

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KIA CORP.,
TOYOTA MOTOR CORP.,
Petitioners,

v.

EMERGING AUTOMOTIVE LLC,
Patent Owner.

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

**EMERGING AUTOMOTIVE LLC'S
PATENT OWNER SUR-REPLY**

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I. Introduction

All claims require a server that receives a “request ... to generate an electronic key,” and that request must include “a condition of use.” Even after Reply, Petitioners cannot identify any disclosure of *Kleve* that teaches or suggests including any “condition of use” in the alleged “request.” Instead, Petitioners hand-wave, urging that because *Kleve* discloses an alleged request and because the parties agree to a rental period, the request must somehow include a rental period as a “condition of use” so that the virtual key can be associated with the rental period. But there is a reason *Kleve* does not disclose it: as it is undisputed that the server already knows the rental period before it receives the alleged request, it would make no sense to send it to the server again. Petitioners’ expert declined to submit a reply declaration, leaving the opinions of Patent Owner’s expert, Dr. Malek, unrebutted. Indeed, the Reply offers no evidence to refute Dr. Malek’s testimony showing that the request does not include any condition of use and that it would not have been obvious to do so.

The Petition identified terms of a “rental agreement” as the alleged “conditions of use.” Pet., 15. The alleged “conditions” fall into one of two categories: (1) “rental period” and (2) “speed, geographic restrictions, load restrictions, etc.” *Id.* For the second category, Petitioners fail to rebut the fact that such restrictions cannot be included as a “condition of use” in the virtual key nor the request for a virtual key

because *Kleve* unambiguously requires that any vehicle restriction limits—at step 214 or otherwise—are set “initially set by the owner at the beginning of the rental term”—*after* the request has been made and the virtual key has been generated. Likewise, Petitioners offer no rebuttal to the Response’s discrediting of Dr. Almeroth’s testimony that *Kleve*’s virtual key is “always generated after the rental agreement” or that the key is “only operable during the rental period.” While the Board initially credited this incorrect testimony in its Institution Decision, Dr. Almeroth admitted on cross examination that his testimony was incorrect.

As to whether the key or request includes the rental agreement’s rental period, *Kleve*’s server already has that rental period before the alleged request. Though the Institution Decision was preliminarily persuaded that the virtual key will include a rental period—something that *Kleve* does not disclose—that nevertheless does not mean that the alleged *request* to generate the virtual key will include the rental period, as the server already has that information.

In Reply, Petitioners argue that *Kleve* ***should*** include a “rental period” to address alleged security risks and/or “well-known benefits” ***for the virtual key itself***. Even if this argument was supported, and even if true, it would not cure *Kleve*’s failure to teach any ***request*** to generate an e-key where that “includes a condition of use for the vehicle.” At best, Petitioners offer a basis for associating the rental period

with *the virtual key itself*, but not any reason to include any restriction whatsoever in the owner’s *request to the server to set up a virtual key*.

In fact, neither *Kleve* itself, nor Dr. Almeroth, offer any reason to include a rental period or any other restriction in the vehicle owner’s *request* to the server to set up a virtual key that would not already be achieved by merely associating the restriction with the virtual key itself. As Petitioners concede, *the server already “knows”* “the rental agreement between the vehicle owner and temporary user”—before the owner requests that the server set up a virtual key—thereby obviating any need for the owner to re-send to the server the very rental agreement it already has and “knows.” EX1003, ¶ 108 (citing EX1004, ¶ 47 (server generates, stores and maintains rental agreement)).

Each of the Petition’s *Zaid*-based grounds fails. As the Institution Decision concluded, *Zaid*’s “reservation,” made via a renter’s social media account, is not “a user account that has a vehicle associated therewith” via which a user requests a server to generate an e-key. Moreover, *Zaid*’s reservation, made by a renter’s social media account, fails to teach or suggest any “condition of use of the vehicle as set by the user via the user account,” required by all claims.

All claims must be upheld.

II. All *Kleve*-based grounds fail because *Kleve* lacks any request to generate an e-key that includes a “condition of use,” as required by every claim and separately, *Kleve*’s “virtual key” likewise has no assigned “condition of use.”

The challenged claims have two distinct requirements: (1) a “request ... to generate an [e-key],” where the “request includes a condition of use,” and (2) “the e-key being assigned with the condition of use.” *Kleve* does not teach or suggest either. In its Response, Patent Owner disproved each faulty premise relied upon by Petitioners—and credited by the Institution Decision—to allege that a “condition for use” is included in *Kleve*’s virtual key or request for the same.

