottla*, and *Patenaude*, only with respect to other independent claim elements or dependent claims. These additional references do not cure any of the deficiencies of *Zaid* with respect to missing limitations of independent claims 1, 16 and 19, and Petitioners offer no argument to the contrary. As such, each ground failed its burden of proof, and the challenged claims must be upheld.

A. Petitioners fail to show that *Zaid*’s “reservation,” made via a *renter*’s social media account, teaches or suggests the claims’ recited elements: “a request from a user via a user account that has a vehicle associated therewith ... the request includes a condition of use of the vehicle as set by the user via the user account.”

Having pointed to a mere rental reservation as the alleged “request ... to generate an e-key”—*it is not*—Petitioners further failed to show that such a reservation is “from a user via a user account that has a vehicle associated

therewith” or that *Zaid*’s reservation “includes a condition of use of the vehicle as set by the user via the user account.” Each of the independent claims of the ’188 patent require a server receiving a request that is not only “*from* a user via a user account that has a vehicle associated therewith” but also that the request’s inclusion of “a condition of use of the vehicle” must be “set by *the user*” who made the request to generate the e-key and the condition of use must also be set via “*the user account*” from which the request was made. EX1001, claims 1, 16, 19.

Each of the claims challenged in grounds 4-6 must be upheld because the Petition failed to show that *Zaid* teaches or suggests these elements required of each independent claim. Petitioners do not argue that *Harris*, or any other reference, renders obvious any of these independent claim elements. Pet. 41-43, 47.

1. ***Zaid*’s disclosure of a Facebook account, accessed by a vehicle renter, does not disclose or suggest any “user account that has a vehicle associated therewith” via which a user requests a server to generate an e-key, as Petitioners allege.**

Petitioners cobble together disparate, unrelated disclosures of *Zaid* in an attempt to meet the required elements of 1[a]/ 16[a]/ 19[a]. Petitioners’ theory is that the claimed “user account that has a vehicle associated therewith” is a vehicle owner’s Facebook or other social networking account. Pet. 41. But Petitioners do not attempt to show that the alleged server receives a request to generate an e-key

via *that* “user account,” as claimed. This is because, as shown below, *Zaid* teaches that a vehicle reservation—the alleged “request”—is *not* sent via a vehicle owner’s Facebook account, as the Petition contends.

Petitioners allege that *Zaid* discloses or renders obvious a “vehicle owner (*user*) that can use a user account (such as through Facebook) to facilitate a vehicle rental reservation...” Pet. 41 (emphasis in original). But the alleged “user account” identified in the Petition is that of the renter, not the vehicle owner. EX1008, ¶ 72. *Zaid* instructs that a vehicle owner can *advertise their vehicle* on social networking sites, like Facebook, but it is the renter of the vehicle—not the vehicle owner—that “must first *log into the social networking website* before he/she can view the advertisement and *make* [*sic*, a] *reservation*.” EX1008, ¶72. The relied upon disclosures of *Zaid* make clear that “the user” referred to here is the renter, that is, the *person who makes the reservation*—not the vehicle owner, as Petitioners erroneously contend. *Id.* Further compounding Petitioners’ misunderstanding, the “user account” of *Zaid*, e.g. Facebook, is the *renter’s* account, not the owner’s. *Id.* Petitioners’ misunderstanding of *Zaid* renders their theories for *Zaid*-based grounds meritless.

While *Zaid* teaches that a vehicle owner may have an *advertisement* appear on *others’* Facebook accounts—i.e. wherein the vehicle reservation is *advertised to*

prospective renters—no POSITA would understand these disclosures to suggest that a *vehicle owner* must first log into his/her own Facebook account “before he/she can view the advertisement” of *their own vehicle* available for rent. EX1008, ¶ 72. Nor would a POSITA conclude that the vehicle owner “must first log into” *their own* Facebook account to “*make [a] reservation*” of *their own vehicle*. *Id.* Advertising on social networking sites, such as Facebook, was commonplace at the time of the invention, and a POSITA would understand that social networking sites allowed advertisers to track data of account users who, e.g., “view the advertisement” and click on such an ad, e.g., to “make [a] reservation.” See EX1008, ¶ 72. Therefore a POSITA would understand that a vehicle owner may have an advertisement of their vehicle on others’ Facebook accounts, and may even obtain data to maintain some “control over the type of user the owner is lending/sharing/renting [a] vehicle to,” but when a user clicks on that ad to “make a reservation,” there is no reason to conclude this reservation is *from the owner via the vehicle owner’s account*, as Petitioners allege. Pet. 41, 44-45. Reality notwithstanding, Petitioners and Dr. Almeroth make the leap that “because the owner advertises when the vehicle is available for reservation, and the owner has ‘control over the type of user the owner is lending/sharing/renting [a] vehicle to’” “[a] POSITA would understand that the vehicle reservation request is sent to the

server **from the owner's user account.**" Pet. 44. As shown above, *Zaid* discloses the opposite.

