Trials@uspto.gov
571-272-7822

Paper 28
Date: January 22, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

QUALCOMM INCORPORATED,
Patent Owner.

IPR2018-01252
Patent 8,683,362 B2

Before DANIEL N. FISHMAN, MICHELLE N. WORMMEESTER, and SCOTT B. HOWARD, *Administrative Patent Judges.*

HOWARD, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

INTRODUCTION

Apple Inc. ("Petitioner") filed a Petition to institute an *inter partes* review of claims 1–6 and 8–20 of U.S. Patent No. 8,683,362 B2 (Ex. 1001, "the '362 patent") pursuant to 35 U.S.C. §§ 311–319. Paper 2 ("Petition" or "Pet."). Qualcomm Incorporated ("Patent Owner") filed a Patent Owner Preliminary Response. Paper 10. We instituted an *inter partes* review of

claims 1–6 and 8–20 on all grounds of unpatentability alleged in the Petition. Paper 11 ("Institution Decision" or "Inst. Dec.").

After institution of trial, Patent Owner filed a Response (Paper 17, "PO Resp."), Petitioner filed a Reply (Paper 19, "Pet. Reply"), and Patent Owner filed a Sur-reply (Paper 21, "PO Sur-reply").

Petitioner relies on the testimony of Dr. Andrew Sears (Ex. 1003) and Patent Owner relies on the testimony of Dr. Jacob O. Wobbrock (Exs. 2001, 2006).

An oral hearing was held on November 21, 2019, and the record contains a transcript of this hearing. Paper 27 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has not shown by a preponderance of the evidence that claims 1–6 and 8–20 of the '362 patent are unpatentable.

BACKGROUND

A. Real Parties in Interest

Petitioner identifies Apple Inc. as the real party in interest. Pet. 72.

Patent Owner identifies Qualcomm Incorporated as the real party in interest. Paper 3, 2 (Patent Owner's Mandatory Notices).

B. Related Matters

The parties identify the following dismissed patent litigation proceeding in which the '362 patent was asserted: *Qualcomm Inc. v. Apple Inc.*, Case No. 3:17-cv-02403 (S.D. Cal.). Pet. 72; Paper 3, 2 (Patent Owner's Mandatory Notices); Paper. 16, 2 (Petitioner's Updated Mandatory Notices).

The parties also identify a second request for *inter partes* review of the '362 patent: *Apple Inc. v. Qualcomm Inc.*, IPR2018–01253. Pet. 72;

Paper 3, 2 (Patent Owner's Mandatory Notices). We take official notice of a third request for *inter partes* review of the '362 patent: *Apple Inc. v. Qualcomm Inc.*, IPR2019-00112. *See* Ex. 1015 (IPR2019-00112, Petition). We previously denied institution of the other requests for *inter partes* review. IPR2018-01253, Paper 12 (PTAB Feb. 28, 2019) (Institution Decision); IPR2019-00112, Paper 7 (PTAB Apr. 11, 2019) (Institution Decision).

Additionally, Patent Owner identifies two pending patent applications that "claim the benefit of U.S. Patent Application No. 12/416,279, from which the '362 patent issued." Paper 3, 2 (Patent Owner's Mandatory Notices).

C. The '362 Patent

The '362 patent is titled "Card Metaphor for Activities in a Computing Device." Ex. 1001, code (54). According to the '362 patent, conventional computer systems use overlapping windows in order to allow the user the opportunity to run several applications at the same time or open multiple copies of a single application, such as opening different documents with a word processor. *Id*. at 1:32–2:2. However, such a graphical user interface typically requires a large screen. *Id*. at 2:3–5. If there is limited screen space, users "must choose between . . . making windows smaller and thus reducing available workspace within each application . . . [or] stacking windows atop each other so that only one window (or very few) is visible at a time." *Id*. at 2:5–9. This is especially true for mobile devices, such as smart phones, which have insufficient screen space to display multiple, overlapping windows. *Id*. at 2:32–47.

According to the '362 patent, this problem can be addressed by using a computer that provides at least two modes for interacting with multiple

activities which the user can toggle between as desired. Ex. 1001, 2:51–59. Specifically, the '362 patent describes using a card metaphor "in which each activity can be represented within an area of the screen." *Id*. at 2:60–3:5. "[I]n a full-screen mode, one activity occupies substantially an entire display screen. The card thus fills substantially the entire display screen, although in some embodiments some areas of the screen may be reserved for status indicators, alerts, messages, and the like." *Id*. at 3:9–13. In a second mode, referred to as a "card mode," "one activity is visible within a card, and a portion of at least one other card is also visible. Thus, a card that has focus (i.e., that the user is interacting with) is visible in full, while at least one other card is only partially visible." *Id*. at 3:14–19. When in card mode, the user can change the location of the cards "so as to change focus from one card to another" or a card can be moved off screen. *Id*. at 3:19–29.

D. Illustrative Claims

Petitioner challenges claims 1–6 and 8–20 of the '362 patent. Pet. 1. Claim 1 is independent, is illustrative of the subject matter of the challenged claims, and reads as follows:

> 1. A computer system comprising:
>
> a physical button;
>
> a processor coupled to the physical button;
>
> a touch-sensitive display screen coupled to the processor, the processor to receive gesture input on the touch-sensitive display screen and operate the computer system in any one of at least two display modes, wherein:
>
> during a given duration, the processor operates at least a first application and a second application concurrently;
>
> in a full-screen mode, the processor provides, on the touch-sensitive display screen, a

user interface for only one of either the at least first application or the second application;

in a windowed mode, the processor:

provides on the touch-sensitive display screen, a first card corresponding to the first application, and a first portion of a second card so that a second portion of the second card is not visible on the touch-sensitive display screen, the second card corresponding to the second application, wherein at least the first card displays content from operation of the first application, the content corresponding to (i) an output from an application, (ii) a task, (iii) a message, (iv) a document, or (v) a web page;

responds to a directional contact along a first direction on the touch-sensitive display screen by changing a position of the first card relative to the touch-sensitive display screen in the first direction; and

responds to a directional contact of moving the first card or the second card along a second direction that is different than the first direction on the touch-sensitive display screen by (i) identifying one of the first card or second card as being selected based on the directional contact along the second direction, and (ii) dismissing the selected first card or second card from the touch-sensitive display screen in the second direction so that the corresponding first application or second application is closed;

wherein the processor, in response to receiving user input via the physical button, transitions the computer system at least (i) from the full-screen mode to the windowed mode, or (ii) from the windowed mode to the full-screen mode.

Ex. 1001, 24:31–25:7

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–6 and 8–20 would have been unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	References
1–6, 8–20	103(a)[1]	Jin,[2] Elias[3]

ANALYSIS

A. Legal Standards

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under 35 U.S.C. § 103 that requires consideration of four factors: (1) the "level of ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the claims at issue," and (4) "secondary considerations" of non-obviousness such as "commercial success, long-felt but unsolved needs, failure of others, etc." *Id.* at 17–18. "While the sequence of these questions might be reordered in any particular case," *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the Federal Circuit has "repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor." *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1335 (Fed. Cir. 2016), *overruled on other*

[1] The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. § 103 effective on March 16, 2013. Because the '362 patent issued from an application filed before March 16, 2013, we apply the pre-AIA version of the statutory bases for unpatentability.
[2] Jin, US 8,633,900 B2, issued Jan. 21, 2014 (Ex. 1005).
[3] Elias, US 2007/0177803 A1, published Aug. 2, 2007 (Ex. 1006).

grounds by Aqua Prods., Inc. v. Matal, 872 F.3d 1290 (Fed. Cir. 2017) (en banc).

