

Filed: May 18, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.

Petitioner,

v.

SPACETIME3D, INC.

Patent Owner

Case IPR2023-00343

U.S. Patent No. 9,304,654

**PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE TO THE
PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,304,654**

As authorized by the Board, this Sur-Reply responds to Petitioner's Reply to Patent Owner's Preliminary Response ("Reply"), filed May 11, 2023.

I. INTRODUCTION

The Reply does nothing more than underscore the deficiencies of the Petition and why dismissal is appropriate. The Reply premises its entire argument on how the prior art considered by the Examiner during prosecution of the claimed inventions is not cumulative of the references cited in the Petition because the prior art does not disclose switching back-and-forth between 3D and 2D space, using the claimed "replacing" feature. First, it is true that the prior art cited during prosecution did not disclose these features. In fact, that is why the '654 Patent was allowed. Second, the references cited in the Petitioner also do not disclose these features. As such, discretionary denial under 35 U.S.C. § 325(d) is appropriate.

II. DISCRETIONARY DENIAL UNDER 325(D) IS APPROPRIATE

The *Advanced Bionics* and *Becton* factors support discretionary denial under Section 325(d). As Petitioner points out, there are six non-exclusive factors to consider in determining whether discretionary denial is appropriate. Factors (a)-(d) pertain to the cumulative nature of the references (similarities and differences) and the extent to which the prior art was evaluated during examination, including whether the prior art was the basis for any rejection. These factors all favor discretionary denial.

First, Petitioner points out that asserted references (*e.g.*, Hanggie, Anthony, and Matthews) were not considered by the Examiner. Reply at 1. Section 325(d), however, provides that "the Director may take into account whether ... the same or *substantially similar prior art* or arguments previously were presented to the Office." As discussed in detail in the Patent Owner's Preliminary Response

(“POPR”), the references cited in the Petition are virtually identical to prior art that was considered by the Examiner. POPR at 30-39.

Second, the cumulative prior art was not only considered by the Examiner but formed the basis for several rejections. For example, Gottesman, Freeman, and Prager were the basis for rejections during prosecution of the ‘018 Patent (*i.e.*, the grandparent patent) and the ‘048 Patent (*i.e.*, the parent patent. *See, e.g.*, EX2004 at 72, 83, 84, 127, 138, 139, 179, 189, and 190; and EX2003 at 92, 111, 117, 118, and 120.

Petitioner argues that there are differences between the prior art cited during prosecution and relied upon in the Petition, including that “none of these references [considered by the Examiner] disclose ‘switching back-and-forth between 2D and 3D spaces.’” Reply at 2-3. While this is true (indeed, this is why the ‘654 Patent was allowed), this feature is also not disclosed in the references cited in the Petition. *See* POPR at 39-52 and Section III below. Petitioner argues that this feature is disclosed in Hanggie via a “maximize” button, which enlarges a window to substantially fill the screen. While Petitioner disagrees (see discussion below), the same feature was disclosed in Iida and Kamiwada, which were considered by the Examiner during prosecution. *See, e.g.*, APPLE1001 at 2. Petitioner argues that these references are different but fails to explain why the “maximize” (or zoom) feature could not be combined as argued by the Petitioner (*e.g.*, with Prager, Freeman, Gottesman, or Sciammarella—3D GUIs considered by the Examiner).

Petitioner also argues other differences, “such as a slide-ruler GUI interface.” Reply at 4. These differences, however, are not material to patentability. *Becton, Dickinson and Co., v. B. Braun Melsungen AG*, IPR2017-

01586, Paper 8 at 21 (PTAB Dec. 15, 2017) (“We cannot reasonably consider such differences ‘material’ because ... these structure differences do not appear to affect in any meaningful manner [the claimed inventions.]”).

Petitioner then argues that “[t]he arguments on the prosecution record are divorced from those raised in this proceeding” and “[t]he majority of prosecution focused on a different claim set.” Reply at 6. Not so. During prosecution of the ‘018 Patent, prior to any office action, Patent Owner amended the claims to include features that are substantially similar to the ones at issue in this proceeding (*e.g.*, capturing outputs, capturing images of outputs, texturing the images on objects in 3D space, interacting with an image to receive additional information). *See, e.g.*, EX2003 at 150, 151, 155).