Indeed, *Zaid* teaches away from such a conclusion. No POSITA would understand *Zaid* as teaching or suggesting that *an advertiser/owner*—whether or not they obtain tracking data for the account user who clicks on the ad—"must first log into the social networking website before he/she can view the advertisement" *of their own product*, and likewise require an advertiser/owner to "first log into" their own Facebook account to "make [a] reservation" *of their own advertised product*. EX1008, ¶ 72. The conclusion here of Petitioners and their expert has no basis in fact, nor any connection to the actual disclosures of *Zaid*.

Petitioners' alternative theory, that "a POSITA would have found it obvious that the reservation request is sent by the owner through the owner's account ... [s]ince both the renter and the owner accounts are involved in making the reservation," also fails. Pet. 44. The premise of this theory is wrong: as detailed above, the identified disclosures of *Zaid* do not refer to an "owner account," nor any other account that has a vehicle associated therewith, but instead describe *a renter* who "must first log into the social networking website before he/she can view the advertisement and make [a] reservation." EX1008, ¶ 72. *Zaid* does not present a "mere design choice" between sending a request from a renter's Facebook

account or an owner's account, as Petitioners incorrectly state, at least because *Zaid* presents no "choice" at all—*Zaid* never mentions or suggests any *owner account* from which such a request can be made. Pet. 44; EX1008, ¶ 72.

As an equally untenable alternative theory, Petitioners propose that "[a] POSITA would alternatively consider it obvious for an owner to access the rental application through a user account to associate their vehicle with the account." Pet. 42-43. Again, the relied on "user account" of *Zaid* actually refers to the *renter's* Facebook account or other social networking website account, not the owner's. EX1008, ¶ 72. Another fatal flaw in this theory is that Petitioners point to *Zaid's* "reservation" as the recited "request ... to generate an electronic key," but *Zaid's* disclosed *rental application* offers no means by which to "make [any] reservation." EX1008, ¶ 77. Instead, *Zaid* instructs that its rental application enables updates to be "announce[d]" and "advertise[d]," such as the location of the vehicle or when it will be available for sharing, but does not disclose functionality to make any reservation. *Id.*

Petitioners' failure to demonstrate any disclosure of *Zaid* which teaches or suggests the required request to generate an e-key from a vehicle owner's Facebook page, the alleged user via a user account that has a vehicle associated therewith, is fatal to grounds 4-6 of the Petition. EX1001, claims 1, 16, 19. The Petition offers

no disclosure or argument that any additional reference allegedly teaches or suggests this limitation required of each independent claim.

2. *Zaid* offers no teaching or suggestion that “the request includes a condition of use of the vehicle as set by the user via the user account.”

Petitioners misapprehend claim elements 1[a] / 16[a] / 19[a], which recite that *the same request* to generate an e-key also “includes” a condition of use (“a request ... the request includes...”), *the same user* makes the request and sets the condition of use (“request from a user ... set by the user”), and it is *the same user account that has a vehicle associated therewith* via which the request is made and the condition is set (“via a user account ... as set ... via the user account”). EX1001, claims 1, 16, 19. Instead, Petitioners rely on different “user accounts,” different “users,” and different “requests,” conflating and misstating disclosures of *Zaid* to suggest teachings that simply don’t exist.

For example, as explained above, as a “user account that has a vehicle associated therewith” via which the claimed request is made, Petitioners point to *Zaid*’s disclosure of a renter logging into their Facebook account to view an ad and “make [a] reservation.” EX1008, ¶ 72. But later, for the recited “condition of use is set by the user *via the user account*,” Petitioners say this is set “when the owner ‘announces when the vehicle is available for sharing.’” Pet. 47 (citing EX1008, ¶

77). Paragraph 77 describes an application in which an owner or renter can advertise or announce updated information, such as a location or when the vehicle is returned, but this application does not enable the “reservation” identified as the alleged “a request from a user via a user account ... to generate an e-key,” and therefore cannot be “*the* user account” via which the user sets a condition of use for the vehicle. EX1008, ¶ 77. In other words, for the antecedent “a user account” from which the request is made, Petitioners point to a reservation made via Facebook ads or those on similar social networking sites (Pet. 42 (citing EX1008, ¶ 72)), but for the very same “user account” via which a condition for use is set, the Petition relies on an unrelated “vehicle rental application” where announcements may be made—an application unrelated to Facebook or another social networking site—and, importantly, an application *lacking* the Facebook ad reservation feature Petitioners relied on as “a request from ... *a user account* that has a vehicle associated therewith.” Pet. 47 (citing EX1008, ¶ 77).

