UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC. and GOOGLE LLC
Petitioners

v.

SPACETIME3D, INC.
Patent Owner

Case IPR2023-00343[1]
Patent No. 9,304,654

PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW

[1] Google LLC, which filed a petition in IPR2023-00579, has been joined as a petitioner in this proceeding.

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I. INTRODUCTION

The Board's Final Written Decision ("FWD") failed to resolve a case dispositive question, namely whether the claimed "replacing said plurality of images … with one of said first, second, and third objects" requires the images to be replaced with "said … object," *i.e.*, an object that was previously generated, allowing the user to resume where they last left off—a feature found in independent Claims 1 and 10.

The claimed invention requires opening a plurality of applications where each application is "configured to (i) generate an object having application-specific data, (ii) display said object on a display device, and (iii) allow said user to modify at least a portion of said application-specific data by interacting with said object." EX1001, 37:49-58.[2] To allow the user to switch from one application to another, images of the objects having application specific data are generated and displayed in a 3D space and the user can select "one of said plurality of images corresponding to one of said plurality of applications." *Id*., 37:59-38:24. This results in "replacing said plurality of images within said three-dimensional space with one of said first, second, and third objects corresponding to said one of said plurality of applications."

[2] All emphasis in this brief is added unless otherwise indicated.

Id., 38:25-29. The user can then interact with "said one of said first, second, and third objects" to modify (or continue modifying) "said one of said first, second, and third application-specific data." *Id*., 38:30-35.

Patent Owner argued that "[t]he interaction with an image does not result in the corresponding application being opened but displaying the *previously* opened version of the application including the application-specific data, so that the user can resume where they last left off." Paper 19 ("Response"), 39 (emphasis in original). Petitioner's sole response to Patent Owner's proposed construction was that "no such limitation is recited in the claim." Paper 26 ("Reply"), 9.

Despite this controversy, the Board failed to construe this claim limitation. Instead, the Board stated that while "[a]n issue that arose during trial is related to the construction of the specific term 'image,' … we do not find it necessary to provide express claim constructions for any other terms." Paper 47 ("FWD"), 13.

By failing to properly construe this limitation, the Board went on to find that "Petitioner's mapping meets the claim language of the 'replacing' limitation, in that the limitation requires ***only*** replacing images within said 3D immersive space with ***objects corresponding to applications*** within said 2D space"—not the previously generated object (*i.e.*, "said object"), from which the image was generated. *Id*., 49.

Not only did this lead to an erroneous result, but one that is inconsistent with findings in a related parallel proceeding, *i.e.*, IPR2023-00242, where Judge McKone (as opposed to Judge McShane, who authored the '343 FWD) found that the plurality of images are ***not*** replaced with just any item, but one that was ***previously opened from which the image was captured***. IPR2023-00242, Paper 51, 21-22.

In light of the foregoing, and Petitioner's failure to provide any evidence or arguments of this feature being disclosed or suggested in the cited prior art, the FWD should be vacated, and the challenged claims should be found not unpatentable.

II. THE INSTITUTED TRIAL AND THE BOARD'S DECISION

The following discussion details the relevant portions of the trial record, including the claim limitation at issue, the Board's implicit construction of that limitation, the parties' arguments and evidence regarding the same, and corresponding findings in the parallel proceeding (IPR2023-00242).

A. The "One of Said First, Second, and Third Objects" Limitation

The '654 Patent claims a unique GUI that allows a user to (1) interact with individual, open applications in 2D space and (2) switch between images of open applications in 3D space. To begin with, this is accomplished by (a) receiving inputs from a user, (b) opening applications in response to the inputs, (c) generating objects having application-specific data, (d) displaying the objects with application-specific

data on the display device, and (e) allowing the user to modify the application-specific data by interacting with individual objects. EX1001, 37:44-58.

However, for ease of switching from one open application to another (*e.g.*, on small devices, where applications are buried behind one another), the claimed invention generates images of the open applications (*i.e.*, objects with application-specific data) and displays those images in a 3D space. The user can then interact with a particular image in 3D space, resulting in the corresponding object (as previously generated) (1) being displayed within a 2D space and (2) replacing the plurality of images in 3D space. *Id*., 37:59-38:35. The user can then interact with the previously generated object in 2D space to modify the application-specific data associated therewith (*i.e.*, to resume where the user last left off). *Id*.

These features are not only required by the claims, but paramount to the purpose of the invention. Once an application has been opened and displayed, including generating an object (*e.g.*, a window) having application-specific data (*e.g.*, data), images of the same (*i.e.*, both the object and the application-specific data) are generated and displayed in 3D space. This allows the user to not only see which applications are open (hence the object), but where the user last left off (hence the application-specific data). The user can then switch applications by interacting with a particular image, resulting in the images in 3D space being replaced with the

previously opened application in 2D space (*i.e.*, "said object" and "said application-specific data"), allowing the user to pick up where they last left off. *See* detailed discussion, Paper 19, 3-4, 8-9, 39-40, 51, 54-55; EX2015, [37]-[38], [58], [91]-[92].