In rejecting these claims, the Examiner cited prior art that was virtually identical (in material respects) to Hanggie and Anthony,¹ including Gottesman, Freeman, and Prager. *See, e.g.*, EX2003 at 92-93 (“Gottesman teaches ... displaying at least a portion of the computing output on at least two objects within a 3D space ... wherein a first one of the at least two objects is displayed in a foreground of the 3D space and a second one of the at least two objects is displayed in a background of the 3D space”); and EX2004 at 127 (“Prager teaches ... capturing computing output from at least one computer source in response to the received end user input ... presenting a first portion of the computing output as at least two objects within a three-dimensional virtual space.”) and 190 (“Freeman teaches a graphical user interface that presents computing outputs within a three-dimensional virtual space in response to received user input.”).

¹ Matthews is only being cited with respect to dependent Claims 6, 9, 14, and 18.

The Examiner also considered other cumulative prior art, including Iida, Kamiwada, and Sciammarella. *See* APPLE1001 at 2. While these references may not have been cited in any rejection, the claims considered by the Examiner include features that are identical to those in the '654 Patent, including a "replacing feature" (*see, e.g.,* EX2003 at 120-121 ("Robbin further teaches texturing the third image on the first one of the at least two objects, the third image thereby **replacing** the first image on the first one of the at least two objects") (emphasis added), and a chronologically arranged timeline (*see, e.g.,* EX2004 at 180 ("Kahl further teaches generating **a timeline ... organized in linear chronological order** according to when objects were presented within the display space (the icons are presented to provide a visual indication of the activity chronologically).") (emphasis added).

Thus, Petitioner is incorrect in stating "[t]he arguments to the prosecution record are divorced from those raised in this proceeding." Reply at 5-6. Petitioner also incorrectly states that there is no evidence that "[t]he Examiner ... consider[ed] the asserted combinations." The Examiner considered several combinations including ones substantially similar to Hanggie and Anthony (*see, e.g.,* EX2003 at 92 (Gottesman and Freeman); and EX2004 at 84 and 139 (Prager, Kahl, and Gottesman) and 190 (Gottelman, Kahl, and Freeman)).

The fifth *Becton* factor is whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art. According to *Advanced Bionics*, it is the Petitioner that bears the burden of demonstrating "that the Office erred in a manner material to the patentability of challenged claims." *Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020). "If reasonable minds can disagree

regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.” *Id.* at 9.

In support of this, Petitioner argues that “[n]one of the prosecution art that Patent Owner relies on formed the basis of a rejection against the Challenged Claims or substantially similar claims.” Reply at 6. Clearly, this is not correct. Petitioner also argues that “[t]he Examiner did not evaluate the asserted art combinations or substantially similar combinations in any meaningful way, as illustrated by the plainly erroneous reasons for allowance.” *Id.* Again, not correct.

With respect to the ‘018 Patent, the Examiner stated that “[t]he claims are allowable over the prior art in view of ... the applicant’s remarks filed on 1/28/2010” (EX2003 at 32), which stated that the claimed features, including ***rendering*** a computing output, ***capturing*** an image, and ***texturing*** an image onto an object, ***where interaction with an image results in*** “[a]n image of the rendered additional information [being] captured and textured onto the window, thereby ***replacing the image of the website,***” were not disclosed in Gottesman, Freeman, or Robbin (EX2003 at 78).

With respect to the ‘048 Patent, the Examiner stated that “[t]he claims are allowable over the prior art in view of the examiner’s amendment and the applicant’s remarks filed on 06/27/2014.” EX2004 at 29. In the Amendment dated June 27, 2014, the Patent Owner argued that “***rendering*** a first webpage, ***capturing an image*** of the first webpage, and ***texturing the image*** on the first object so that it can be ***displayed (with other objects) in 3D space,***” and “***[i]f the user interacts with the first object (i.e., the image of the first webpage), then a windowed version of the first webpage is presented to the user [in 2D space],*” is not shown**

or suggested by the prior art. EX2004 at 52-62 (emphasis added).