Accordingly, Petitioners fail to point to one “user account” which is both the user account via which a request to generate an e-key is made and the user account via which the user sets a condition of use of the vehicle. In any event, Petitioners fail to offer any teaching or suggestion in *Zaid* that an owner making an “announcement” via a “vehicle reservation application” can somehow enable a user

to set a condition of use for a vehicle to be included in a request for an e-key. EX1008, ¶ 77; Pet. 42-47.

Likewise problematic for the Petition is its reliance on different “users” as involved in making the same “request”: Petitioners point to *Zaid* paragraph 72, in which *a renter makes a reservation* (alleged to be the “request [to the server] ... to generate an [] e-key”) and *an “owner [who] ‘announces when the vehicle is available for sharing’”* (alleged to be “the request includes a condition of use as set by the user via the user account”). Pet. 44, 47. These two different individuals cannot be the same “a user” and “the user” recited by claim elements 1[a] / 16[a] / 19[a]. *Id.* Assuming *arguendo* that the reservation is a request to the server to generate an e-key—it is not—there is no teaching or disclosure that the same user who is making the reservation by clicking on a Facebook ad can also use their same social networking account to set a condition for use of the vehicle. EX1008, ¶ 72.

Petitioners’ imaginative contortions of *Zaid* notwithstanding, the Petition failed to show any disclosure suggesting or teaching the recited elements “a request from a user via a user account having a vehicle associated therewith ... to generate an [] e-key ... the request includes a condition of use of the vehicle as set by the user via the user account.” For these reasons, the Petition’s grounds 4-6 all fail and each of the challenged claims therein must be upheld.

B. Petitioners’ failure to show elements 1[a] / 16[a] / 19[a] are obvious in view of *Zaid* infects the remaining independent claim elements 1[b]-[e], [g] / 16[b]-[e], [g]-[h] / 19[b]-[e], [g]-[h].

Each of the independent claims require specific elements for “the e-key” requested and received by the server in elements 1[a], 16[a], and 19[a]. EX1001, claims 1[a] / 16[a] / 19[a] (“receiving, by the server, a request from a user ... to generate an electronic key (e-key) ... the request includes ... information for ... *the e-key* ... the request includes a condition of use of the vehicle as set by the user via the user account”). For each of the reasons set forth in Sections V.-VI.A., above, and credited by the Board in its Institution Decision, Petitioners fail to demonstrate the elements required to meet “the e-key” request of elements 1[a], 16[a], and 19[a]. *See* sections V.-VI.A., *supra*. “The request” to generate “the e-key” of elements 1[a], 16[a], and 19[a] is the antecedent “the e-key” for elements 1[b]-[e], [g], 16[b]-[e], [g]-[h] and 19[b]-[e], [g]-[h]. *Id*; *see* sections V.-VI.A., *supra*. Accordingly, for the same reasons set forth in Sections V.-VI.A., above, Petitioners also fail to show that any reference discloses or suggests “the e-key” recited by independent claim elements 1[b]-[e], [g], 16[b]-[e], [g]-[h] and 19[b]-[e], [g]-[h]. EX1001, claims 1[b]-[e], [g] / 16[b]-[e], [g]-[h] / 19[b]-[e], [g]-[h].

Likewise, Petitioners’ addition of the *Harris*, *Mottla* and *Patenaude* references for grounds 4-6 do not cure *Zaid*’s failure for “the e-key” request of

elements 1[a], 16[a] and 19[a], and Petitioners offer no argument or analysis to the contrary. Accordingly, none of these references cure Petitioners' failure to show "the e-key" recited by claim elements 1[b]-[e], [g], 16[b]-[e], [g]-[h] and 19[b]-[e], [g]-[h].