B. Level of Ordinary Skill in the Art

Factors pertinent to a determination of the level of ordinary skill in the art include (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of workers active in the field. *Envtl. Designs, Ltd. v. Union Oil Co*. of Cal., 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. Ltd, Inc. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

Petitioner argues that a person having ordinary skill in the art "would have had at least a Bachelor's Degree in Computer Science, Computer Engineering, Electrical Engineering, Psychology, or a related field, and at least five years of experience in the field of human computer interaction." Pet. 3 (citing Ex. 1003 ¶¶ 18–19); *see also* Pet. Reply 28–30. Petitioner further argues that Patent Owner "incorrectly mischaracterizes a portion of Dr. Sears's transcript to try to draw a distinction between the definitions of a [person having ordinary skill in the art] provided in the Petition and Dr. Sears's supporting declaration to argue how Dr. Sears arrived at his determination." Pet. Reply 30; *see also id.* at 29–30 (citing Ex. 2010 13:8–19:17).

Patent Owner argues for a lower level of ordinary skill in the art:

> A person of ordinary skill in the art in the relevant time period would have had at least a Bachelor of Science Degree in electrical engineering, computer engineering, computer science, or in a related field, with at least 2 years of industry experience in touch sensitive computer systems or gesture-based control of computer systems. Alternatively, a person of ordinary skill in the relevant timeframe could have been someone lacking formal technical education but having practical experience that would be equivalent to such education.

PO's Resp. 6–7 (citing Ex. 2001 ¶¶ 33–35).

Patent Owner further argues Petitioner and Dr. Sears disagree as to the qualifications of a person having ordinary skill in the art. PO Resp. 7–8. Patent Owner also argues that "both Petitioner and Dr. Sears appear to have relied solely on Dr. Sears's personal experiences and judgment, which is not the correct analysis for determining the qualifications of one of ordinary skill in the art." *Id.* at 8 (citing *Evtl. Designs*, 713 F.2d at 696–97).

First, we are not persuaded by Patent Owner's argument that Dr. Sears and Petitioner substantially disagree as to the level of skill of a person having ordinary skill in the art. Although the identification of the level of ordinary skill in the art in the Petition is not identical to Dr. Sears's testimony—the Petitioner omits the word "typically" and adds the qualification that "[a]dditional relevant education . . . may compensate for any deficits"—Petitioner's proposal is substantially the same as Dr. Sears's testimony. *Compare* Pet. 3, *with* Ex. 1003 ¶¶ 18–19 (Sears Decl.). That is, we fail to see how the differences are material and Patent Owner has not argued that any difference in the formulation would result in a different outcome.

Second, we disagree with Patent Owner that Dr. Sears—and by extension Petitioner—did not consider the proper factors. Dr. Sears testified

that his identification of the level of skill was based on his experience in the field. Ex. 1003 ¶ 18. In his deposition, he further explained that this was based both on his "research experience" and "practical experience" working for "Goddard Space Flight Center" and "[Sun] [M]icrosystems." Ex. 2010, 14:22–15:15 (Sears Dep.). Although Dr. Sears may not have considered all of the factors identified in *Environmental Design*, his testimony appears to be based on several of the factors—that is, the level of skill of people who were working with him and solving problems in the field. *See id.* at 16:15–17:22.

Third, besides the reference to a person having ordinary skill in the art having a psychology degree, Drs. Sears and Wobbrock are in agreement regarding the education of a person having ordinary skill in the art. *See* Ex. 1003 ¶ 18; Ex. 2006 ¶ 38. As Dr. Sears has not explained why a psychology degree would be relevant to the claimed invention—which is directed to "application management in computing devices" (*see* Ex. 1001, 1:24–28)—there is not sufficient evidence to support its inclusion in the level of ordinary skill in the art. *See Envtl. Designs*, 713 F.2d at 696–697.

Fourth, both experts are in general agreement as to the relevant amount of industry experience—a relatively small amount—and neither has offered any testimony that the exact amount of experience makes a difference. *See* Ex. 1003 ¶ 18; Ex. 2001 ¶ 33.

Fifth, both experts use the phrase "at least" in describing the level of ordinary skill in the art. However, qualifiers such as "at least" expand the range indefinitely without an upper bound, and thus precludes a meaningful indication of the level of ordinary skill in the art. Therefore, we do not use them in setting forth the level of skill in the art.

Accordingly, we find that a person having ordinary skill in the art has a Bachelor's Degree in computer science, computer engineering, electrical engineering, or a related field, with between two and five years of experience. Moreover, additional relevant education or industry experience may compensate for any deficits.

C. Claim Construction

In this *inter partes* review, we construe claim terms in this unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2018).[4] "Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history." *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016). In addition, the Board may not "construe claims during [an *inter partes* review] so broadly that its constructions are unreasonable under general claim construction principles." *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (emphasis omitted), *overruled on other grounds by Aqua Prods.*, 872 F.3d 1290. An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

[4] Per recent regulation, the Board will apply the *Phillips* claim construction standard to petitions filed on or after November 13, 2018. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (codified at 37 C.F.R. § 42.100(b) (2019)). Because Petitioner filed its petition before November 13, 2018, we apply the broadest reasonable interpretation standard.

Neither Petitioner nor Patent Owner identified any claim limitation that needed construction. *See* Pet. 3; PO Resp. 6.

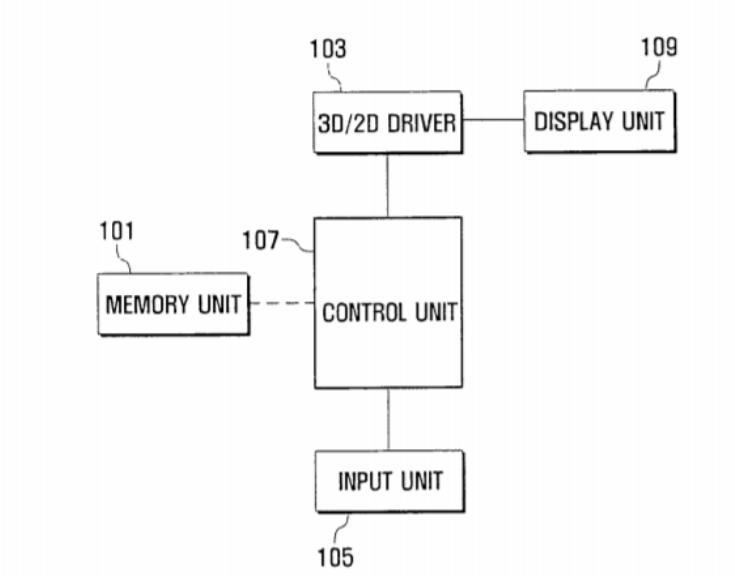
"[W]e need only construe those claim limitations 'that are in controversy, and only to the extent necessary to resolve the controversy.'" *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). Because the parties did not request the construction of any limitation and no express constructions are necessary to resolve a controversy, we do not construe any of the limitations.

