

IN THE 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 No. IPR2024-00981

U.S. Patent No. 9,365,188

**PETITIONERS' RESPONSE TO PATENT OWNER'S REQUEST FOR
DIRECTOR REVIEW**

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As it was in the proceeding before the panel, Patent Owner's Request for Director Review (Paper 37, "Request") is riddled with misstatements and mischaracterizations of Petitioners' position, the testimony of Petitioners' expert, and the Kleve reference. In bringing this Request, Patent Owner identifies no evidence which the Board overlooked and largely rehashes its arguments below that the Board rejected in view of Kleve's disclosures and the expert testimony.

Still, much is not in dispute about Kleve. It is not in dispute that a renter and vehicle owner negotiate a rental period (*i.e.* when the rental can begin and how long it will be), that a request for an e-key is then sent to the server, and that the e-key is only operable during the rental period. There was also no dispute that restrictions are set by the owner sending a request with the restrictions.

The only dispute was the ***timing*** of the restriction request. Below, Patent Owner argued that because Kleve discloses that the vehicle owner may set restrictions (such as limits on weight and speed) when the rental period begins, Kleve's system absolutely forecloses setting any restrictions before that, including the rental period itself. When the Board questioned Patent Owner on how the system could enforce the rental period if it could not be set until after it began, Patent Owner could not provide a responsive answer. Paper 35 at 51:3-54:7 (Patent Owner's counsel repeating their contention that the rental period must be set at step 214 after the rental period begins).

The Board declined to adopt Patent Owner's nonsensical reading. Kleve clearly states that the e-key is "enabl[ed] ... during a given rental period." Ex. 1004, ¶39. Kleve also clearly states that it "monitor[s] the vehicle for the *entire rental period*." *Id.*, ¶54. The Board arrived at the only logical conclusion—that the "rental period restriction may be assigned prior to the start of the rental period in order to monitor usage for the entire period." Paper 36 ("FWD") at 30. The Board correctly concluded that because the e-key is restricted to the rental period, the rental period must be set before the e-key is generated—*i.e.* when the e-key is requested. Patent Owner simply does not identify any legal error, procedural irregularity or misapprehension by the Board.

I. KLEVE DISCLOSES AND RENDERS OBVIOUS AN E-KEY REQUEST THAT INCLUDES USE CONDITIONS

As the Board properly found, Kleve renders obvious that the e-key request includes the rental period restriction. Each of Patent Owner's arguments in its Request were properly considered and rejected by the Board.

A. Kleve's Disclosures and the Board's Decision

Kleve is directed to a "vehicle rental micro-business" where individual car owners may rent out their vehicles. Ex. 1004 at ¶¶2-6. As Kleve makes clear, operational security is paramount, and that includes ensuring that the vehicle is only "activat[ed] during a *prescribed* rental period." *Id.* at Abstract; *see also id.* at ¶51 ("Controlling 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.”). Accordingly, when a request for an e-key is sent, the e-key is “enabl[ed] ... during a given rental period.” Ex. 1004, ¶39; FWD at 30. This allows the system to “monitor the vehicle for the *entire rental period*.” Ex. 1004, ¶54; FWD at 30. In addition, as Patent Owner admits, Kleve permits “*only Vehicle Owners* to input restrictions to control usage”—in other words, restrictions are only set via request by the Owner. POR at 54 (quoting Ex. 1004 at ¶¶51, 43, 75). Kleve expressly discloses that the vehicle owner sends a request to simultaneously “Generate Virtual Key *and Vehicle Restrictions*.” Ex. 1004 at Fig. 6; FWD at 24.

Based on these disclosures, the Board correctly concluded that Kleve discloses and renders obvious the claimed e-key “request includes a condition of use” and that the e-key is “assigned with the condition of use.” FWD at 21-33. In particular, the Board concluded that Kleve “describes an e-key that is only operable during a rental period,” and so “the distribution of Kleve’s e-key includes a rental period.” *Id.* at 28-29. Since it is necessary at all times for the e-key to be associated with the rental period, and since it is undisputed that restrictions can only be sent by the owner, Kleve teaches that the rental period restriction is sent when the owner sends the e-key request. *Id.*; Ex. 1003 at ¶120. Indeed, Kleve

expressly teaches that the owner sends a request to “Generate Virtual Key and *Vehicle Restrictions*.” Ex. 1004 at Fig. 6.