B. The Petition and Institution

The Petition argued that the independent claims are obvious over Hanggie (EX1006) and Anthony (EX1007), collectively "HAC." With respect to the "replacing" feature, Petitioner argued that "through user selection of the maximize button for a window, HAC's computer would have allowed the user to view the window in a "maximum" capacity such that it occupies all or almost all parts of the computer display," and that "[s]uch a maximized 2D window would then *replace* the display of the dynamic timeline and any windows within the timeline." Paper 2 ("Petition"), 52-53.

As the Petition did not request construction of "one of said first, second, and third objects," the Board did not do so in granting institution. However, the Board did clarify Petitioner's arguments on the "replacing" feature, stating that Petitioner "relies on Hanggie's application window as teaching the recited 'object' [generated as a result of opening applications], <u>not</u> the recited 'plurality of images,'" and that "Petitioner relies on the 3D windows in Anthony's timeline as teaching the recited

'plurality of images within said three-dimensional space.'" Paper 11, 53-54 (emphasis in original). As such, Petitioner relies on Anthony for images in 3D space.

C. Post-Institution Briefing

In its Response, Patent Owner pointed out a critical deficiency in the Petition—that the object that replaces the plurality of images "in response to said first interaction [with one of said plurality of images]" in the proposed combination is ***not*** "one of said first, second, and third object." Specifically, Patent Owner argued:

> [T]he claims require that if you interact with any image in 3D space (foreground or background), the images are replaced with a corresponding active application. In Anthony, however, if you interact with an item in the background (e.g., a non-focal group), the item moves to the foreground (e.g., becoming the focal group). *See*, *e.g.*, APPLE1007 at [0059] ("When the user selects a new focal group, the system may initiate a series of steps to animate the process of changing focus from one group of icons to another."). And if you interact with an item in the foreground, "the system [will] attempt to open the file" in 3D space. *Id*. at [0047]. In the claimed invention, however, the applications are already opened. As such, the images are replaced with "the object" and "the application-specific data" (as previously displayed).

Paper 19, 54-55; *see also* id., 3-4, 8-9, and 39-40, and Paper 33, 14.

The foregoing claim construction was supported by Dr. Schaefer, who testified that "[w]hen the user interacts with a particular image, the corresponding object and application-specific data (as previously displayed) is displayed (again) in 2D space, where the object replaces the plurality of images in 3D space, and the user can resume modifying the application-specific data (*e.g.*, where the user left off prior to the generation of images)." EX2015, [37]; *see also id*., [38], [58], [91]-[92].

Petitioner's sole response to Patent Owner's construction was merely that "no such limitation is recited in the claim," and that "PO's attempt to distinguish the claimed images in 3D space from the prior art is not rooted in language recited in the claims." Paper 26 at 9. Dr. Fuchs (Petitioner's expert) also argued that "no such limitation (of displaying a previously opened version of the application) is present in the claim." EX1033, [18].

D. The Board's Final Written Decision

In the FWD, the Board construed terms "2D space," "3D space," and "image." Paper 47, 12-13. Notably, the Board did not construe the phrase "one of said first, second, and third object," stating that "[b]ased on the record before us, we do not find it necessary to provide express claim constructions for any other terms." *Id*.

In addressing the "replacing" limitation, most of the Decision centered around the term "images" and whether the images were "replaced," and did not address

whether the object replacing the image was the ***previously opened object***. *See* Paper 47, 32-33. Instead, the Board found that "Petitioner's mapping meets the claim language of the 'replacing' limitation, in that the limitation requires ***only*** replacing images within said 3D immersive space with ***objects*** corresponding to applications within said 2D space." *Id*., 49.

As such, the Board failed to consider whether the object replacing the plurality of images is the previously opened version, from which the image was captured, allowing the user to resume where they last left off. Had the Board properly construed the phrase "one of said first, second, and third objects," the Board would have found that this feature is not only missing from the prior art, but Anthony teaches the exact opposite. *Id*., 25-26 ("Anthony discloses that '[i]f an icon 606a in the focal group 509 represents a file, double-clicking the file will cause the system to attempt to ***open the file***.'"). Not only did this lead to an erroneous conclusion, but a conclusion inconsistent with findings in a related parallel proceeding.