D. Obviousness over Jin and Elias

1. Jin

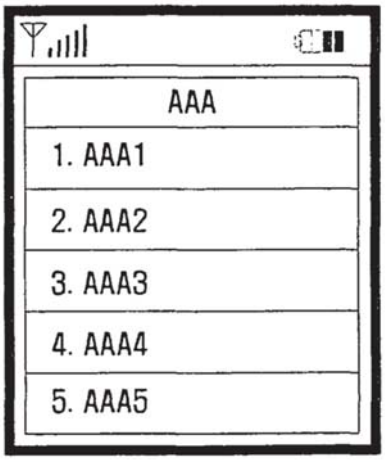
Jin is titled "Screen Display Method for Mobile Terminal" and relates "to a screen display method for a mobile terminal wherein a plurality of contents belonging to the same level or a plurality of applications in execution can be displayed together on a single screen in response to user inputs." Ex. 1005, code (54), 1:15–20. Jin's mobile device "provides a screen display method for a mobile terminal wherein a plurality of applications in execution can be simultaneously displayed on the screen." *Id.* at 2:1–4.

Jin's Figure 1 is reproduced below.



Ex. 1005, Fig. 1. Jin's Figure 1 "is a schematic block diagram illustrating a mobile terminal to display contents and applications in accordance with the principles of the present invention." *Id.* at 2:65–67. As shown in Jins's Figure 1, "the mobile terminal includes a memory unit 101, 3D/2D driver 103, input unit 105, control unit 107, and display unit 109." *Id.* at 3:56–58. "The control unit 107 controls the overall operation of the mobile terminal." *Id.* at 4:36–37. Jin's mobile terminal can be used to display content and applications in various formats. *See*, *e.g.*, 3:62–4:3, 4:36–56.

For example, as shown in Jin's s Figure 4, reproduced below, Jin's display can show the content of a single window.



Ex. 1005, Fig. 4. Jin's Figure 4 "is a screen representation of a content window" that "corresponds to a state where the artist 'AAA' is selected and songs released by the artist 'AAA' are listed. That is, the control unit 107 recognizes selection of the artist 'AAA', and displays a descriptive listing of the selected artist 'AAA' on the display unit 109." *Id*. at 3:6, 6:12–16.

Jin further discloses that "in response to a multi-window display request, the control unit 107 controls the display unit 109 to display those contents at the same level as the currently displayed content in the form of an opaque stack, transparent stack, tile board, or folding fan." Ex. 1005, 4:36–42.

Jin further describes various ways to change the displayed windows. For example, Jin states that "[i]n response to a request for single window movement or multiple window movement during display of windows associated with same-level contents, the control unit 107 controls the display unit 109 to rearrange the windows accordingly." Ex. 1005, 4:49–52. Jin also describes how to scroll windows: "In response to a scrolling request during display of same-level content windows, the control unit 107 controls the display unit 109 to scroll the front one or all of the windows depending upon settings by the user." *Id.* at 4:52–56.

2. Elias

Elias is titled "Multi-touch Gesture Dictionary." Ex. 1006, code (54). Elias discloses that the gesture dictionary "may take the form of a dedicated computer application that may be used to look up the meaning of gestures." *Id*. at code (57). Elias' Figure 5 is reproduced below.

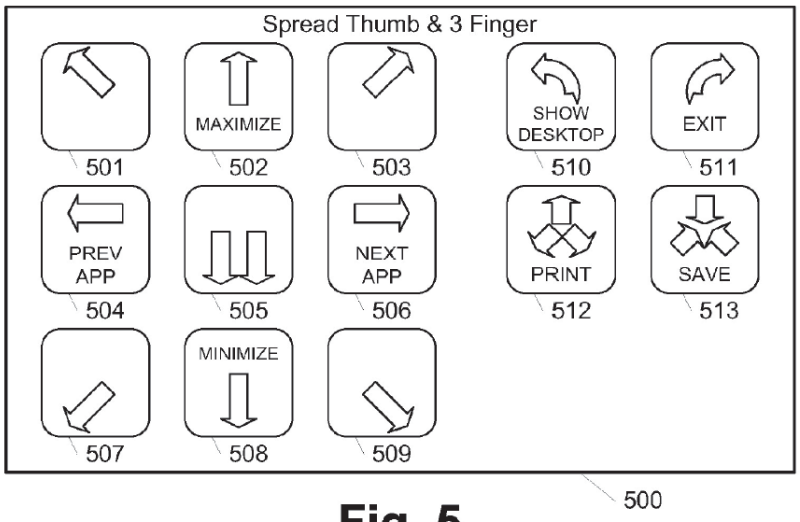


Fig. 5

Id. at Fig. 4. Elias' Figure 5 "illustrates an exemplary dictionary entry associated with a spread thumb and three finger chord that may be used in accordance with some embodiments of the present invention." *Id*. ¶ 22. As shown in Figure 5, exiting an application is associated with clockwise rotation. *Id.* ¶¶ 44–45.

3. Analysis of Claims 1–6 and 8–20

Petitioner argues that the combination of Jin and Elias teaches all of the limitations recited in claim 1. *See* Pet. 5–42; Pet. Reply 2–16. Because it is dispositive, we focus our analysis on the following limitation recited in claim 1:

> the processor . . . responds to a directional contact of moving the first card or the second card along a second direction that is different than the first direction on the touch-sensitive display screen by (i) identifying one of the first card or second card as being selected based on the directional contact along the second direction, and (ii) dismissing the selected first card or second card from the touch-sensitive display screen in the second

direction so that the corresponding first application or second application is closed.[5]

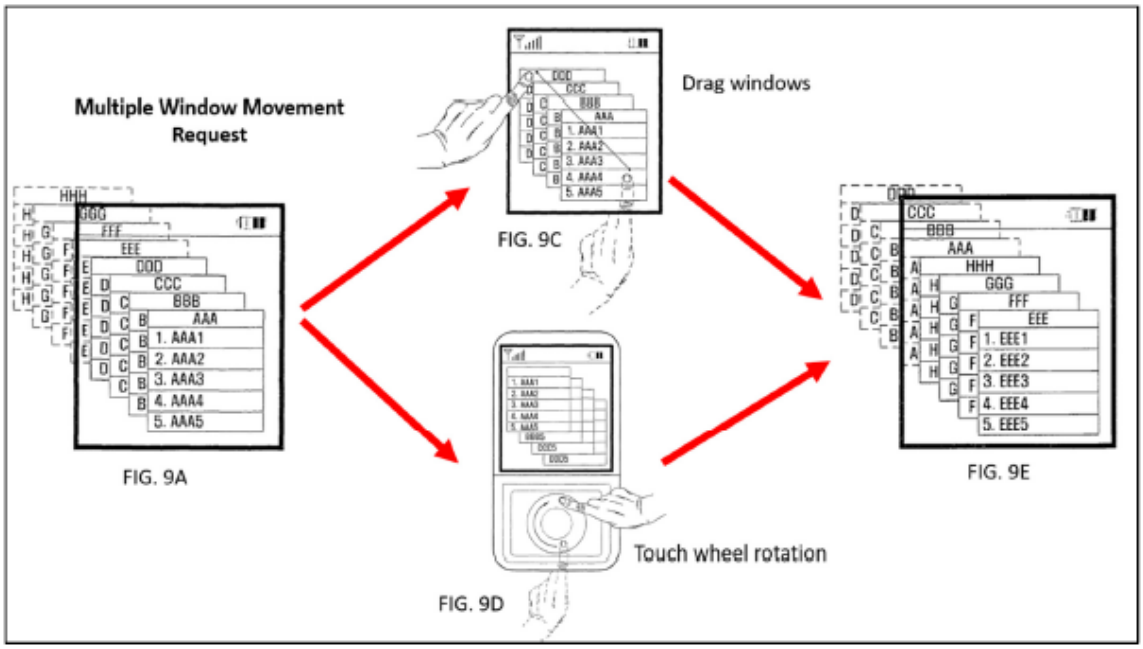
Ex. 1001, 24:45–25:2.

a) Petitioner's Arguments

Petitioner argues the combination of Jin and Elias teaches the dismissing limitation recited in claim 1. Pet. 38–40.