B. Patent Owner's Arguments Fail

The Board properly considered and rejected each of the arguments Patent Owner raises in its Request.

First, Patent Owner repeatedly asserts that Kleve is silent regarding whether an e-key request includes a use condition such as the rental period, and whether the e-key is associated with the use condition. Indeed, Patent Owner even asserts that Kleve's silence on these issues is “undisputed.” Request at 3. That is not true. Petitioners argued that Kleve both expressly discloses and renders obvious those limitations. Paper 3 (“Pet.”) at 15-16; Paper 24 (“Reply”) at 2-4.

Kleve expressly discloses that when the e-key is requested at “step 210,” the e-key “enable[s] the keyless drive system for the appropriate Temporary User during a *given rental period*.” Ex. 1004 at ¶39. As the Board found, this is an express disclosure that the e-key “is only operable during a rental period,” and is therefore associated with that restriction. FWD at 29, 33-34. Moreover, Kleve teaches that the restriction can only be set by a request from the owner. POR at 54; Ex. 1004, ¶51, ¶69 (“At step 604 [of Fig. 6], the vehicle Owner may then generate a virtual key ...”), Fig. 6 (Element 604: “Generate Virtual Key and *Vehicle Restrictions*”). Thus, because rental period must be enforced on the e-key when it

is requested, Kleve teaches that the e-key request from the owner includes the rental period.

Second, much of Patent Owner's argument below focused on "step 214" of Figure 2, which is when the rental period begins. *See, e.g.*, POR at 13 ("[T]he Owner does not have the option to set rental restrictions until the beginning of the rental term at step 214."). Patent Owner claims that "every use restriction explicitly identified in Kleve is set at step 214 after the e-keys were already generated." Request at 5; *see also id.* at 7-8. However, Kleve only states that at step 214, "[t]he Owner **may** set user restrictions" which may include "speed, global position coordinates, or load weight restrictions." Ex. 1004 at ¶40; *see also* POR at 12 ("Kleve's system provides a separate, **optional** operation to allow only the Owner to 'set user restrictions' at step 214.").

Importantly, whereas Kleve repeatedly discusses the enforcement of a rental period, including when it "start[s]" (*see, e.g.*, Ex. 1004 at ¶75), step 214 does not explicitly identify setting the rental period. Nor could it. As the Board properly found, "[b]ased on Kleve's teaching of 'monitor[ing] the vehicle for the *entire* rental period' (Ex. 1004 ¶ 54 (emphasis added)), we find that Kleve's rental period restriction may be assigned prior to the start of the rental period in order to monitor usage for the entire period." FWD at 30. This is the only reasonable and logical conclusion the Board could have reached—because whereas Kleve emphasizes the

importance of enforcing the rental period, that would not be possible if it is set at step 214 *after* the rental period already begins. As Petitioners explained, foregoing enforcement of the rental period until after it starts would allow a renter to enter an owner's vehicle before they are authorized to do so. Reply at 7 ("Since the virtual key is sent before the beginning of the rental period, there must be a mechanism outside of step 214 that disallows its use before the rental period.").

Third, and for the first time in its Request, Patent Owner argues that the "rental start period" restriction "does not exist." Request at 5-6. New arguments cannot be a basis for the Director to vacate the Board's decision, as the Board never had an opportunity to consider them.

Regardless, there is no dispute that Kleve describes a "rental period" and that it is a restriction. *See, e.g.*, Ex. 1004 at ¶39 ("The virtual key may also be sent to the vehicle configuring the VCS to enable the keyless drive system for the appropriate Temporary User during a given rental period."); Sur-Reply at 3 ("[A] rental period or any other *restriction*"); Paper 35 at 43:2-4 ("Nowhere here is Kleve saying this information somehow includes any condition [of] use, not a rental period, not any rental term, nothing at all.").