In Reply, Petitioners actually rely on the undisputed inferiority of *Kleve*’s teachings, repeatedly highlighting, for obviousness, *Kleve*’s failure to teach many of the very “operational security” features and efficiencies enabled by the innovations of the ’188 Patent, and clearly unavailable in the prior art. But Petitioners offer no evidence or expert testimony in Reply to support the flawed bases on which their *Kleve*-based challenges rest. Petitioners’ unsupported attorney argument that *Kleve*’s virtual key, in hindsight, *should*, as a matter of alleged

“common sense,” include a rental period, does nothing to change the lack of disclosure fatal to all *Kleve*-based grounds. Reply, 2, 10, 15.¹

Nevertheless, even if all the Reply arguments—to assign a condition of use in the virtual key itself—were true, they still would fail to teach or suggest including a condition of use in the *request* to generate. Doing so would be nonsensical, as *Kleve* offers no reason to include in a request to the server the very same rental agreement information that the server already has.

¹ Petitioners’ reliance on hindsight modifications based on purported “common sense” fails, as it is based on attorney argument (or at best conclusory expert testimony) and not any prior art document. USPTO Memorandum, July 31, 2025, “Enforcement and Non-Waiver of 37 C.F.R. § 42.104(b)(4) and Permissible Uses of General Knowledge in Inter Partes Reviews” (“applicant admitted prior art (AAPA), expert testimony, common sense, and other evidence that is not ‘prior art consisting of patents or printed publications’ (collectively, ‘general knowledge’) may not be used to supply a missing claim limitation”); 35 U.S.C. § 312(a)(3) (Board shall deny any petition that fails to comply with Rule 104(b)(4)); *see Qualcomm Inc. v. Apple Inc.*, 24 F.4th 1367, 1373-77 (Fed. Cir. 2022) (vacating and remanding to determine whether AAPA improperly formed the “basis” of petitioner's patentability challenge).

- A. Even if the “rental period” or any other alleged “condition” were assigned with the server’s generation of a virtual key, nothing in Reply shows any “condition of use” included in an owner’s *request to set up that virtual key*.**

Petitioners offer no evidence to support the Reply’s hollow attorney arguments, let alone any POSITA-supported evidence of what, Petitioners argue, “no POSITA would ever find desirable.” *Id.*, 15; *id.*, 2 (“nonsensical,” “makes no sense”), 8 (“there must be some mechanism”), 15 (“defies common sense”). Ultimately the Reply provides only a litany of hindsight excuses to modify *Kleve*’s disclosure for “operational security,” “ensuring proper enforcement,” and preventing “unfettered access.” *Id.* But none of that is based on any art of record.

Regardless, these arguments ignore the actual claim requirements, as the Reply provides no reason to include the rental period in the alleged *request* to generate an electronic key. To the contrary, there would be *no reason* for *Kleve*’s request to set up a virtual key—sent by a vehicle owner to the server—to *re-send to the server* the rental period that Petitioners concede is already “known” by the server.

- 1. There is no dispute that, for any rental agreement made after a virtual key request, the “request” cannot include any terms of the nonexistent rental agreement.**

The Institution Decision credited Dr. Almeroth’s testimony that “the virtual key in *Kleve* is always generated after the rental agreement.” Paper 10 at 41.

Id. According to Dr. Almeroth, this “indicates that rental agreement restrictions were sent with the request so that the virtual key could be associated with said restrictions.” *Id.* (citing Ex. 1004 ¶¶ 39, 68 (“Once the rental period has expired the virtual key may be reset and cleared from the VCS.”)). Dr. Almeroth further testifies that the virtual key in Kleve is always generated after the rental agreement. *Id.* (citing Ex. 1004 ¶¶ 39, 68 (“[O]nce the Temporary User selects the vehicle, pays the appropriate amount and signs a consent agreement, then the system may generate a virtual key to distribute to the Temporary User and VCS.”)).

Thus, after review of the arguments and evidence, we find that Petitioner has provided adequate explanation and supporting evidence that Kleve teaches or suggests the challenged claim limitation.

On cross-examination, however, Dr. Almeroth admitted his testimony was wrong. Response, 46-47 (citing EX2030, 27:5-10, 27:21-28:1).

For the alleged “request to generate an electronic key” recited by each independent claim, Petitioners rely on the vehicle owner’s entry of “vehicle authorization credentials based on information received by the Temporary User to set up a virtual key.” Pet., 10-11. However, *Kleve* does not teach that this “request” includes the rental agreement or any of its alleged conditions. Response, 5-43. Instead, *Kleve* provides two different options for the server to obtain the rental agreement: (1) **before** a vehicle owner requests the set up of a virtual key (EX1004, ¶ 62), and (2) **after** the owner requests the set up of a virtual key (*id.*, ¶ 65).

Kleve teaches a rental agreement occurring after a user receives a virtual key and accesses the owner’s vehicle. Here, the Temporary User, who has already used

the virtual key to enter the vehicle, may “agree to rental terms” using the touchscreen display of the vehicle. EX1004, ¶¶ 65, 47, 67. Accordingly, the virtual key has already been generated and has already been distributed, all before the Temporary User may “agree to rental terms” at the vehicle. *Id.*; Response, 43-44. Plainly, the alleged “conditions” of the rental agreement cannot be placed in any request to generate *Kleve*’s “virtual key” when the virtual key exists before any rental agreement.² Petitioners do not dispute that there is no “rental period” included in any request to set up a virtual key *before* the parties even agree to rental terms. Reply, 15 (characterizing *Kleve*’s disclosure as an “optional, alternative embodiment”).