Specifically, Petitioner argues Jin teaches moving a card in a first direction in response to a movement on a touch screen in a first direction. *See Id.* at 35–38. According to Petitioner, Jin's Figures 9A, 9C, and 9E "illustrates a multiple window movement request and its result." *Id.* at 35 (citing Ex. 1005, 7:35–39).

Petitioner provides an annotated drawing, reproduced below, that incorporates Figures 9A, 9C, 9D, and 9E of Jin.



Annotated Figures 9A, 9C, 9D, and 9E of Jin (APPLE-1005)

[5] This limitation is sometimes referred to as the "dismissing" limitation.

Pet. 36. Jin's Figures 9A, 9C, 9D, and 9E "illustrate manipulation of content windows for multiple window movement." Ex. 1005, 3:15–16. Petitioner's drawing above incorporates Figures 9A, 9C, 9D, and 9E with red annotations depicting a sequence of events to move multiple windows on the display unit. *See* Pet. 36.

Petitioner argues, for example, that Jin teaches that "'the control unit 107 can recognize dragging from the front window to the last window on the display unit 109 as a multiple window movement request', illustrated in FIG. 9C, in which the front window 'AAA' is moved in the direction of the dragging in a sliding manner." Pet. 36 (quoting Ex. 1005, 7:42–46). Petitioner further argues that "[i]n response to Jin's multiple window movement request, the control unit 107 rearranges the windows such that 'content windows in display become invisible and content windows not in display become visible on the display unit 109, as illustrated in FIG. 9E.'" *Id.* (quoting Ex. 1005, 7:53–55); *see also id.* at 37 (summarizing Jin's Figures 9A, 9C, and 9E); Pet. Reply 3 ("In the multiple window movement request, Jin recognizes 'dragging from the front window to the last window' and 'rearrange[] content windows so that the content windows in display become invisible and contents windows not in display become visible' in response."), 7 ("Thus, Jin contemplates the movement of a window based on finger movements corresponding to the same." (citing Pet. 8)), 16 ("First, a [person having ordinary skill in the art] would have understood that in response to a directional contact along a first direction, as illustrated in FIG. 9C above, the first card's position would change relative to the screen in the first direction. FIGs. 9A-9E illustrate this movement." (citations omitted)).

Petitioner further argues Elias teaches dragging. Pet. Reply 8 (citing Ex. 1006 ¶ 42). Petitioner directs us to an annotated version of Elias's Figure 3, reproduced below.

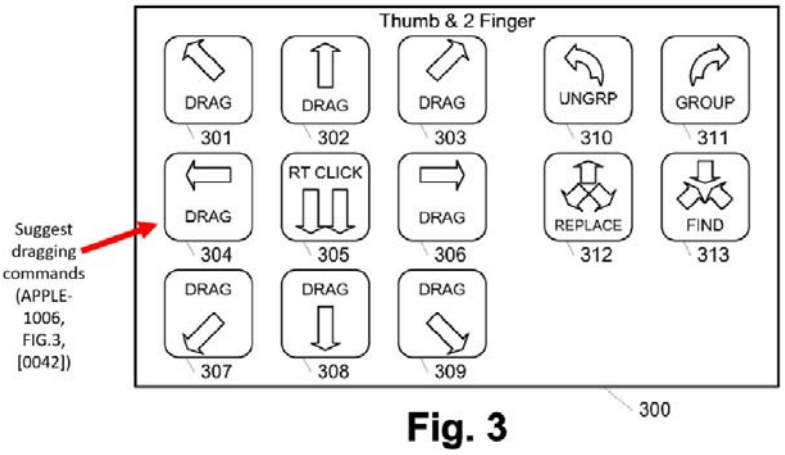


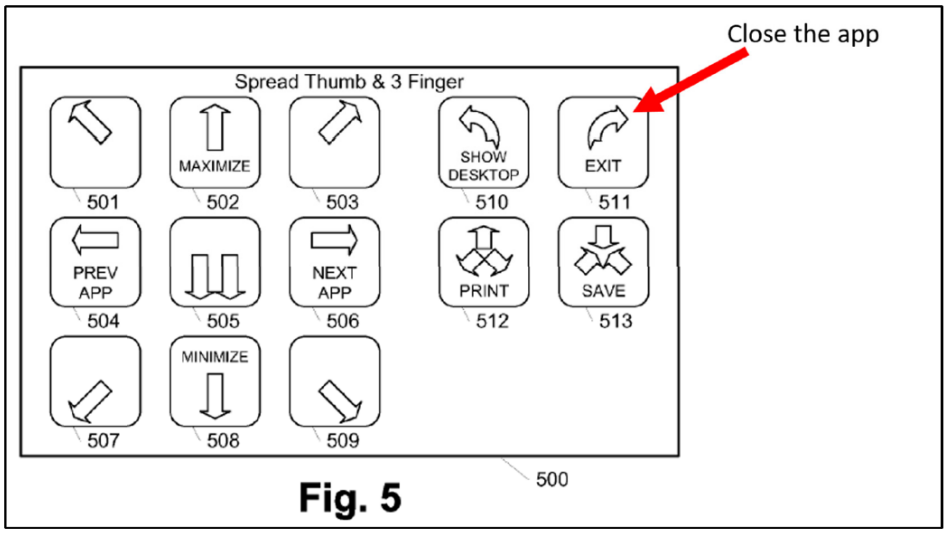
Fig. 3

Pet. Reply 3. Elias's Figure 3 "illustrates an exemplary dictionary entry associated with a thumb and two finger chord." Ex. 1006 ¶ 20. Petitioner annotated Elias's Figure 3 with "Suggest dragging commands" with a red arrow pointing to dictionary entry 304 "DRAG." Pet. Reply 3.

According to Petitioner, Elias's Figure 3 "illustrates a dictionary entry 300 enabling users to perform dragging typically 'accomplished in conventional graphical user interface ("GUI") system[s] by holding a mouse button while moving the mouse.'" *Id.* (quoting Ex. 1006 ¶ 42). Additionally, Petitioner argues that "Elias's gesture dictionary provides feedback in response to recognizing a gesture motion" and that a person having ordinary skill in the art "would have understood that Jin/Elias would display feedback that includes animation illustrating the selected window moving off the display in the second direction in response to a user performing a 'clockwise rotation 511' associated with 'exit[ing], i.e., clos[ing] [an] application' on a window." *Id.* (citing Pet. 14–15, 38–40; Ex. 1003 ¶¶ 97–106; Ex. 1006 ¶ 45).

During the Oral Hearing, Petitioner argued that its reliance on Elias for dragging is not a new argument. *See e.g.*, Tr. 13–17, 48–51. Specifically, Petitioner stated its use of Elias's Figure 5 in the Petition was exemplary and that Petitioner intended to refer to the whole dictionary gesture dictionary. *Id.* at 17.

Petitioner further argues that "a [person having ordinary skill in the art] would have been motivated to incorporate, and would have understood how to incorporate Elias's gesture dictionary as a background application on Jin's mobile device." Pet. 38 (citing Ex. 1006 ¶ 14); *see also* Pet. Reply 19–20. Petitioner further argues that, as shown in an annotated version of Figure 5, reproduced below, "Elias's dictionary 500 discloses that '[o]ther GUI-related commands may be assigned' including 'exit, i.e., close application (associated with clockwise rotation 511).'" Pet. 38–39 (emphasis omitted) (quoting Ex. 1006 ¶ 45) (citing Ex. 1003 ¶¶ 45, 60, 88, 95, 96,101, 102); *see also* Pet. Reply 21.