Instead, Patent Owner argues that because the specific words "rental start period" are not found in Kleve, it must not be a restriction—again, a position that was not raised below and for which Patent Owner has no expert testimony in

support. Request at 10 (“[T]he ‘rental start period’ ... is not discussed or disclosed in Kleve.”). Yet Kleve clearly describes enforcing the start or beginning of the rental period. *See, e.g.*, Ex. 1004 at ¶43 (“[V]ehicle restriction limits initially set by the Owner at the **beginning** of the rental term.”), ¶66 (“When the **scheduled** rental period of time **begins** the vehicle Owner may send the credentials to the vehicle”), ¶75 (“The system may wait for the rental period to **start** at step 704. ... The system may begin to download performance limitaitons and restrictions assigned by the vehicle owner **at the start of the rental period** at step 708.”); *see also id.* at Abstract (“The identifier is configured with the processor to activate a vehicle during a **prescribed** rental period.”).

Moreover, Kleve describes that when the rental period is about to expire, the owner can agree to update the “rental period end time restriction” to give the renter more time. Ex. 1004 at ¶43. There is no dispute that the rental period includes this end time restriction. POR at 18. The natural conclusion is that the rental period also has a start time restriction.

Thus, from the above disclosures, it is clear that Kleve’s rental period restriction includes a start time. FWD at 24 (“[T]he rental period includ[es] both the start and end time for the rental period”). And given that Kleve indisputably “describes an e-key that is only operable during a rental period,” the beginning of the rental period must be a restriction that is enforced. FWD at 29; *see also id.* at

30 (“Based on Kleve’s teaching of ‘monitor[ing] the vehicle for the *entire* rental period’ (Ex. 1004 ¶ 54 (emphasis added)), we find that Kleve’s rental period restriction may be assigned prior to the start of the rental period in order to monitor usage for the entire period.”). Accordingly, Patent Owner is simply wrong that the “Board never contends that the ‘rental period start restriction’ is set by the owner via the owner’s account.” Request at 10. The Board found (and Patent Owner did not dispute) that “a rental agreement is negotiated through the user profiles (i.e., user accounts) on the website and ***the agreement includes the rental period.***” FWD at 23; Ex. 1004 ¶38 (“The Owner and Temporary User may agree to terms and conditions for the rental period using the website.”). And since the rental period includes both its start and end time (FWD at 24), the Board found that the rental start period is set by the owner via the owner account.

Fourth, Patent Owner argues that the Board “made explicit findings that are contrary to Petitioners’ concessions and admissions.” Request at 6, 12-13. Here, Patent Owner repeatedly mischaracterizes what occurred below.

Patent Owner contends that Petitioners admitted at the hearing that the rental period is not included in the *e-key*.¹ Request at 12-13. Petitioners did not. The claims of the ’188 patent require the ***request*** for the e-key to include the use

¹ To be clear, the e-key is distinct from the e-key ***request***.

condition, but do not require that the e-key itself include the use condition. The claims only require that the use condition be “assigned to” or “associated with” the e-key. Accordingly, in response to Patent Owner’s counsel arguing that the e-key can operate without including use conditions (*see* Paper 35 at 53:19-24), Petitioners’ counsel made clear that it was not Petitioners’ position in this proceeding that the e-key must include the rental period in order to meet the limitation.² Paper 35 at 63:13-18.

However, the Board is fundamentally correct that Kleve discloses that the e-key can include the rental period. FWD at 28-29 (“[W]e find that the distribution of Kleve’s virtual e-key includes a rental period, specifically the start of the rental period”). In particular, it is the “virtual key” when “sent to the vehicle” that “*enable[s]* the keyless drive system for the appropriate Temporary User *during a*

² Of note, Petitioners have contended in IPR2024-01167 that Kleve’s e-key includes the rental period. IPR2024-01167, Paper 23 at 3; *see also* Paper 35 at 21:3-7 (“[In the ’188 patent, i]t’s not required that the restrictions actually be included in the virtual key. It’s a little bit different here [with the ’659 patent] because the claims require coded data being sent from the renter’s device to the vehicle. That includes restrictions settings associated with virtual key. What I’m pointing out is that Kleve expressly discloses both.”).

given rental period.” Ex. 1004 at ¶39. In other words, both the vehicle and the renter has a copy of the e-key, but it is only when the vehicle has the e-key that the vehicle can ensure the e-key “is only operable during the rental period.” FWD at 29 (“[T]he server is not used for remote access in every disclosed embodiment.”).

