

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA MOBILITY LLC and GOOGLE LLC,
Petitioners,

v.

MULTIFOLD INTERNATIONAL INCORPORATED PTE. LTD.,
Patent Owner.

Case IPR2025-00040

U.S. Patent 9,134,756

PATENT OWNER'S PRELIMINARY RESPONSE

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EXHIBIT LIST	
2001	Patent Family of EP1775925A2 retrieved from Espacenet

I. INTRODUCTION

Challenged claims 1-9 of U.S. Patent 9,134,756 (the “’756 Patent”) are directed to methods of displaying at least two desktops and/or applications on a multi-display device having at least two displays. The method selects a first desktop or application to display on a first display, selects a second desktop or application to display on a second display, and then selects one of the two desktops or applications to be maximized, resulting in the selected desktop or application being displayed in a maximized condition on both the first and second displays.

The Petition should be denied under Section 325(d) because an examiner already considered the principal prior art at issue here (Yook, Lee, and Aguilar) and allowed the ’756 Patent over these references. This is unsurprising, because the Petition fails to demonstrate that any reference – Yook, Lee, Aguilar, or Purcell – suggest the steps of a processor “selecting a first desktop or application to display on the first display” and “selecting a second desktop or application to display on the second display.” Therefore, institution must be denied.

II. BACKGROUND

A. The ’756 Patent

The ’756 Patent is titled “Dual Screen Application Visual Indicator” and the specification describes an exemplary “user device and methods for revealing a combination of desktops on single and multiple screens.” Ex.1001, abstract. Fig. 1

shows an exemplary dual-screen device that includes a primary screen 104 comprising a display 110 and a secondary screen 108 comprising a display 114:

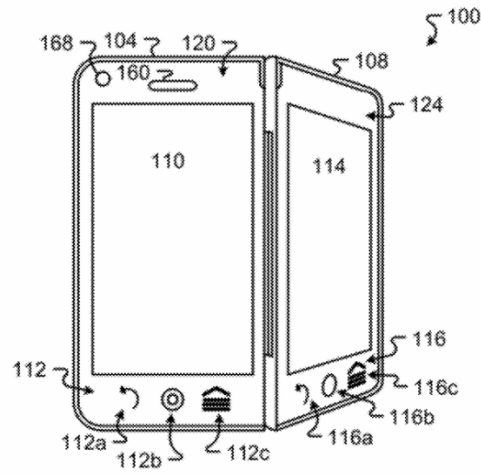


FIG. 1A

“A determined number of desktops and/or running applications can be selectively displayed on dual screen displays conditioned upon inputs received and the state of the device.” Ex.1001, abstract. For example, a first desktop or application may be displayed on a primary display, and a second desktop or application may be displayed on a secondary display, as shown in Fig. 10A:

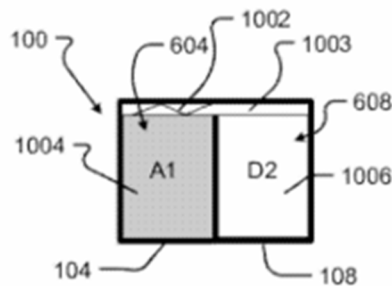


FIG. 10A

Ex.1001, 31:16-23. The user provides gestures and, based on the context of the gesture, the device may select a desktop or application to display on the first display (Ex.1001, 17:48-67), select a desktop or application to display on the second display (*id.*), maximize a desktop or application on both displays (Ex.1001, 31:43-53), or minimize an application displayed on both displays onto only the primary or secondary display (Ex.1001, 31:60-67). Thus, the dual-display device presents “a user with an intuitive ability to manage multiple applications/desktops running simultaneously.” Ex.1001, abstract.

B. The Alleged Prior Art

The Petition asserts the following eight grounds of invalidity:

- Anticipation of claims 1-4 and 6-9 by U.S. Pub. 2010/0248788 (“Yook”)
- Obviousness of claims 1-9 by Yook
- Anticipation of claims 1-3, 6, 7, and 9 by U.S. Pub. 2007/0085759 (“Lee”)
- Obviousness of claims 1-3, 6, 7, and 9 by Lee
- Anticipation of claims 1-3, 6, 7, and 9 by U.S. Patent 8,677,284 (“Aguilar”)
- Obviousness of claims 1-3, 6, 7, and 9 by Aguilar

- Anticipation of claims 103, 6, 7, and 9 by U.S. Pub. 2007/0024645 (“Purcell”)
- Obviousness of claims 1-9 by Purcell in view of Yook

1. Yook

Yook is a patent application titled “Method of Dividing Screen Areas and Mobile Terminal Employing the Same” and discloses a device with a single screen that can be divided into multiple areas. Ex.1004, abstract.