E. Parallel Proceeding – IPR2023-00242 (U.S. Pat. No. 8,881,048)

The patent at issue in the '242 IPR ("the '048 Patent") is similar to the '654 Patent in that a plurality of items are open, images of the items are displayed in 3D space, and interacting with an image results in the images in 3D space being replaced with a corresponding item (as previously opened) in 2D space. '242 IPR, EX1001,

37:49-38:17. In the '654 Patent, as discussed above, the items are objects having application-specific data. In the '048 Patent, the items are webpages that are received and rendered. *Id*. As these two patents share a common specification and similar claims, the two IPRs were consolidated for oral arguments.

While the FWD in the '343 IPR was authored by Judge McShane, it was Judge McKone who authored the FWD in the '242 IPR. Therein, Judge McKone noted that "claim 1 refers to replacing the first and second objects with 'the rendered first webpage,' which implies that the objects are not replaced with just any version of the first webpage." '242 IPR, Paper 51, 20-21. "Thus, while we agree with Petitioner that claim 1 does not recite 'the rendered old version of the first webpage,' the 'rendered first webpage' is the 'old version' of the first webpage rendered, captured, and textured in other steps of claim 1, and not the new 'live' version." *Id*., 22.

Judge McKone stated that this finding was not only supported by the claim language, but the specification as well, where the "replacing" step "*is accomplished by revealing the 2D version of the webpage that was initially hidden or drawn off screen and positioning it in a layer that is in front of the 3D virtual space* such that the end user can interact with this layer in 2D." *Id*., 22 (emphasis in original). "Here, objects within the 3D space are replaced with 'the 2D version of the webpage that was initially hidden or drawn off screen.' This is the 'old' version, and not the

'current' or 'live' version of the webpage, to use Petitioner's designations." *Id*., 22.

III. ARGUMENT

A. The Board Failed to Resolve a Case Dispositive Controversy Concerning the "One of Said First, Second, and Third" Limitation

After institution, Patent Owner repeatedly pointed out that the phrase "one of said first, second, and third objects" was critical to the claimed invention as replacing the plurality of images with the previously generated object allowed the user to pick up where they last left off. In other words, "[t]he interaction with an image does not result in the corresponding application being opened but displaying the *previously* opened version of the application including the application-specific data, so that the user can resume where they last left off." Paper 19, 39-40 (emphasis in original); *see also id*., 3-4, 8-9, 51, and 54-55; and EX2015, [37]-[38], [58], and [91]-[92].

This can be seen in Claim 1, which provides "replacing said plurality of images within said three-dimensional space with one of said first, second, and third objects corresponding to said one of said plurality of applications within a two dimensional space … receiving a second interaction … and modifying said one of said, first, second, and third application-specific data in response to said second interaction." Paper 19, 39-40 (emphasis in original).

Despite Patent Owner setting forth a claim construction that was consistent with the claims and supported by the specification (*see*, *e.g.*, '242 IPR, Paper 51, 22), Petitioner merely argued that "no such limitation is recited in the claim." Paper 26, 9. ***It is this controversy that the Board failed to address in its FWD***.

As the Federal Circuit pointed out in *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc*., 200 F.3d 795, 803 (Fed. Cir. 1999), claim terms are construed when they "are in controversy" and "to the extent necessary to resolve the controversy." Despite this controversy, the Board stated that "[b]ased on the record before us, we do not find it necessary to provide express claim constructions for any other terms." Paper 47, 13.

Not only should this term have been construed, but by failing to do so, the Board reached a conclusion inconsistent with findings in the parallel proceeding, IPR2023-00242. As discussed above, the '242 IPR was consolidated with the '343 IPR as both patents shared the same specification and included similar claims, with the '242 IPR dealing with webpages that are received and rendered and the '343 IPR dealing with applications that generate objects having application-specific data.

However, in both proceedings, the images are replaced with an item that was previously opened, allowing the user to resume where they last left off. In the '242 IPR, Judge McKone stated that "[u]pon consideration of the plain language of claim 1 and the description in the specification, we agree with Patent Owner that 'the

rendered first webpage' [which replaces the images in 3D space] … is 'not referring to the webpage generally, but ***the rendered version from which the corresponding image was captured***.'" '242 IPR, Paper 51, 23 (emphasis in original). Judge McKone went on to state that "while we agree with Petitioner that claim 1 does not recite 'the rendered ***old version*** of the first webpage,' the 'rendered first webpage' is the 'old version' of the first webpage rendered, captured, and textured in other steps of claim 1, and not the new 'live' version." *Id*., 22 (emphasis in original).