Annotated Figure 5 of Elias (APPLE-1006)

Id. at 39. Elias's Figure 5 illustrates an exemplary dictionary entry associated with a spread thumb and three finger chord. Ex. 1006 ¶ 22. The

version of Elias's Figure 5 reproduced above has been annotated by Petitioner to label the exit motion as "[c]lose the app." Pet. 39. According to Petitioner, the combination of Jin and Elias teach the dismissing limitation:

> Jin in view of Elias provides responding to a directional contact of moving the first card along a second direction (such as, clockwise direction illustrated in 511 in Elias) that is different from the first direction. Additionally, moving the card in the second direction (illustrated in clockwise direction 511) exits, i.e., closes the application corresponding to the first card.

Id.

b) Patent Owner's Arguments

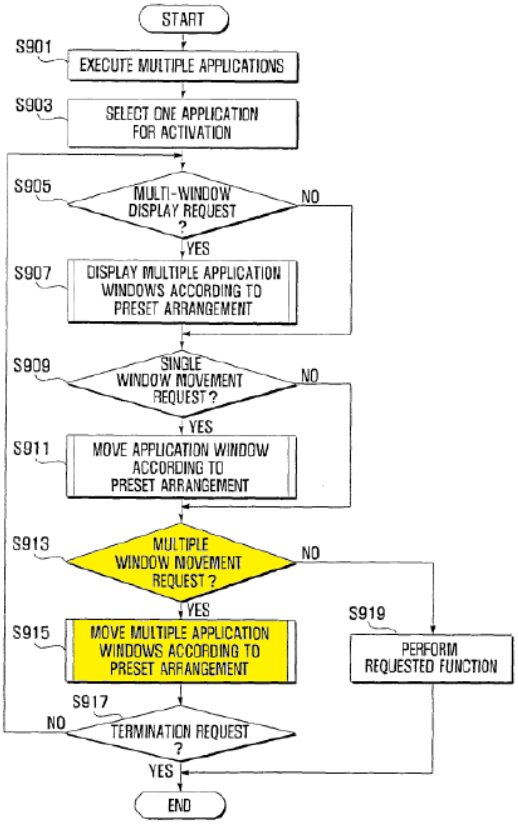
Patent Owner argues that "[t]he Jin-Elias combination does not render obvious" the dismissing limitation recited in claim 1. PO Resp. 8–9; *see also id*. 8–48; PO Sur-reply 2–15. According to Patent Owner, "Petitioner's argument that the Jin-Elias combination discloses these elements is based on the incorrect position that Jin discloses dragging a window on the screen."[6] PO Resp. 9 (citing Pet. 35–40). More specifically, Patent Owner argues "Petitioner incorrectly interprets a statement in Jin about a user dragging his finger on a screen to mean windows on the screen are also dragged." *Id.* (citing Pet. 36). According to Patent Owner, however, "Jin . . . does not teach or even show that the windows are dragged with the movement of the user's finger." *Id.* (citing Ex. 1005, Fig. 9C, 7:35–55).

First, Patent Owner argues that "Jin does not teach dragging a window to match a finger movement." PO Resp. 9–10. According to Patent Owner, "Jin teaches dragging ***a finger*** on the screen (display unit 109) to initiate a

[6] Patent Owner italicizes the names of references in its papers. We have omitted the italics when reproducing the quotes in this Decision.

'multiple window movement request' and rearranging the displayed windows ***after*** this multiple window movement request is complete." *Id.* at 10 (citing Ex. 1005, 7:35–55). Specifically, Patent Owner argues Jin teaches detecting a "multiple window movement request" and, in response to the detection, the device "rearranges content windows so that the content windows in display become invisible and content windows not in display become visible on the display." *Id.* at 11 (quoting Ex. 1005, 7:50–55). Patent Owner further argues that the windows are rearranged after the multiple window movement request (finger dragging) is complete and not during the multiple window movement request. *Id.* at 11–13; *see also* PO Sur-reply 4.

Patent Owner argues that this timing is confirmed by Jin's Figure 11, an annotated version of which is reproduced below.



Id. at 14. Jin's Figure 11 "is a flow chart illustrating an application display method according to another exemplary embodiment of [Jin]" and has been annotated by Petitioner with yellow highlighting on steps S913 ("MULTIPLE WINDOW MOVEMENT REQUEST") and S915 ("MOVE MULTIPLE APPLICATION WINDOWS ACCORDING TO PRESET ARRANGEMENT"). Ex. 1005, 3:19–21, Fig. 11; PO Resp. 14. According to Patent Owner, because "step S915 is not executed until after the multiple movement window request has been input[ted]," it "confirms that the application windows in Jin are not rearranged until after the multiple window movement request is complete." PO Resp. 14 (emphasis omitted); *see also id.* at 15–25 (arguing that "Jin does not teach or suggest that windows in the multiwindow display mode are dragged to match a finger movement"); PO Sur-reply 4–6.

Second, Patent Owner argues Jin does not teach or suggest that a selected card will be dismissed from the screen in a second direction in response to directional contact of moving that card along the second direction. *See* PO Resp. 26–45; PO Sur-reply 12–15. Specifically, Patent Owner argues—for the reasons discussed above—that "Jin does not teach dragging a window to match a finger movement;" instead, "Jin's system rearranges a preset number of windows after a user drags a finger on the screen." PO Resp. 27 (citing Ex. 1005, 5:45–50, 7:37–55, 9:28–31). Patent Owner further argues Elias does not teach moving a window in a direction when performing a gesture to exit an application; instead, it simply teaches using a finger gesture to close the window. *Id.* at 27–30. Patent Owner also argues that "Dr. Sears merely alleges that the Jin-Elias combination renders obvious dismissing a card from a display." *Id.* at 41 (citing Ex. 1003 ¶ 96).

Third, Patent Owner argues Petitioner does not explain why a person having ordinary skill in the art would have modified Jin's system to dismiss a selected card from a screen in a clockwise direction in response to moving that card along the clockwise direction. PO Resp. 45–48; PO Sur-Reply 15–16. Specifically, Patent Owner argues that even if a person of ordinary skill in the art would have combined Elias's gesture dictionary with Jin's system, Petitioner does not sufficiently explain "why one would specifically modify Jin's system to dismiss a selected window from a screen in the clockwise direction." PO Resp. 47 (emphasis omitted). According to Patent Owner, "based on Petitioner's explanation, it would appear that dismissing a window from the screen in any direction or in any manner would achieve these benefits." *Id.* at 46 (citing Pet. 15).