As shown in Figs. 1 and 3, Yook’s exemplary device has touch screen 140 which may be divided into two areas labeled “A” and “B” in Fig. 3:

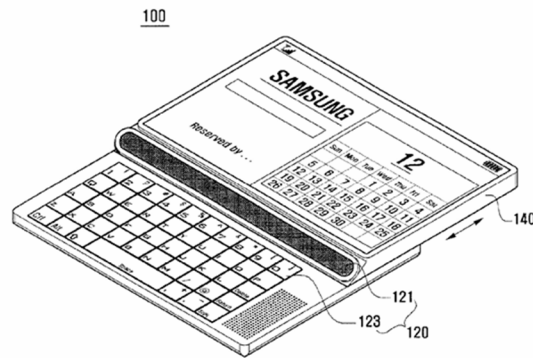
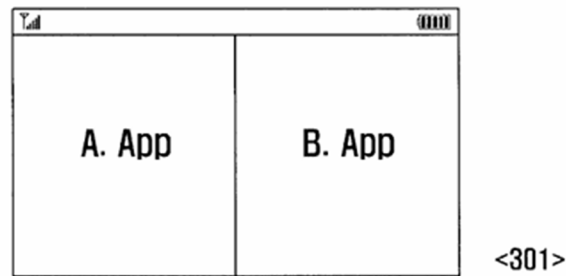


FIG . 3



Yook's Fig. 4. shows functions that may be performed by the divided areas. For example, Fig. 4A shows the division of touch screen 140 into two areas A and B. Ex.1004, [0044]. Fig. 4B shows that function A may be displayed on the entirety of touch screen 140, that function C may be displayed on the entirety of touch screen 140, or that touch screen 140 may be divided into two areas, with function A displayed in one area and function C displayed in the other area. Ex.1004, [0046].

2. Lee

Lee is a patent application titled "Method for Displaying Multimedia Contents and Mobile Communications Terminal Capable of Implementing the Same" and describes a mobile communication terminal having a first display unit and a second display unit, as shown by Fig. 4:

FIG. 4

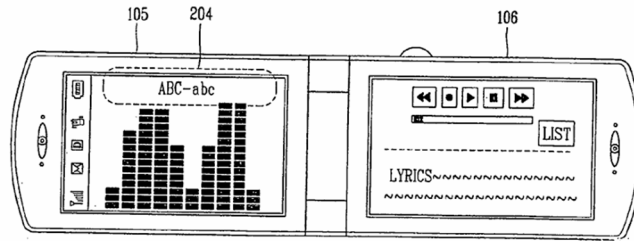


Fig. 10A shows that separate functionality of a single application can be displayed on each screen. Ex.1005, [0051]. For example, multimedia content is displayed on the first display screen 105 and the playback controls for the multimedia content is displayed on the second display screen 106:

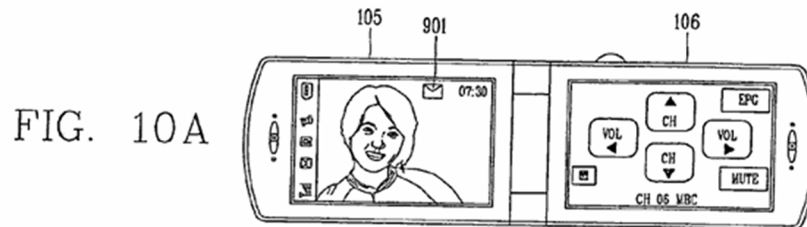
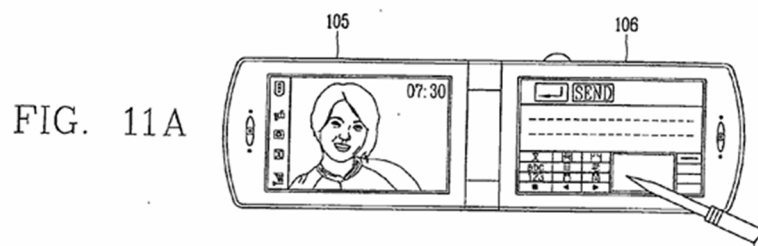


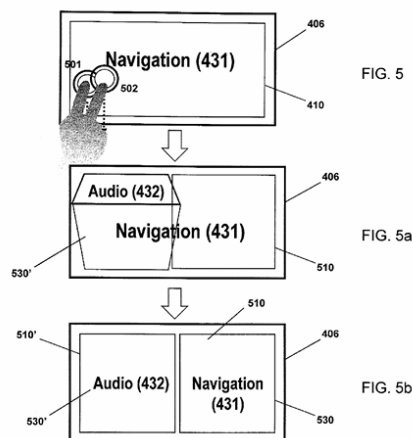
Fig. 11A shows that the user may multitask and send messages on the second display screen while continuing to view the multimedia content on the first display screen:



Ex.1005, [0054].