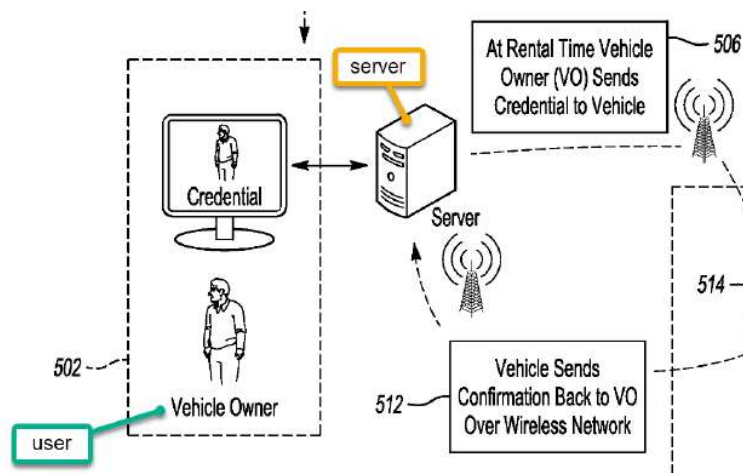
There is no basis in fact for accepting Dr. Almeroth’s now discredited testimony that a key is “always generated after the rental agreement,” and likewise no basis for relying on this inaccurate statement to conclude that a request for a virtual key would include rental agreement terms. Paper 10 at 41.

² Likewise, the “virtual key” itself would not be assigned the alleged “conditions.”

2. For any rental agreement made *before* a virtual key request, the server already has that rental agreement and already knows the rental period—*Kleve* does not teach to send it again and doing so would make no sense.

When a rental agreement is already in place, it would make no sense to provide the alleged “condition” to the server in the “request” because the server already has that information. As Dr. Almeroth admits, *the server already “knows” which rental period to apply*. EX1003, ¶¶ 108-109. Accordingly, there is no need for the Owner’s *request to the server* to set up a virtual key to include any of the rental agreement terms the *server already has and already “knows.”* *Id.* (citing EX1004, ¶ 47 (server generates, stores and maintains rental agreement)).

Dr. Almeroth admitted that *Kleve*’s “website and database are part of a server system” (*id.*, ¶ 104); that the parties’ rental agreement is made through the server-hosted website (*id.*, ¶¶ 99, 104, 106); that the alleged request to set up a virtual key is sent to the server (*id.*, ¶ 107); and at the time of that request, the server already has the parties’ rental agreement, and indeed the server already “knows” which rental agreement terms have been agreed to (*id.*, ¶ 108).



Id., ¶ 107.

Not only does *Kleve* never disclose including any “condition” in the request, by Petitioners’ own admissions *Kleve*’s system would have no need to have the vehicle owner’s **request** re-send to the server the very rental agreement, the very rental period, or any other rental agreement restrictions, because they are **already known to the server**.

Even assuming, *arguendo*, that each of Petitioners’ security concerns were legitimate (e.g., Reply, 15-16, a virtual key “completely unmoored from any restrictions” or “unfettered access”), *Kleve*’s server could associate the already-known rental period with the virtual key itself—readily addressing each of Petitioners’ concerns—without ever having the owner re-send to the server the rental agreement or the rental period. Likewise, *Kleve* can readily achieve Dr. Almeroth’s stated end of “associating the virtual key with the restrictions such that

the central system knows which restrictions must be enforced with which virtual keys”—without including any restrictions in the request to the server, since the server already “knows” these agreed-upon rental agreement restrictions when generating the virtual key. *Id.*; EX1003, ¶¶ 121-123. Each of Dr. Almeroth’s alleged “operational security” issues and “well-known benefits” of associating restrictions with virtual keys would be readily resolved when the server generates the virtual key with the agreement restrictions that the server already knows must be enforced with that virtual key. EX1003, ¶¶ 108, 121-122. Accordingly, even under Petitioners’ theories to modify *Kleve*—having no basis in any asserted reference—the server can generate a virtual key, “enabl[ing] the keyless drive system for the appropriate Temporary User during a given rental period”—all without any need to *re-send* to the server the rental agreement or rental period already known to the server. EX1004, ¶ 38; *see also* Paper 10 at 40 (citing *id.*).

Petitioners allege that some additional “enforcement mechanism” is required prior to step 214—when use restrictions are set—but, again, the rental period is already “known” to the server and can therefore be associated with the server’s generation of a virtual key. Pet., 12-13, Reply, 17. Therefore, Petitioners’ concern over “ensuring proper enforcement of the agreement” does not in any way suggest that the Owner should re-send to the server the rental agreement already known to the server. Reply, 15.