Fourth, Patent Owner argues Petitioner raised a new theory regarding Elias in Petitioner's Reply. *See* PO Sur-reply 6–8. According to Patent Owner, "[r]ecognizing the deficiencies in Jin, Petitioner changes the combination to rely on a dragging action taught in Elias." *Id.* at 6–7 (citing Pet. Reply 8–9). Patent Owner further argues that Petitioner cannot wait until its Reply to introduce a new theory of invalidity. *Id*. at 6–8. Patent Owner further argues that "[e]ven if Petitioner's new combination had been timely presented, Petitioner still fails to show how this combination teaches or suggests dismissing a window from the screen in the direction of a finger drag so that a corresponding application is closed." *Id.*; *see also id.* at 8–11.

c) Our Analysis

(1) Whether Petitioner Raises a New Theory in Petitioner's Reply

In an *inter partes* review, "Petitioner may not submit new evidence or argument in reply that it could have presented earlier, *e.g.* to make out a

prima facie case of unpatentability." Trial Practice Guide Update (August 2018), 14, *available at* https://www.uspto.gov/sites/default/files/documents/2018_Revised_Trial_Practice_Guide.pdf. As the Federal Circuit has explained,

> [i]t is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify "with particularity" the "evidence that supports the grounds for the challenge to each claim." 35 U.S.C. § 312(a)(3). "All arguments for the relief requested in a motion must be made in the motion. A reply may only respond to arguments raised in the corresponding opposition or patent owner response." 37 C.F.R. § 42.23(b). Once the Board identifies new issues presented for the first time in reply, neither this court nor the Board must parse the reply brief to determine which, if any, parts of that brief are responsive and which are improper. As the Board noted, "it will not attempt to sort proper from improper portions of the reply." Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,767 (Aug. 14, 2012).

Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd., 821 F.3d 1359, 1369 (Fed. Cir. 2016); *see also Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 775 (Fed. Cir. 2018) (quoting same). Based on that standard, the Federal Circuit determined that the PTAB properly refused to consider a new theory raised for the first time in a reply brief:

> Unlike district court litigation—where parties have greater freedom to revise and develop their arguments over time and in response to newly discovered material— the expedited nature of IPRs bring with it an obligation for petitioners to make their case in their petition to institute. While the Board's requirements are strict ones, they are requirements of which petitioners are aware when they seek to institute an IPR.
>
> . . . .
>
> . . . In these circumstances, we find that the Board did not err in refusing the reply brief as improper under 37 C.F.R.

> § 42.23(b) because IBS relied on an entirely new rationale to explain why one of skill in the art would have been motivated to combine Tsien or Ju with a modification of Zavgorodny.

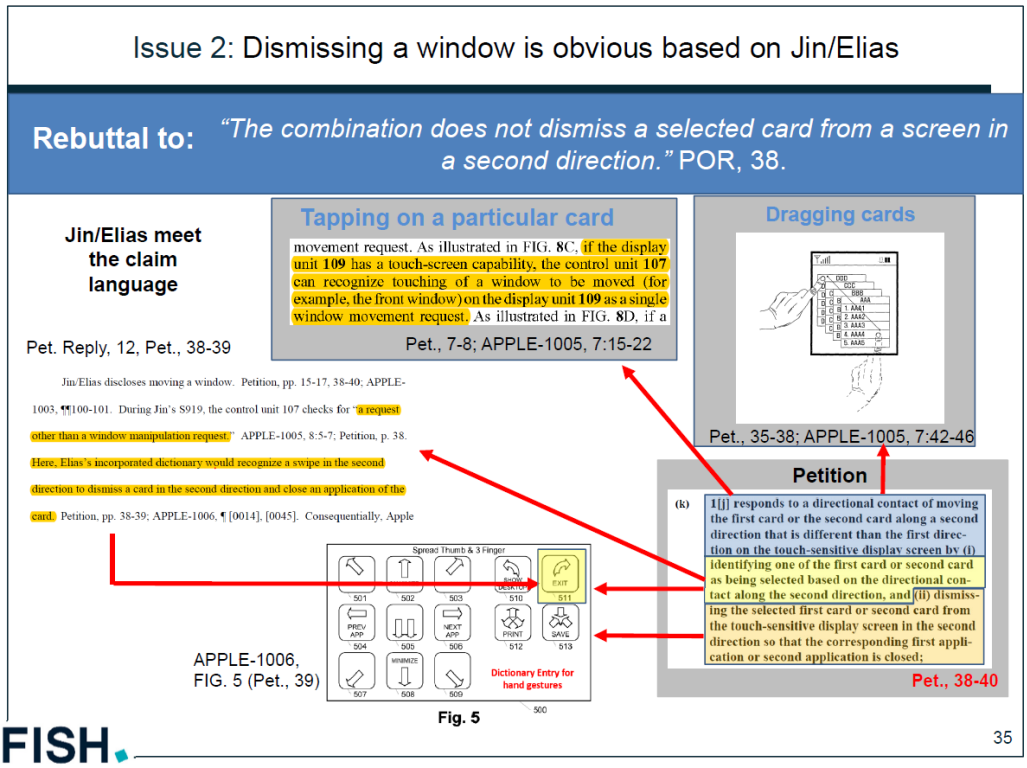
Intelligent Bio-Sys., 821 F.3d at 1369–70.

In the Petition, Petitioner relies on Jin for both (1) movement of a window and (2) movement of a window corresponding to directional contact. *See* Pet. 8, 37–40; *see also* Pet. Reply 7 ("Thus, Jin contemplates the movement of a window based on finger movements corresponding to the same. Petition, pp. 8."), 16 ("First, a [person having ordinary skill in the art] would have understood that in response to a directional contact along a first direction, as illustrated in [Jin's] FIG. 9C above, the first card's position would change relative to the screen in the first direction. Petition, p. 37-40. [Jin's] FIGs. 9A-9E illustrate this movement. *Id.*"), 16 (stating that "Dr. Sears does not rely upon Elias for this [describing the movement of the visual representation of the application], but relies upon Jin. (citing Ex. 2010, 72:14–21; Pet. 35–37, 38–40)). Petitioner confirmed this theory during the Oral Hearing:

> [Petitioner's Counsel]: So, turning to Slide 35, and seeing how we believe this combination comes together, we have the claim limitation at issue appearing in the lower right-hand portion . . . .
>
> JUDGE HOWARD: Okay, and maybe this answers the question that I asked before, but in -- on Slide 35 you recite Limitation 1(j), and you have different colors on different sections. For example, you have the first part which begins, "a response to the directional contact of moving the first card, or the second card, along a second direction that is different from the first direction on the touch sensitive display screen by 1." And with that, you point to two different portions of the Petition, with reference to Exhibit 1005.
>
> . . .

> [Petitioner's Counsel]: Yes, Your Honor, with the understanding that Elias' is predicated upon the gestures that it, in fact -- and the movement that, among other things, exists in Jin to move the multiple window display.

Tr. 18–20. Petitioner's Slide 35[7] is reproduced below.



Ex. 1017, 35. Petitioner's Slide 35 is a demonstrative exhibit prepared by Petitioner that maps various portions of the dismissing limitation to argument and evidence. *See id.*

In its Reply, Petitioner, at times, relies on Elias to show using a finger to drag an item across the screen. For example, Petitioner argues that "a [person having ordinary skill in the art] would have understood after

[7] Petitioner's Slide 35 is a demonstrative exhibit and is not evidence. Petitioner's Slide 35 is reproduced for the sole purpose of providing context to the exchange quoted above.

reviewed Elias that Elias discloses dragging."[8] Pet. Reply 8 (citing Ex. 1006 ¶ 42 (Elias)) (footnote added). Similarly, Petitioner argues that "a [person having ordinary skill in the art] reviewing Elias would recognize that Elias's dictionary enables users to drag a window, e.g., perform 'translational movements' in a variety of directions." Pet. Reply 11 (citing Ex. 1006[9] ¶ 42); *see also id.* at 12 ("Additionally, Elias discloses users can perform dragging windows." (citing Ex. 1006 ¶ 42)), 17 (arguing Elias's feedback would have been understood to include an "animation illustrating the selected window moving off the display (citing Ex. 1006 ¶ 45) (other citations omitted)). Because the Petition did not rely on Elias for that teaching, Petitioner's Reply presents a new theory that was not previously presented in the Petition.