C. Additional deficiencies of dependent claims.

Claim 12 must be upheld as valid because Petitioners fail to show that any reference discloses or suggests the recited "the e-keys that are generated are associated with the user account, and any one of the generated e-keys are removable from being active via the user account, the user account being used for making the requests to generate the e-key or e-keys." EX1001, claim 12. Petitioners claim that "a vehicle owner (user) that can use a user account (such as through Facebook) to facilitate a vehicle rental reservation ... causes the server to generate an encrypted reservation (e-key)" (Pet 41, 55-56), but the alleged "e-keys that are generated are associated" with the *renter's* Facebook account, not the vehicle owner's, as detailed in sections V.-VI.A., above. Moreover, Petitioners identify Zaid paragraph 131, as alleged disclosure that "any one of the generated e-keys are removable from being active via the user account," as recited by claim 12. But paragraph 131 describes various means by which vehicle access is withdrawn (e.g., time lapse, end of the

reservation, or the phone is out of range), but none of these examples is performed “via the user account”—i.e., via the renter’s Facebook account. EX1008, ¶ 131.

Moreover, because the identified “user account” from which the reservation is made is a renter’s Facebook account, not the vehicle owner’s, there is no merit to Dr. Almeroth’s conclusion that because the vehicle reservation was sent to the server using the owner’s account, later deactivation occurs via the same user account transmission. Pet. at 56; EX1003, ¶ 241. Likewise, Dr. Almeroth’s opinion that “a POSITA would also consider it obvious to deactivate a user account by owner’s request to facilitate cancellation by the owner,” is of no avail because *Zaid* discloses no means by which the vehicle owner can deactivate *the renter’s* Facebook account. Dr. Almeroth’s opinions are without merit.

Claims 14 and 15 must be upheld as valid because *Zaid* provides no disclosure or suggestion of the recited “templates.” EX1001, claims 14, 15. Petitioners point to alleged “use privileges, e.g. use for a period of time,” but the claims require the use of “a template having a set of privileges.” *Id.* *Zaid* offers no suggestion or disclosure of any such templates. As is clear by the express language of the claims, the template is “selectable instead of selecting individual privileges to be associated with the e-key.” EX1001, 3:50-54, claims 14, 15. Accordingly, even if the disclosures of *Zaid* did teach “privileges,” such as the identified “use for

a period of time,” Petitioners’ examples fail to teach or suggest any selectable template having a set of privileges, let alone any “child template,” “teen template,” “valet attendant template,” “spouse template,” “mechanic template,” “friend template,” “guest template” or “custom template.” EX1001, claims 14, 15.

VII. Conclusion

For the foregoing multitude of reasons, all challenged claims should be upheld as valid.

Dated: April 14, 2025

/Jerry D. Tice II/

Jerry D. Tice II

Reg. No. 73,582 (Lead counsel)

Brenda Entzminger

Reg. No. 76,896 (Back-up counsel)

BUNSOW DE MORY LLP

701 El Camino Real

Redwood City, CA 94063

Telephone: 650-318-6774

Facsimile: 415-426-4744

jtice@bdiplaw.com

Counsel for Patent Owner

37 C.F.R. §42.24(d) CERTIFICATION

The undersigned hereby certifies that this submission, excluding the table of contents, table of authorities, exhibit list, certificate of word count, and certificate of service, contains 13,674 words, as determined using the standard word counting feature of the Microsoft Word program.

Dated: April 14, 2025

/Jerry D. Tice II/

Jerry D. Tice II

Reg. No. 73,582 (Lead counsel)

BUNSOW DE MORY LLP

701 El Camino Real

Redwood City, CA 94063

Telephone: 650-318-6774

Facsimile: 415-426-4744

jtice@bdiplaw.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE

Petitioners have consented to e-mail service in this proceeding. Pursuant to 37 C.F.R. §42.6, the undersigned certifies that on April 14, 2025, a copy of the foregoing document was served by email upon the following counsel at the below email addresses:

Finnegan, Henderson, Farabow, Garrett & Dunner LLP
Joshua L. Goldberg – joshua.goldberg@finnegan.com
James R. Barney - james.barney@finnegan.com
Aidan Skoyles - aidan.skoyles@finnegan.com
Nicholas Eitsert - nicholas.eitsert@finnegan.com

QUINN EMANUEL URQUHART & SULLIVAN, LLP
James M. Glass – jimglass@quinnemanuel.com
Quincy Lu - jimglass@quinnemanuel.com
Jeffrey S. Gerchick - jeffgerchick@quinnemanuel.com
Brett Watkins - brettwatkins@quinnemanuel.com

Dated: April 14, 2025

/Jerry D. Tice II/
Jerry D. Tice II
Reg. No. 73,582 (Lead counsel)
BUNSOW DE MORY LLP
701 El Camino Real
Redwood City, CA 94063
Telephone: 650-318-6774
Facsimile: 415-426-4744
jtice@bdiplaw.com

Counsel for Patent Owner