3. Aguilar

Aguilar is a patent titled “Method and Apparatus for Controlling and Displaying Contents in a User Interface” and describes a “user interface with multiple applications which can be operated concurrently and/or independently.” Ex.1006, abstract. Fig. 5 of Aguilar shows an embodiment “in which the user is allowed to split the display screen to two display segments”:



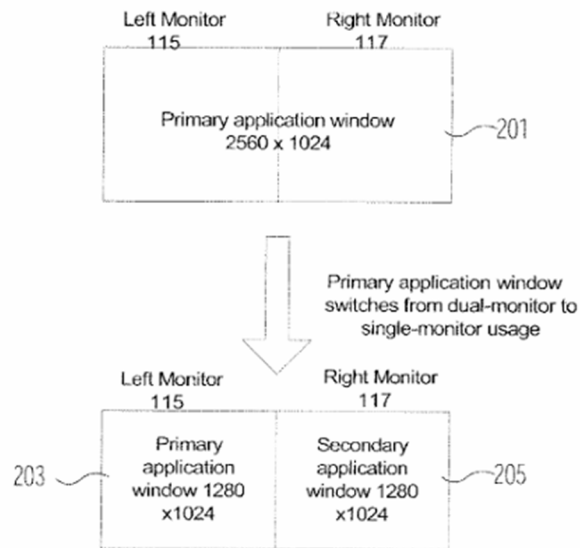
Ex.1006, 4:19-22. The user may be “allowed to select different applications in one of the display segments,” and “the applications in different display segments can be swapped.” Ex.1006, 4:23-28.

4. Purcell

Purcell is a patent application titled “Multiple Application and Multiple Monitor User Interface Image Format Selection System for Medical and Other

Applications” and describes a “screen sharing function [that] enables a main executable application, which typically uses more than one monitor, to switch to single-monitor usage as necessary.” Ex.1007, abstract.

As shown in Fig. 2 of Purcell, the “primary application typically runs with a single full-size image window spanning both monitors 115 and 117” of a dual-monitor system:



Ex.1007, [0016]. “In order to permit another application to execute concurrently and display an image window adjacent to an image window of the primary application,” the system “dynamically changes the primary application image window size to match that of the left monitor 115.” *Id.* This enables secondary

monitor 117 to display a secondary application and permits a user to interact with both applications without causing either window to obscure the other. *Id.*

III. CLAIM CONSTRUCTION

The Petition states that “Petitioners have applied the definitions set forth in the ’756 patent and do not believe any further construction is necessary in order to determine that the Challenged Claims are invalid over the prior art.” Pet., 21. For purposes of this preliminary response, Patent Owner’s position is that all terms are entitled to their plain and ordinary meaning as understood by a POSITA. Patent Owner reserves the right to expressly construe terms of the ’756 Patent should the Board institute review.

IV. PERSON OF ORDINARY SKILL

The Petition submits that a “POSITA at the time of the alleged invention would have had an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of experience in the field of user interface technologies, including e.g., graphical user interface technologies, or a related field.” Pet., 20. Patent Owner applies this definition of a POSITA for the purposes of this preliminary response but expressly reserves the right to urge a different definition of a POSITA and support such definition with evidence including expert testimony.

V. THE PETITION SHOULD BE DENIED UNDER §325(d)

The Board should exercise its discretion and deny this Petition under 35 U.S.C. 325(d) because the Office previously considered Yook, Aguilar, and Lee—all of which are substantially the same as Purcell—and the Petition does not identify any material errors in the prosecution that would suggest a different result. *Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469 Paper 6 (PTAB Feb. 13, 2020).