The Examiner agreed to allow the claims, but only after amending the claims to recite “replacing the first and second images within the 3D space with a window within a two-dimensional (2D) space in response to receiving the interaction, *wherein the window includes the first webpage.*” *Id.* at 28 (emphasis added).

Finally, with respect to the ‘654 Patent, the Examiner acknowledged that “[t]he present invention teaches converting outputs of a plurality of applications into *a plurality of images displayed in a three-dimensional space, replacing the plurality of images with the output of the first application in a two-dimensional space in response to first user interaction with the first image*, and modifying the first application specific data in response to second user interaction with the output.” APPLE1002 at 19. The Examiner further stated that “[t]he claims are allowable over the prior art in view of the examiner’s amendment and the applicant’s remarks filed on 09/30/2014.” *Id.*

In the Amendment dated September 30, 2014, the Patent Owner argued that “[t]he pending claims are similar in that *a plurality of images (i.e., image of outputs) are displayed to a user*, and the user is allowed to interact with a particular output by *first interacting with a corresponding image and then the particular output*. The pending claims further provide that *the plurality of images are displayed in chronological order*, allowing the user to view the application in order of use.” *Id.* at 226 (emphasis added).

The Examiner agreed to allow the claims, but only after amending the claims to provide that the plurality of images are displayed in “a three-dimensional

space” and that replacing the plurality of images “within the three-dimensional space” with a *corresponding application “within a two-dimensional space.”* *Id.* at 14-15. The Examiner further required *defining chronological order* so that “*a first one* in said order is displayed *in a foreground* of said three-dimensional space, *a second one* in said order is displayed *in a background* of said three-dimensional space *behind at least said first one* in said order, and *a third one* in said order is displayed *in a background* of said three-dimensional space, *behind at least said second one* in said order.” *Id.* (emphasis added). Thus, the record clearly illustrates that the Examiner was fully aware of the claims’ scope and the importance of both the “replacing” and “chronological” limitations.

Accordingly, Petitioner has not shown *any* Office error, let alone error that is *material to patentability* and to a level that *reasonable minds could not disagree*. This, coupled with the fact that the evidence submitted by Petitioner merely rehashes arguments and prior art already considered by the Examiner (Becton factor (f)), discretionary denial under Section 325(d) is appropriate.

At the very least, the fact that the Examiner allowed the claims over cumulative prior art (including combinations) is evidence that a POSITA would not have found the Challenged Claims obvious over similar combinations argued by Petitioner. *See, e.g., Advanced Bionics*, IPR2019-01469, Paper 6 at 9 (PTAB Feb. 20, 2020) (“[T]his framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.”).

III. “REPLACING” FEATURE NOT DISCLOSED IN THE PRIOR ART

Petitioner argues that Patent Owner has intrinsically and improperly construed the “replacing” limitation to mean “switch[ing] between *inactive images*

of webpages in 3D space and an individual, *active webpage* in 2D space.” Reply at 8-9 (emphasis in original). First, Patent Owner has not argued to construe the term “replacing.” As such, this term should be given its plain and ordinary meaning.

That being said, the claim language goes on to provide (a) what is being replaced and (b) what it is being replaced with. For example, Claim 1 of the ‘654 Patent provides that “said plurality of images within said three-dimensional space” are replaced with “one of said first, second, and third objects corresponding to said one of said plurality of application within a two-dimensional space.” APPLE1001 at 37:44-38:35. Thus, Claim 1 requires switching from 3D space to 2D space, where an individual application replaces the plurality of images.

However, Claim 1 goes on to provide that (a) interacting with an image in 3D space *does not* result in editing its contents, but instead triggers the “replacing” step (*id.* (“replacing ... in response to said first interaction.”)), and that interacting with the application in 2D space *does* result in editing its contents (*id.* (“receiving a second interaction by said user with said one of said first, second, and third objects within said two-dimensional space; and modifying said one of said first, second, and third application-specific data in response to said interaction”)). *Id.* Thus, Patent Owner is ***not construing*** the “replacing” limitation but ***merely summarizing*** its relationship to other claim limitations. *See* POPR at 41.