Patent Owner also falsely claims that it was Dr. Almeroth’s opinion that “the request for the e-key must have included that condition of use in order for the e-key to include a condition of use.” Request at 7 (citing FWD at 31) (emphasis in original). But Dr. Almeroth did not say that, and the Board’s recounting of his testimony does not contend he said that either. Instead, the Board correctly stated that Dr. Almeroth opined that “the rental agreement restrictions were sent with the *request* so that the virtual key could be *associated* with said restrictions.” FWD at 31 (quoting Ex. 1003 at ¶¶118-23).

Moreover, the Board clearly found that the e-key request includes a rental period regardless of whether the generated e-key itself includes a rental period.

Fifth, Patent Owner argues that it is the *renter* which initiates the start of the rental period by “initiat[ing] the rental event,” and that the rental period start “is something that just happens at some point after the keys are issued” and therefore need not be monitored. Request at 10-11. Patent Owner never before contended that the rental period need not be monitored because it is an arbitrary time initiated

by the renter. Instead, this position is at complete odds with Kleve's disclosures and Patent Owner's positions below.

Nothing in Kleve suggests that the renter unilaterally establishes when the rental period begins. To the contrary, Kleve consistently describes the rental period as a predefined, prescribed, and scheduled parameter that is established as part of the rental agreement and system configuration, not as a variable triggered at the discretion of the renter.

Kleve quite clearly states that the rental period is "prescribed" and that its beginning is "scheduled." Ex. 1004 at Abstract, ¶66 ("When the *scheduled* rental period time *begins*"), ¶8 ("The processor may use the identifier to activate the vehicle during a *scheduled* rental period."). Moreover, because there is a "rental period end time restriction" which can be "update[d]," it is clear that the rental period is not simply a duration that is triggered by the renter, but is instead a specific, prescribed, scheduled start and end time. *Id.* at ¶43. Kleve also emphasizes that "[c]ontrolling usage to enforce compliance with the rental agreement terms may be of more importance to a vehicle rental micro-business owner[.]" *Id.* at ¶51. Thus, when Kleve says the system "monitor[s] the vehicle for the *entire* rental period," Kleve requires that the system monitor the vehicle *before the rental period starts* to ensure there is no unauthorized access. Ex. 1004 at ¶54; FWD at 30.

The notion that the *renter* unilaterally decides when the rental period begins is likewise at complete odds with Patent Owner's arguments below. Patent Owner repeatedly emphasized that Kleve's "solution" is "to allow the Vehicle Owner *alone* the power to control usage of their own vehicle." POR at 29 (emphasis in original). Patent Owner also contended that "the rental period is not restricted or enforced via the virtual key itself, but is *controlled by the Vehicle Owner* alone." *Id.* at 49 (emphasis added). Yet a system that allows any renter to access a vehicle at any time to initiate the rental period removes control from the owner. Indeed, it is difficult to imagine how a rental car system would even work under such conditions. Certainly, the owner would not be able to schedule multiple renters in advance, for the owner would have no idea when each renter will actually initiate the rental period.

Sixth, Patent Owner argues that "there is no need to include or assign the start of the rental period to monitor usage for the entire period" because "monitoring use starts after the rental starts." Request at 11-12. This, however, is at odds with Kleve's requirement that the e-key "enable[s] the keyless drive system for the appropriate Temporary User *during a given rental period*" or that the rental period is "prescribed." Ex. 1004 at ¶39, Abstract. As the Board found, Kleve discloses that the e-key "is only operable during a rental period." FWD at 29. Accordingly, the system must monitor the vehicle *before* the rental period

begins to ensure that it is only used during the prescribed time period. Indeed, in one embodiment, Kleve expressly teaches that “the VCS may begin monitoring and report usage of the vehicle to the owner” while “wait[ing] for the rental period to start.” Ex. 1004 at ¶75.