Accordingly, whether the Board accepts Petitioners’ attorney arguments as to what *Kleve* *should* have, but does not disclose, as opposed to Patent Owner’s reliance on *Kleve*’s express teachings of *when* use restrictions are set by the vehicle owner, all *Kleve*-based grounds of the Petition fail regardless. EX1004, ¶¶ 43 (“initially set by the Owner at the beginning of the rental term”), 75 (“performance limitations and restrictions assigned by the vehicle owner at the start of the rental period”). Assuming, *arguendo*, *Kleve*’s virtual key is associated with a rental period, there remains no disclosure of, nor any reason for, *Kleve*’s request to set up a virtual key to also include the rental agreement restrictions already known to the server.

3. Even if the virtual key were “only operable during a rental period,” Petitioners offer no reason for including the already-known rental period in the request to the server.

Kleve provides no fewer than seven examples disproving Petitioners’ misstatement that the virtual key is “only operable during a rental period.” EX1004, ¶¶ 43, 53-55, 79-80. As the Institution Decision credited Petitioners’ misstatement, the Response detailed *Kleve*’s disclosure that the virtual key is terminated beyond the end of the rental period and terminated before the rental end time. Response, 21-26. Petitioners offer no rebuttal on this point, but instead merely repeat the Institution Decision’s reliance on Petitioners’ misstatement. Reply, 1-2, 7.

Kleve's disproving examples notwithstanding, even if the virtual key were "only operable during a rental period," Petitioners still fail to show any reason why the request to set up a virtual key would include the rental period—or any other rental agreement restriction already agreed to—as these are already known to the server. As explained above, neither *Kleve* nor Petitioners disclosed any reason why the owner would need to send information to the server which the server already has.

4. Petitioners cannot identify a single disclosure in *Kleve* that the alleged request "includes a condition of use of the vehicle."

The Petition failed to point to any disclosure of *Kleve* that the alleged request includes any alleged "condition of use." While Petitioners try to supplement the Petition in Reply, all without expert testimony, the attempted supplementation fails.

a. Petitioners misstate Figure 3's disclosure, but even if it were accurate, it would still fail to teach any condition of use sent with the owner's request to set up a virtual key.

Seeking to find some restriction set before "the beginning of the rental term," Petitioners' attorneys made up a disclosure in *Kleve*, arguing that "limitations are pre-assigned before the start of the rental term." Reply, 9. In reality, what *Kleve* states is: "at 326, the VCS may *implement assigned* vehicle control restrictions *during the use of the rental term* by mitigating vehicle performance while

preventing the Temporary User to exceed a limitation set by the Owner.” EX1004, ¶ 51. During the rental term, therefore, the VCS implements restrictions. But *Kleve* dictates such restrictions are “***assigned by the vehicle owner at the start of the rental period.***” *Id.*, ¶¶ 75, 43 (“initially set by the Owner at the beginning of the rental term.” Like Figure 3, Figure 7 teaches that after the Temporary User initiates the rental event, the VCS may “download performance limitations and restrictions assigned by the vehicle owner at the start of the rental period at step 708.” *Id.* Accordingly, the disclosures identified by Petitioners cannot negate *Kleve*’s unequivocal disclosure that “restriction limits [are] initially set by the Owner at the beginning of the rental term.” *Id.*, ¶ 43.

Even if Petitioners’ fictional disclosure were somehow accepted, Petitioners’ argument would still fail to show any disclosure or teaching that *Kleve*’s ***request*** to set up a virtual key ever includes any condition of use. Petitioners’ arguments about the “rental start time” of various figures does nothing to change the fact that by that start time, the virtual key has already been generated and distributed. *See, e.g., id.*, ¶ 75 (vehicle detects start time when Temporary User initiates rental event).

Likewise immaterial to the Petition’s failure is whether Figure 3 shows any “equivalent to step 214” to extend the rental period: whether it does or not fails to contradict *Kleve*’s teaching that restriction limits are “initially set by the Owner at the beginning of the rental term.” Reply, 9; EX1004, ¶ 43. But, it is a fact that

Kleve's description of Figure 3 does teach a mechanism for extending the rental term. *Id.*, ¶ 54, Figure 3. Like Figure 2, *Kleve* ties Figure 3's rental time extension actions to steps *unrelated to the generation of a virtual key*. *Id.* *Kleve* explains, "[i]f the Temporary User has not returned the vehicle at the time the rental period has expired, the system may notify the user if a rental term extension is desired," and if desired, "the Temporary User may be prompted to accept additional rental charges at step 344." *Id.*