As such, a construction consistent with the foregoing would not be “premature” as Petitioner suggests (Reply at 9) as construction of this limitation was foreseeable, especially in light of the prosecution history. *See, e.g., Apple Inc., Samsung Elec. Co., LTD, and Samsung Elec. Am., Inc., v. Rosetta-Wireless Corp.*, IPR2016-00616, Paper 11 at 2 (PTAB, Jun. 15, 2016) (denying additional briefing

when claim constructions were *foreseeable* as “patent owners in their preliminary responses commonly seek construction of terms that were not addressed by a petitioner in a corresponding petition.”).

Petitioner's request for supplemental briefing speaks volumes, drawing attention to Petitioner's concerns that the references cited in the Petition do not disclose “replacing,” let alone replacing a plurality of images (including the image that is being interacted with) in 3D space with an active webpage in 2D space. POPR at 39-52.

Petitioner argues that in Hanggie, the 3D window (shown in Figure 3, reproduced below) includes “buttons 305 (e.g., used to restore, maximize, minimize, close the window, etc.)” (APPLE1006 at [0058]), and that by clicking on the maximize button on the 3D window, the window will not only enlarge, but be presented in a 2D space (Reply at 3).

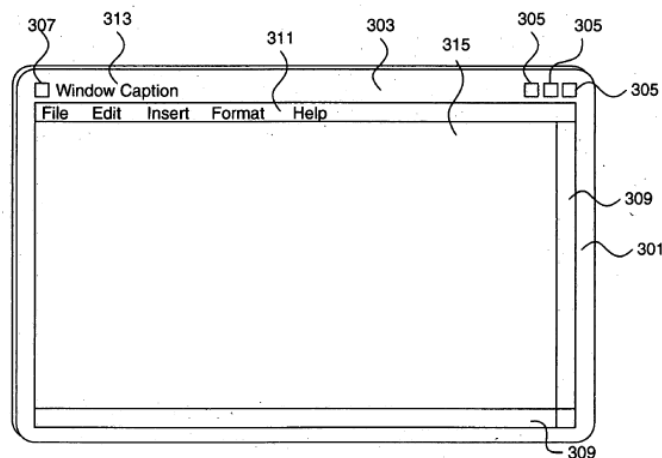


Figure 3 of Hanggie

This argument has several flaws, including because (1) enlarging a window does not affect the nature of the space (a 3D object can only be presented in a 3D

space); (2) clicking the maximize button on the toolbar is not an interaction with an image; (3) while the window may get bigger, it does not replace itself (claims require that the selected image is replaced with an active application), and (4) maximizing does not result in switching from an *inactive image* to an *active application*. POPR at 39-52.

Petitioner argues that Anthony teaches displaying various “data objects,” and thus “it would have been obvious to a POSITA that when Anthony’s dynamic timeline displays a plurality of inactive images in 3D (some of which may include inactive application windows with control buttons), selection of a maximize button corresponding to a particular application window would cause that window to replace the images previously displayed in 3D with a 2D window that is active to receive user inputs.” Reply at 9-10.

Assuming *arguendo* that maximizing a window affects the space in which the window exists (it does not) (see POPR at 44-45), and that both inactive images and windows could be displayed in Anthony’s dynamic timeline, maximizing an inactive window is not an interaction on an image, does not result in the window itself being “replaced” with anything, let alone an active application, and does not replace an *inactive* window with an *active* window. ***Maximizing an object merely enlarges an object—it does not convert the object from an image to an application or from inactive to active.*** This is true regardless of whether the combination is Anthony in view of Hanggie or Hanggie in view of Anthony, as Petitioner’s only support for the “replacing” feature is the maximize button in Hanggie. This, together with the fact that other claim features are not disclosed in the combination (*see* POPR at 39-53), warrants the Board’s denial of the Petition.

Patent Owner's Sur-Reply
IPR2023-00343 (U.S. Patent No. 9,304,654)

Respectfully submitted,

Date: May 18, 2023

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Patent Owner's Sur-Reply
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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e)(4), the undersigned certifies that on May 18, 2023, a complete and entire copy of this Patent Owner's Sur-Reply to Petitioner's Reply to their Petition for *Inter Partes* Review of U.S. Patent No. 9,304,654 was provided by email to Petitioner by serving the email correspondence addresses of record as follows:

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