We are not persuaded by Petitioner's arguments during the Oral Hearing that this theory was presented in the Petition. *See* Tr. 13–17, 48–51. First, Petitioner's argument is inconsistent with Petitioner's admission that Dr. Sears relied on Jin—and not Elias—for movement:

> Qualcomm incorrectly asserts that "Elias does not teach that performing this [exit] gesture causes the application or a corresponding window to move along the clockwise direction (or any other direction)" and that Dr. Sears confirms this—"[Elias] does not describe the movement of the visual representation of the application." POR, p. 30. *However, Dr. Sears does not rely upon Elias for this feature, but relies upon Jin*. EX. 2010, 72: 14-21; Petition, pp. 35-37 and 38-40. For

[8] In the previous paragraph, Petitioner stated "that dragging suggests 'click[ing] on an object' and then moving 'the finger to drag that object on the screen.'" Pet. Reply 8 (quoting Ex. 2010 30:9–23, 31:8–12).

[9] Although the citation is to Exhibit 1005 (Jin), based on the context of the sentence and the citations to a paragraph, that appears to be a typographical error. Instead, based on the context including the use of "Elias" in the sentence, we understand that Petitioner was citing to Exhibit 1006 (Elias).

> example, Dr. Sears states "'dismissing' . . . is tied back to the claim language . . . refer[ing] to both removing the visual representation from the screen and closing the application. **Jin describes removing the visual representation from the screen.**" *Id*., (emphasis added). Dr. Sears reliance on Elias includes "in response to that specific gesture [clockwise gesture], the application would be closed." *Id*., pp. 71:23-72:2. *Thus, Dr. Sears clearly explains how Jin describes the visual representation of the dismissing in the second direction* and Elias closing the moved application.

Pet. Reply 16–17 (bold emphasis in original) (italics emphases added).

Second, Petitioner's argument is inconsistent with the mapping in its own demonstratives. As discussed above, during the Oral Hearing Petitioner presented a demonstrative exhibit that maps the movement of the card to Jin, not Elias. *See* Tr. 18–20.

Third, a comparison of both the Petition and Petitioner's Reply demonstrates how Petitioner's use of Elias has changed. For example, the Petition contains a single sentence quoting a statement in Elias about providing feedback indicating the meaning of a gesture: "Elias 'execute[s] a meaning of the [identified] gesture and may also provide visual and/or audible feedback indicating the meaning of the gesture.'" Pet. 14–15 (citing Ex. 1006 ¶ 13). That citation is not linked to Petitioner's argument as to why the combination of Jin and Elias teach the dismissing limitation. *Compare* Pet. 14–15 (quoting feedback sentence), *with id.* at 38–40 (discussing the dismissing limitation).

In its Reply, Petitioner changes its approach. Specifically, Petitioner argues that a person having ordinary skill in the art would have understood Elias's reference to "provid[ing] visual and/or audible feedback indicating the meaning of the gesture" would "include[] animation illustrating the selected window moving off the display." *See* Pet. 17 (citing Pet. 14–15,

38–40; Ex. 1003 ¶¶ 93, 97–106, Ex.1006 ¶¶ 45, 49). This is not a clarification of an argument made in the Petition, but a reformulation relying on a new reference. Such a radical change in approach is not allowed by our rules. *See Intelligent Bio-Sys.*, 821 F.3d at 1369–70.

By statute, a petition is required to identify "with particularity[ ] the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge." 35 U.S.C. § 312(a)(3) (2012). The petition shall also include a "full statement" with "a detailed explanation of the significance of the evidence, including material facts." 37 C.F.R. § 42.22(a)(2) (2019). In that regard, our rules require a petition to include information sufficient to show how and why the properly construed claims are unpatentable over the asserted prior art. 37 C.F.R. § 42.104(b)(3), (b)(4) (2019). Because Petitioner did not rely on Elias to teach dragging a window to match directional contact with the screen in the Petition, we do not consider that new theory.[10]

(2) Whether the Combination of Jin and Elias Teaches or Suggests the Dismissing Limitation

In the Institution Decision, we found that

> Jin teaches moving a card in a first direction in response to a movement on a touch screen in a first direction. Ex. 1005, 7:35–55, Fig. 9A-9E. That is, Jin teaches that control unit 107 can detect a movement request, such as dragging the front window to the last window on a touch-sensitive display. *Id*. at 7:37–46, Fig. 9A, Fig. 9C.

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[10] Although our Trial Practice Guides states that we "will not attempt to sort proper from improper portions of the reply" (Office Patent Trial Practice Guide, 77 Fed.Reg. 48,756, 48,767 (Aug. 14, 2012)), in the interests of justice, we will not *only* consider the new theory. *See* 37 C.F.R. § 42.5(a), (b) (2019). To the extent that the Reply argues that Jin teaches moving a window, we consider those arguments

Inst. Dec. 27. We further found that, based on Jin teaching dragging a window to match a finger movement that the combination of Jin and Elias teaches "dismissing the selected first card or second card from the touch-sensitive display screen in the second direction so that the corresponding first application or second application is closed":

> As discussed above, *Jin teaches dragging a window to match a finger movement* and Elias teaches movement in a clockwise direction to close/exit a window. *The combination of the teachings results in the window moving in the direction of the finger movement when a user desires to close or exit a window*. Therefore, based on the current record, Petitioner has sufficiently shown how the combination of the teachings of Jin and Elias teaches "dismissing the selected first card or second card from the touch-sensitive display screen in the second direction so that the corresponding first application or second application is closed," as recited in claim 1.

Id. at 28 (emphases added).

At the time, we qualified that our "factual findings . . . are preliminary," "based on the evidentiary record developed thus far," and that "[o]ur final decision will be based on the record as fully developed during trial." *Id.* at 32. We further advised the parties that we were not "determin[ing] whether an individual asserted fact is indisputable or whether a preponderance of the evidence supports Petitioner." *Id.* at 31. Having conducted the trial, for the reasons discussed below, our preliminary finding is not supported by the entirety of the record. Instead, we agree with Patent Owner that Jin does not teach or suggest "directional contact of moving the [selected] card along . . . the touch-sensitive display screen" and agree that the combination of Jin and Elias does not teach or suggest "dismissing the selected first card or second card from the touch-sensitive display screen in

the second direction so that the corresponding first application or second application is closed" as recited in claim 1.

Specifically, Petitioner has not sufficiently shown that Jin teaches or suggests that the processor responds to directional contact moving the selected card in the second direction on the display screen. Jin's Figures 9C shows a finger moving along the screen—directional contact. Ex. 1005, Fig. 9C. However, Jin's Figure 9C does not illustrate the card moving along with the finger. *Id.* Rather, Jin's Figure 9E simply shows the cards in a new position without describing what happened on the display while the location of the cards were changed. *See id.* at Fig. 9E. Accordingly, Petitioner has not proven that Jin teaches directional contact moving the selected card in the second direction on the display screen.

That is consistent with the text describing Jin's Figures 9C and 9E. According to Jin, control unit 107 recognizes dragging from the front window to the last window as a multiple window movement request. Ex. 1005, 35–49. Jin further states that in response to the multiple window movement request—that is after the finger movement is completed—the control unit 107 performs a multiple window movement operation. *Id.* at 7:50–55. Accordingly, first a finger or other object is dragged along the screen and, after the movement of the finger is completed, the appropriate action—such as moving multiple windows—is performed.