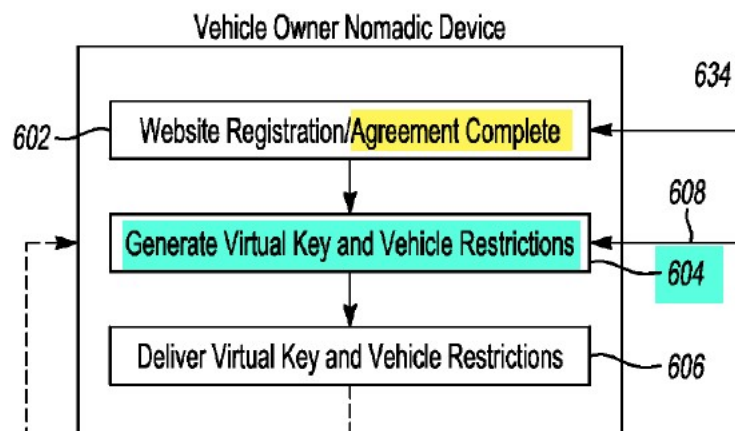
Here again, even if there were no extension mechanism in Figure 3, as there is in Figure 2, such an argument does nothing to show any "condition of use" is sent with the request to set up a virtual key. The Petition's *Kleve*-based grounds fail regardless.

b. *Kleve's* Figure 6 and description thereof do not disclose any request to generate a virtual key, let alone any restriction included in a request.

Petitioners' new reliance on Figure 6 likewise fails and mischaracterizes the disclosure. Petitioners point to step 604 of Figure 6 as an alleged request to generate a virtual key. Reply, 3. But step 604 describes two ways in which the virtual key is ***generated***; never once mentioning any "request" to a server to generate any e-key, or any request at all. EX1004, ¶ 69, Figure 6. More fundamentally, nothing in Figure 6—or anywhere else—suggests that any restrictions are included in a request to set up a virtual key. *Id.* Ultimately, nothing in Figure 6 undermines *Kleve's*

unequivocal teachings that restrictions may not even be “initially” set until *after* a virtual key has already been requested. *Id.*, ¶¶ 43 (“initially ... at the beginning of the rental term”), 75 (“start of the rental period”).

If anything, Figure 6 undermines Petitioners’ contention that the rental agreement restrictions are even assigned with the virtual key. Step 604 of Figure 6—“generate virtual key and vehicle restrictions”—occurs *after* the agreement is already complete. *Id.*, Figure 6:



Petitioners never explain why any vehicle restrictions would be “generated,” at step 604, if the virtual key allegedly includes the rental agreement restrictions. Reply, 3. Likewise unexplained is Petitioners’ demand that *Kleve*’s figures must be identical, when *Kleve* used different figures to highlight different features. EX1004, ¶¶ 11 (Figure 2 as flow chart of entire “vehicle rental micro-business”), 16 (Figure 6 as the “authorization process between a vehicle owner and temporary user”).

- c. ***Kleve offers no disclosure to support Petitioners’ mischaracterization of Figure 7—nevertheless, the starting point of Figure 7A is *after* the virtual key has been generated and distributed.***

Petitioners’ new reliance on Figure 7 is also unavailing and certainly fails to cure the Petition’s deficiencies since the starting point of Figure 7A proceeds *after* the vehicle has been rented and a virtual key has already been generated and distributed. EX1004, ¶¶ 17, 75. Step 702’s “monitoring and report[ing] usage” cannot include the vehicle’s monitoring and reporting of any “performance limitations” or “restrictions assigned by the vehicle owner,” since the vehicle does not even “**download** performance limitations and restrictions assigned by the vehicle owner” until step 708. *Id.*, ¶ 75. Likewise, the “monitoring and report usage” of step 702 cannot be monitoring any performance limitation or use restriction, since that monitoring of performance limitations does not even commence until step 710, and is further detailed in steps 712, 714, 716 and 718. *Id.*, ¶¶ 76-78 (monitoring vehicle’s location, performance limits, driver behavior), 79 (notification of detected driver behavior event).

Petitioners’ mischaracterizations notwithstanding, neither Figure 7A nor its accompanying disclosures ever mention a vehicle owner’s request to set up a virtual key and certainly fail to suggest that this *unmentioned* request should include any “condition of use.” *Id.*, Fig. 7A, ¶¶ 75-80.

Kleve contradicts Petitioners’ specious claim that an added “comma” somehow undermines *Kleve*’s requirement that restrictions are set “at the start of the rental period.” Reply, 16. Figure 7’s step 706 reflects the start of the rental period—once the Temporary User initiates the rental event. EX1004, ¶ 75. Then, **after** the rental time has started (at step 706), the vehicle may “download performance limitations and restrictions assigned by the vehicle owner at the start of the rental period at step 708.” *Id.* Therefore, the rental period has already begun **before** step 708. *Id.* Accordingly, comma or not, *Kleve* makes clear that (1) the performance limitations and restrictions are “assigned by the vehicle owner at the start of the rental period,” (2) the start of the rental period is at step 706—when the Temporary User initiates the rental event and the system detects a rental start time—and (3) only **after** detecting a rental start time, “may” the vehicle’s system download the performance limitations and restrictions assigned by the vehicle owner at the start of the rental period. *Id.* Petitioners’ effort to disparage the Response is disingenuous given the Response’s clear, comma-free recitation of Figure 7’s steps, e.g., Response, 16-17:

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.