Despite a slight difference in verbiage—applications are not rendered, but instead generate objects having application-specific data—the same is true here. In fact, during oral arguments, counsel for Patent Owner argued that "[w]e have the exact same claim language here that we had in the '048 that we talked earlier. We have that the replacing is with 'said object.' 'Said object' is the object that was generated previously when you opened the application before the images were captured. It's just like the 'said rendered first webpage.'" Paper 40, 50:21-51:14. "So, I would say if the Court finds that the '048, the 'rendered first webpage' rationale rings true, … [t]he same logic applies [here] as well." *Id*., 61:23-62:8.

Because this dispute was presented to the Board and required to resolve whether the prior art disclosed this feature, the Board erred by not construing the

phrase "one of said first, second, and third objects"—a construction that is both case dispositive and necessary to prevent inconsistencies between related proceedings.

B. The Board Failed to Consider Whether A POSITA Would Have Found This Feature, Properly Construed, Obviousness Over HAC

The Petition did not argue or assert that the prior art teaches or renders obvious replacing the plurality of images with the ***previously generated object***. Instead, it focused on whether "maximizing" a window in 3D space constitutes "replacing" the images in 3D space. To this end, Petitioner argued that "by selecting a maximize button on a window in Anthony's timeline, the window would be reconfigured in the legacy mode and displayed in 2D to occupy all or most parts of the screen in a 'maximum' capacity. Such a maximized 2D window would then replace the display of the dynamic timeline and any windows within the timeline." Paper 2, 53.

There is no mention in the Petition of whether interacting with an item in Anthony's timeline would result in replacing the plurality of images with the ***previously opened object***. *See* Paper 11, 53-54 ("Petitioner relies on the 3D windows in Anthony's timeline as teachings the recited 'plurality of images within said three-dimensional space.'"). Perhaps because Anthony explicitly provides the opposite—that interacting with an item within the 3D timeline "will cause the system to attempt to open the file." Clearly, opening an application anew is quite different from

resuming where the user last left off. For example, opening a Word document from the beginning (or page 1) is quite different from resuming on page 46, where the user last left off. The same is true for other applications, e.g., Excel, PowerPoint, etc.

Such a feature is also not disclosed in Hanggie. In fact, Petitioner's own expert, Dr. Fuchs, testified that he "did not need to determine if this Figure 3 [in Hanggie] was an image" (EX2019, 46:2-5), as the Petition relies on Anthony for "displaying said plurality of images in a three-dimensional space"—a reference where interacting with an item in 3D space results in ***opening*** an application anew.

Even after the issue had been fully briefed by Patent Owner (*see*, *e.g.*, Paper 19, 39-40), Petitioner's sole argument was that "no such limitation is recited in the claim." Paper 26, 9. In fact, Dr. Fuchs' (Petitioner's expert) response was limited to a single unsupported assertion—"[a]nd even if it were, displaying a previously opened window in the state that it was last interacted with is certainly well-known in the art." EX1033, [18]. Such a conclusory statement, especially one based on art that was not even identified in the Petition, cannot support a finding of obviousness. *See*, *e.g.*, *Xerox Corp. v. Bytemark., Inc.*, IPR2022-00624, Paper 9 (PTAB Aug. 24, 2022) (finding that "the cited declaration testimony is conclusory and unsupported" and is therefore "entitled to little weight," especially when the "expert testimony is

offered not simply to provide motivation to combine prior-art teachings, but rather to supply a limitation missing from the prior art.").

In the parallel proceeding, after Judge McKone found Dr. Fuchs' testimony to be "inconsistent, unreliable, not credible, and entitled to little weight," the Board stated that "[e]ven if we were to find Dr. Fuchs' testimony credible … Petitioner's argument was not presented in the Petition and relies on new evidence." '242 IPR, Paper 51, 46; *see also* Consolidated Trial Practice Guide (Nov. 21, 2019), 74 ("'Respond,' in the context of 37 C.F.R. § 42.23(b), does not mean proceed in a new direction with a new approach as compared to the positions taken in a prior filing.").

In light of the foregoing, and that fact that (1) Petitioner failed to provide any evidence or argument that HAC renders obvious replacing a plurality of images in 3D space with the previously opened object, (2) Anthony is the only cited prior that teaches images in 3D space, and (3) Anthony teaches the exact opposite (*i.e.*, opening the application—not replacing images with the previously opened object), the FWD should be vacated, and the Challenged Claims found not unpatentable.

IV. CONCLUSION AND RELIEF REQUESTED

Petitioner respectfully requests Director Review or rehearing by the Delegated Review Panel to vacate the Board's Decision, correct the Board's errors on claim construction and/or obviousness, and to reverse or remand as appropriate.

Respectfully submitted,

Date: August 1, 2024

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CERTIFICATE OF SERVICE

The undersigned certifies that on August 1, 2024, a true and correct copy of this Request for Director Review was provided by email to Petitioner by serving the email correspondence address of record as follows:

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