It is also consistent with the flow chart of Jin's Figure 11. As shown in Jin's Figure 11, at step S913 a determination is made whether there is a multiple window movement request and, if so, the multiple windows are moved. *Id.* at Fig. 11. In other words, first the processor determines what finger movement (directional contact) is made and then it executes the appropriate command. *See* Ex. 2006 ¶ 43 (Wobbrock Decl.) ("Thus,

Figure 11 confirms that the application windows are not moved until after the multiple window movement request is complete.").

This understanding of the teaching of Jin is not disputed by the parties. During the Oral Hearing, Petitioner agreed that first the motion is made and then, only after it is completed, are the windows moved:

> JUDGE HOWARD: Do you contend that this section that you cited from Column 7, describes dragging the window along with the finger movement, or again, is this after the finger movement is done.
>
> [Petitioner's Counsel]: Your Honor, I think it's as a result of the finger movement being done.

Tr. 11:20–24.

We do not find Dr. Sears's contrary testimony persuasive. According to Dr. Sears:

> During a multiple window movement request, as the user drags his or her finger on the display unit 109 in the direction from the front window to back window, the location of the front card and each of the subsequent cards changes in the same direction in which the user's finger is moving. For instance, annotated FIG. 9A of Jin above shows the display unit 109 before the user drags the first card "AAA" to the last window position. As shown in annotated FIG. 9C of Jin, the user drags his or her finger on the front card from the bottom right of the display unit 109 to the upper left of the display unit 109 in a direction of the last card to initiate a multiple window movement request. As shown in FIG. 9E, the resultant illustration of the multiple window movement request, the front card "AAA" has changed its position to the last visible window to the display unit 109.

Ex. 1003 ¶ 56. However, contrary to Dr. Sear's testimony, Jin's Figures 9A, 9C, and 9E do not show movement of the card during the multiple window movement request. Specifically, Figure 9C shows the multiple window movement request—the finger dragging across the display—without

showing any movement of the windows. *See* Ex. 1005, Fig. 9C. Instead, as discussed above, the cards are not rearranged until after the completion of the multiple window movement request. Because Dr. Sear's testimony regarding when the windows in Jin move is inconsistent with what is shown in the Figures and described in the text, we find it not creditable.

We also do not agree with Petitioner that Jin's reference to dragging refers to dragging the windows. *See* Pet. 8–9, 25, 36–38. Jin recites—in substantially the same formulation at various places—that, with regard to Figure 9C, "the control unit 107 can recognize *dragging* from the front window to the last window on the display unit 109 as a multiple window movement request." Ex. 1005, 7:42–46 (emphasis added); *see also id.* at 4:62–65, 5:9–15, 6:22–28, 7:62–65. However, based on the context—such as the use of the language "touchscreen" or reference to the various figures—"dragging" in those sentences refers to dragging an object, such as a finger, along the screen; "dragging" does not refer to moving the windows. For example, the reference at column 7, lines 42–46 describes Jin's Figure 9C. As discussed above, Jin's Figure 9C shows a finger being moved—that is dragged—from the lower right corner of the display to the upper left corner; but it does not show any window being dragged. *See* Ex. 1005, Fig. 9C; Ex. 2006 ¶¶ 41–42 (Wobbrock Decl.).

Additionally, we agree with Patent Owner that Jin does not teach moving a card in a direction (i.e., "dragging" the card(s) along with movement of the user's finger). Although Jin's Figures 9A and 9E show that the windows are rearranged as a result of the finger motion, the figures do not show how the cards are rearranged. *See* Ex. 1005, Figs. 9A–9E. Similarly, although Jin's Specification states that multiple window

movement operation is performed, it does not describe how the windows are rearranged:

> FIGS. 9A to 9E illustrate manipulation of content windows for multiple window movement.
>
> During display of multiple content windows as in FIG. 9A, the control unit 107 detects input of a multiple window movement request. As illustrated in FIG. 9B, if a motion sensor is equipped, the control unit 107 can recognize turning of the mobile terminal parallel with the ground as a multiple window movement request. As illustrated in FIG. 9C, if the display unit 109 has a touch-screen capability, the control unit 107 can recognize dragging from the front window to the last window on the display unit 109 as a multiple window movement request. As illustrated in FIG. 9D, if a touch wheel or scroll wheel is equipped, the control unit 107 can recognize a large amount of wheel rotation as a multiple window movement request.
>
> In response to input of a multiple window movement request, the control unit 107 performs a multiple window movement operation (S213). *The control unit 107 rearranges content windows so that the content windows in display become invisible and content windows not in display become visible on the display unit 109, as illustrated in FIG. 9E.*

Id. at 7:35–55 (emphasis added); *see also* Ex. 2005 ¶¶50–51.

Even Petitioner does not argue that Jin teaches how the cards are rearranged. Instead, when describing Jin, Petitioner simply states that "the position of the first card 'AAA' would change relative to the display in the first direction." Pet. Reply 8 (citing Pet. 37); *see also id.* at 14 ("As a result, the stack of cards shown in FIG. 9E remains in the same order as FIG. 9A, but rearranged in the direction of the drag. [Ex. 1006 ¶ 42], APPLE-1003, ¶¶ 54-55. Thus, the cards have been rearranged direction of the dragging and along the dragging axis."); Pet. 37 ("A POSITA would have understood that in response to a directional contact along a first direction on the touch-

sensitive display screen, as illustrated in FIG. 9C, the position of the first card is changed relative to the display screen in the first direction. . . . FIG. 9E illustrates the first card 'AAA' has changed position relative to the display in response to the directional contact along the first direction.").

Because Petitioner's arguments as to how the combination of Jin and Elias teaches the dismissing limitation are predicated on Jin teaching both a processor which "respon[ds]to a directional contact of moving" a card and showing movement of a card in a given direction, Petitioner's failure to show that Jin teaches those features is fatal to its arguments that independent claim 1 and dependent claims 2–6 and 8–11 are unpatentable over Jin and Elias. Additionally, because independent claims 12 and 17 recite substantially the same limitation and Petitioner relies on substantially same evidence (*see* Pet. 64–65, 70), Petitioner similarly failed to show that independent claims 12 and 17 and dependent claims 13–16 and 18–20 are unpatentable over Jin and Elias.

CONCLUSION

For the foregoing reasons, we conclude that Petitioner has not demonstrated by a preponderance of the evidence that claims 1–6 and 8–20 would have been obvious under 35 U.S.C. § 103 in light of Jin and Elias.

ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, Petitioner has not shown by a preponderance of the evidence that claims 1–6 and 8–20 of the '362 patent are unpatentable;

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

In summary:

Claims	35 U.S.C. §	References	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–6, 8–20	103(a)	Jin, Elias		1–6, 8–20

FOR PETITIONER:

Walter Renner
axf-ptab@fr.com

Thomas Rozylowicz
tar@fr.com

Timothy Riffe
riffe@fr.com

Jason Wolff
wolff@fr.com

Craig Carlson
ccarlson@fr.com

FOR PATENT OWNER:

Chad Walters
chad.walters@bakerbotts.com

Brian Oaks
brian.oaks@bakerbotts.com

Charles Yeh
charlesyeh@gmail.com

Eliot Williams
eliot.williams@bakerbotts.com

Joseph Akalski
joseph.akalski@bakerbotts.com

Jessica Lin
jessican.lin@bakerbotts.com