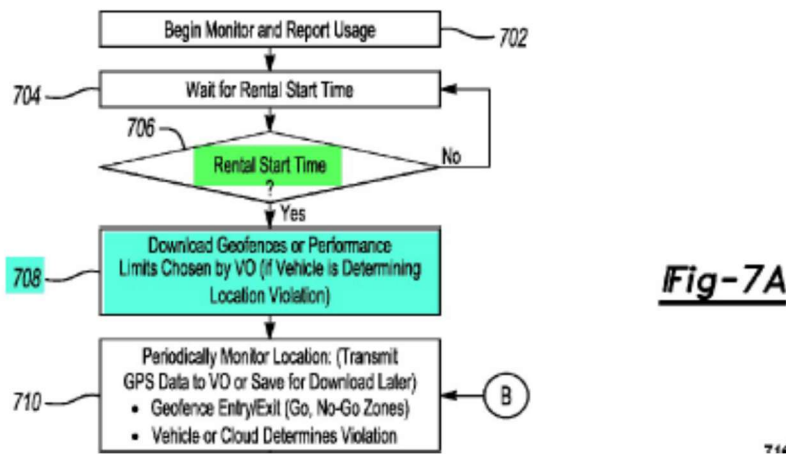


Figure 7 is therefore consistent with the disclosures of Figure 2, requiring that restriction limits are “initially set by the Owner at the beginning of the rental term.” EX1004, ¶ 43.

B. It is undisputed that *Kleve* does not disclose its alleged “e-key” having any alleged “condition of use,” and Petitioners’ hindsight-driven reasons to do so are contrary to *Kleve*’s express teachings.

Kleve never discloses its “virtual key” as having any condition of use. And as demonstrated in the Response, *Kleve* teaches setting and applying use restrictions *after* the virtual key is already generated. Response, 4-26. Nevertheless, contrary to *Kleve*’s express teachings, Petitioners argue that the “virtual key” *should* include

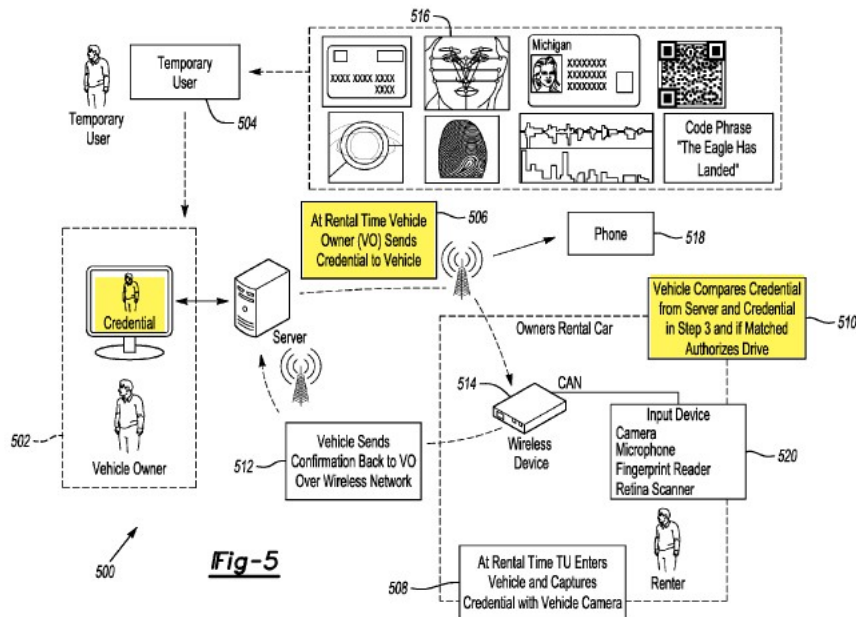
the alleged conditions based on security concerns, although never contemplated by *Kleve*. But it is not surprising this was not contemplated by *Kleve*, as *Kleve* teaches a different mechanism that accounts for any purported “security concerns.”

1. ***Kleve* teaches verification of a credential “*used as a virtual key*” by the Owner sending the “credential” or virtual key “at rental time”—a step which would be unnecessary were the rental period included in the virtual key itself.**

Petitioners resort to hindsight bias to discuss purported security concerns in what *Kleve* did disclose, arguing that it allows “unfettered access.” *E.g.*, Reply, 16. But there are no such security concerns in *Kleve*, or any “unfettered access.” To make this argument, Petitioners pretend there is some security difference between *Kleve*’s virtual key and its “credential,” arguing—without evidentiary support—that the virtual key “allows access” and the “credential” is “an additional security check to ensure the temporary user is who they claim to be.” Reply, 5-6. Again, *Kleve* proves Petitioners wrong. The credential itself is “*used as a virtual key*, or in addition to the virtual key, allowing the Temporary User access to the Owner’s vehicle while enabling a keyless drive-away.” EX1004, ¶ 63.