II. VACATUR IS UNWARRANTED

If the Director were inclined to reverse the Board's decision, the Director should remand back to the panel for further proceedings. In particular, the Board did not analyze Petitioners' argument that it would have been obvious to include the rental period with the e-key request.

III. PATENT OWNER'S OTHER MISCHARACTERIZATIONS OF PETITIONERS' ARGUMENTS AND DR. ALMEROOTH'S TESTIMONY

Besides those discussed above, Patent Owner makes other misstatements and mischaracterizes of the positions that Petitioners took below, as well as the testimony of its expert, Dr. Almeroth.

First, Patent Owner claims that Dr. Almeroth “admitted in deposition [his declaration testimony] was not correct.” Request at 3. He did not. In his declaration, Dr. Almeroth testified that in the embodiment he was discussing, “Kleve discloses that the virtual key is always generated after the rental agreement.” Ex. 1003 at ¶120. During his deposition, he again stated that “a person reading Kleve would understand it's describing embodiments where it's

always the case.” Ex. 2030 at 28:3-20; *see also id.* at 26:14-20. As the Board found, “[t]here is nothing in the deposition testimony by Dr. Almeroth that appears inconsistent with his declaration testimony nor does their appear to be the kind of admission touted by Patent Owner.” FWD at 32.³ Moreover, there is no dispute that the embodiments which Petitioners rely on always generates the key after the rental agreement, and it is not material to any of the issues raised by Patent Owner.

Second, Patent Owner claims that in its Reply, Petitioners “no longer relied on any expert testimony” and “dropped each of the alleged ‘restrictions’” identified in step 214. Request at 8-9. Petitioners’ Reply, however, repeatedly cites to expert testimony. *See, e.g.*, Reply at 2, 3, 7, 15, 16, 18. Petitioners simply did not find it

³ For context on why Patent Owner asked these questions of Dr. Almeroth, Kleve briefly describes an alternative embodiment where “[r]ental conditions may also be displayed on the vehicle’s touchscreen visual display and accepted or rejected through the touchscreen visual display.” Ex. 1004 at ¶47. Patent Owner contends that in this embodiment, there is no rental agreement until after the e-key is generated—even though this disclosure is better read as displaying and confirming the already-agreed upon terms. But that embodiment is immaterial to this case. Petitioners do not rely on it, and it is undisputed that in the embodiments that Petitioners *do* rely on, there is always an agreement before the e-key is generated.

necessary to include a supplemental expert declaration given the strength of the evidence already in the record. Petitioners' Reply also did not "drop" any of the restrictions identified in the Petition. While the Board's decision and the parties' briefing focuses on the "rental period," Petitioners have always maintained that, in Kleve, all restrictions in the rental agreement were also included in the e-key request and that it would have been obvious to do so. *See, e.g.*, Reply at 12, 13-14 ("[I]ndicating that the restrictions [prohibited areas, top vehicle speed, limiting cargo load] can be set prior to the rental period."), 17 ("PO's reading ... makes for a highly flawed and insecure system that a POSITA would desirably seek to fix with the simple solution of including the rental agreement conditions with the virtual key request."). Indeed, Kleve describes that the system "begin[s] monitoring and report usage of the vehicle to the owner" **before** the rental period begins, indicating that all rental agreement restrictions are included in the e-key request. Ex. 1004 at ¶75.

IV. CONCLUSION

For these reasons, the Director should deny Patent Owner's Request to review the Board's Final Written Decision.

Date: January 16, 2026

Petitioners' Response to Director Review
U.S. Patent No. 9,365,188
Respectfully submitted,

By: /s/ James M. Glass
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on January 16, 2026, true and correct copies of the foregoing document and supporting materials were served in its entirety on the PO at the following email addresses:

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