It is this credential—“used as a virtual key”—which the owner verifies by sending a credential to the vehicle “at rental time.” *Id.*, Fig. 5, ¶¶ 63, 67-68. Then, “[a]t step 508, the Temporary User may use their *virtual key credential to access the vehicle*,” and at “step 510, the vehicle may verify the Temporary User by

communicating with the server to compare the credential and verify the Temporary User's access." *Id.*, ¶¶ 67-68. Therefore, when the credential itself is used as a virtual key, *Kleve* instructs that the Owner sends the credential to the vehicle "at rental time" to verify the Temporary User's virtual key. Accordingly, the point made in Patent Owner's Response remains: if the rental period were somehow included in the virtual key, it would not be necessary for the Owner, "at rental time," to "send[] credentials to vehicle" to "verify the Temporary User's virtual key." *Id.*, ¶ 68, Fig. 5.



Indeed, regardless of timing, *Kleve* discloses that any “restrictions” are “downloaded” by the vehicle separate and apart from any “virtual key.” *Id.*, ¶ 75, Figure 7. Petitioners’ fears over “unfettered access” are belied by *Kleve* itself, since

Kleve uses the “credential” sent by the Owner “at rental time” to “verify the Temporary User’s virtual key.” *Id.*, ¶ 68, Fig. 5. Accordingly, Petitioners are incorrect that “having the virtual key include the rental period is necessary to limit its use to the rental time” (Reply, 6), as *Kleve* **does** teach “a mechanism outside of step 214 that disallows its use before the rental period.” Reply, 7.

2. **Petitioners do not rebut *Kleve*’s requirement that vehicle restriction limits are “initially set by the Owner at the beginning of the rental term” and therefore cannot be included as any “condition of use” in a virtual key, which has already been generated.**

Even after Reply, Petitioners failed to identify **any disclosure** whereby *Kleve* teaches or suggests including any rental period or any other restriction in the virtual key. Indeed, in Response, Patent Owner demonstrated that this would be contrary to the express teachings of *Kleve*, which teach to implement any restrictions **after** the virtual key has been generated: “initially set by the Owner at the beginning of the rental term.” Response, 4-26.

Kleve’s timing is not limited to what Petitioners characterize as “optional step 214.” Reply, 15. For example, *Kleve* again reiterates this required timing when describing Figure 7: “performance limitations and restrictions assigned by the Vehicle Owner **at the start of the rental period.**” EX1004, ¶ 75. And to the extent the owner’s **discretion** in setting restrictions is somehow suggested to be immaterial to the Petition’s failures, *Kleve* again proves Petitioners wrong. First, equally

“optional” is *Kleve*’s generation of a virtual key, the alleged request to generate a virtual key, and whether the parties may agree to rental terms. *Id.*, ¶¶ 39 (“system *may* generate a virtual key”), 62 (“vehicle Owner *may* ... set up a virtual key”), 84 (“*may* agree to terms”), 38 (same). Indeed, *Kleve* teaches the vehicle may not download any restrictions until the Temporary User has initiated the rental period, which makes sense, as the vehicle would not be able to apply any restrictions for an earlier renter. *Id.*, ¶ 75, Figure 7A.

Second—optional or not—*Kleve* would have no reason to teach setting use restrictions to be “monitored” and “enforced” (e.g., *id.*, ¶¶ 43, 75) were those very same restrictions—which were agreed to in the rental agreement—somehow already included in the generated virtual key. *E.g.*, Response, 1-2, 15, 28, 56.

III. The Petition failed to show any learning functionality that would render dependent claim 17 obvious.

Kleve never discloses or even suggests the word “learn,” let alone the recited functionality requiring a server to learn the patterns from “the inputs or settings being examined to identify patterns.” EX1001, claim 17. While Petitioners rely on *Kleve*’s “frequent destinations,” which are among a Temporary User’s “preset settings” applied when renting a vehicle, such “presets” are nothing more than the Temporary User’s “personal settings” and “personal preferences.” EX1004, ¶¶ 72, 50. *Kleve* shows these preset “navigation routes” are just like the user’s preferred

climate control settings and seat adjustment preferences. *Id.* *Kleve* offers no disclosure of any server learning functionality, let alone a server receiving and examining inputs to identify patterns, and the server learning the patterns to provide recommendations to the recipient. EX1001, claim 17. And indeed, *Kleve* instructs that its “personal settings,” including “presets,” are provided to the vehicle via the Temporary User’s nomadic device, paired with the vehicle, not by the server, as claim 17 requires. EX1004, ¶ 72.

The Reply seeks to ignore the claim requirements and resort to a false equivalence from the patent specification. Reply, 18. Here, the specification discloses the server identifying “learned behavior (e.g., learned settings that provide for automatic programming,” which then “shows to the user settings that have been learned and provides the user with options to modify learned settings,” such as: “We noticed you like your car temperature at 8am to be 75 degrees, this will be preset for you automatically.” EX1001, 28:3-32. *Kleve*’s ***preset*** settings, which are nothing more than a Temporary User’s personal settings, stand in stark contrast to the recited learning functionality of the ’188 patent.

IV. All *Zaid*-based grounds fail, as the Reply offers nothing to cure the deficiencies already identified by the Institution Decision.

Having already relied 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,” which is clearly a reservation made by a potential renter—not any account of a vehicle owner—Petitioners cannot satisfy claim elements 1[a], 16[a] or 19[a].

As the Board agreed in its Institution Decision, “the vehicle renter uses their own account to make a reservation”; *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.

As detailed in the Response, *Zaid*’s disclosure of a Facebook account, accessed by a vehicle renter, failed to disclose or suggest any “user account that has a vehicle associated therewith” via which a user requests a server to generate an e-key. Response, 62-68. Petitioners in Reply again seek to cobble together disparate, unrelated embodiments of *Zaid*, in an attempt to cure the deficient Petition, but cannot escape the flawed disclosures specified and relied upon therein. 37 C.F.R. 42.104(b)(4). E.g., Pet., 41:

(a) 1[pre], 1[a]

“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) for an identified recipient to use the vehicle”: 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 that causes the server to generate an encrypted reservation (*e-key*) to allow an identified user (*identified recipient*) to use the owner’s vehicle. Ex. 1003, ¶¶203-14.

Pet., 44:

“receiving, by a server, a request from a user via a user account ... to generate an electronic key”: Zaid discloses that the server receives a vehicle reservation (*request*) which results in generating an encrypted reservation (*e-key*). Specifically, Zaid states that a “vehicle reservation is booked by a user at a *central server*,” after which “the central server encrypts the message containing the vehicle reservation.” Ex. 1008, ¶125. A POSITA would understand that the vehicle reservation request is sent to the server from the owner’s user account, 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 vehicle to.” Ex. 1008, ¶¶72, 77, 79; Ex. 1003, ¶210. Thus, Zaid discloses the owner decides whether a reservation will proceed—a POSITA would therefore understand that the reservation request to the server comes from the owner through the owner’s account. *Id.*

Pet., 47:

“the request includes a condition of use of the vehicle as set by the user via the user account”: Zaid states that the reservation request “includes a reservation for a specified time period,” which is *a condition of use of the vehicle*. Ex. 1008, ¶69. This condition is *set by the user via the user account* such as when the owner “announces *when the vehicle is available for sharing*,” which sets limits on the specific time period for reserving the vehicle. *Id.*, ¶77; Ex. 1003, ¶219.

The Petition specified Zaid’s Facebook reservation as the alleged “request,” but Zaid teaches that this reservation is made from a renter’s account, not sent via a vehicle owner’s account, as Petitioners alleged. Response, 62-68. The Response showed that the flawed leaps of logic used by Petitioners and their expert had no basis in fact, nor any connection to the actual disclosures of Zaid. Nothing offered in Reply cures these fatal flaws.

Moreover, the Petition specified different “user accounts” and different “requests” for limitations 1[a] / 16[a] / 19[a], despite the fact that the claims require by antecedent basis “the user account” and “the request” to match “a request” and “a user account.” The Response showed—and Petitioners have failed to rebut—that because the relied upon disclosures for these limitations are altogether distinct, Zaid offers no teaching that “the request includes a condition of use of the vehicle as set by the user via the user account.” Response, 68-70.

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. Petitioners also failed to rebut the Petition’s deficiencies as to claims 12, 14, and 15, as identified in Response. Response, 72-74.

V. Conclusion

The Board should uphold each of the challenged claims.

Dated: September 2, 2025

Respectfully submitted,

/Brenda Entzminger/

Brenda Entzminger

Reg. No. 76,896 (Lead counsel)

Jerry D. Tice II

Reg. No. 73,582 (Back-up counsel)

Aaron R. Hand

Reg. No. 80,694 (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

bentzminger@bdiplaw.com

Counsel for Patent Owner

37 C.F.R. §42.24(d) CERTIFICATION

The undersigned hereby certifies that this submission, excluding the tables of contents, certificate of word count, exhibit list, and certificate of service, contains 5,564 words, as determined using the standard word counting feature of the Microsoft Word program.

Dated: September 2, 2025

/Brenda Entzminger/

Brenda Entzminger

Reg. No. 76,896 (Lead counsel)

Jerry D. Tice II

Reg. No. 73,582 (Back-up counsel)

Aaron R. Hand

Reg. No. 80,694 (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

bentzminger@bdiplaw.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE

Petitioner has consented to e-mail service in this proceeding. Pursuant to 37 C.F.R. §42.6, the undersigned certifies that on September 2, 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
Ryan Davies - ryan.davies@finnegan.com

Quinn, Emanuel, Urquhart & Sullivan LLP
James M. Glass – jimglass@quinnemanuel.com
Quincy Lu – quincylu@quinnemanuel.com
Ron Hagiz – ronhagiz@quinnemanuel.com
Jeffrey S. Gerchick – jeffgerchick@quinnemanuel.com
Brett Watkins – brettwatkins@quinnemanuel.com

Dated: September 2, 2025

/Brenda Entzminger/

Brenda Entzminger

Reg. No. 76,896 (Lead counsel)

Jerry D. Tice II

Reg. No. 73,582 (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

bentzminger@bdiplaw.com

Counsel for Patent Owner