Although the Petition argues that denial under Section 325(d) would be inappropriate because it “relies upon prior art references that were not of record during prosecution of the ’756 patent,” this representation is false. The Office considered Yook, Aguilar, and Lee – and allowed the ’756 Patent over all three references. *First*, the prosecution history contains a complete copy of the European patent application counterpart (EP 1775925) of Lee (US 2007/0085759). Ex.1002, 236; Ex.2001 (Espacenet showing EP 1775925 and US 2007/0085759 are in the same patent family). The examiner considered the European counter of Lee in the context of an international search report submitted by the applicant. *Id.* *Second*, the examiner explicitly considered Yook (US 2010/0248788) on August 21, 2014, after it was disclosed in an IDS. Ex.1002, 150 (attesting that “ALL REFERENCES [including Yook were] CONSIDERED”). *Third*, the examiner also explicitly

considered U.S. Patent Application Publication 2011/0107272 that subsequently issued as US Patent 8,677,284 to Aguilar on January 26, 2014, after it was disclosed in an IDS. Ex.1002, 215 (attesting that “ALL REFERENCES [including US 2011/0107272 were] CONSIDERED”); Ex.1006, 1 (listing US 2011/0107272 under Prior Publication Data). Thus, the examiner considered – and rejected – the three principal references relied upon by this Petition. To the extent that the fourth reference – Purcell – does not appear in the prosecution record, the Petition characterizes Purcell as a secondary reference whose teachings are substantially the same as (and cumulative with) Yook. Pet., 21 (alleging anticipation by Yook), 84-85 (arguing that Yook and Purcell “accomplish the same solutions to the same problem,” and alleging that to the extent that a limitation is absent from Purcell, that it would have been obvious in view of Yook). Indeed, the Petition fails to identify any teaching in Purcell that distinguishes it from the teachings of Yook. Accordingly, the Petition concerns prior art that is the same (Yook, Aguilar, and Lee) or that it describes as substantially the same (Purcell) as the prior art that was previously before the Office and meets the first prong of *Advanced Bionics*. *Id.*, 8-10.

This Petition also satisfies the second prong of *Advanced Bionics*. The Petition fails to allege any material error made by the Office during the prosecution. Instead,

the Petition merely argues that the examiner did not consider “prior art references[] including multiple displays in a single device, which all of the prior art relied upon herein includes.” But this argument is premised on Petitioners’ erroneous belief that the examiner did not consider Yook, Aguilar, and Lee. As demonstrated above, the prosecution history indisputably shows that the examiner considered Yook, Aguilar, and Lee – and allowed the ’756 Patent over Yook’s and Aguilar’s teachings of “multiple displays in a single device.” The examiner also allowed the ’756 Patent over Lee’s disclosure of multiple screens and displays in a single device. *See* Pet., 44 (alleging that “Lee discloses a mobile device that has two touch screens”). Moreover, Purcell plainly teaches multiple devices rather than a single device (*see* Pet., 75 (identifying a “Left Monitor” and a “Right Monitor”)), so Purcell’s teachings do not even implicate this issue. The Petition’s arguments do not amount to a material error with respect to Yook, Aguilar, or Lee, and are not even applicable to Purcell. Thus, the Petition has not demonstrated that the Office erred in a manner material to patentability and also meets the second prong of *Advanced Bionics*. *Id.*, 8-10.

As this Petition unambiguously meets both prongs of *Advanced Bionics*, institution should be denied under Section 325(d).

VI. CLAIMS 1-9 ARE NOT ANTICIPATED BY OR OBVIOUS IN VIEW OF PETITIONERS' PRIOR ART

A. The Petition Fails to Allege That Any of Yook, Lee, Aguilar, or Purcell Discloses or Suggests a Processor “Selecting a First Desktop or Application to Display on the First Display” or “Selecting a Second Desktop or Application to Display on the Second Display” (All Grounds)

Independent claim 1 requires that “the *processor*” of the multi-display device select “a first desktop or application to display on the first display” and select “a second desktop or application to display on the second display.” This claim language explicitly requires that the processor select or determine the first desktop or application to display on the first display, and the second desktop or application to display on the second screen. Independent claim 7 recites similar limitations where an input “represents an instruction [for the computer system] to *determine*[] a first desktop or application on a first display” and to “*determine*[] a second desktop or application on a second display.”

The claimed processor selection or determination of the desktop or application to display is distinct from a user selection of a desktop or application to display. For example, the '756 Patent teaches that the processor determines the application to display in a separate step from the user providing input to display an application:

The functional result of receiving a gesture can vary depending on a number of factors, including a state of the device 100, display 110, 114, or screen 104, 108, a context associated with the gesture, or sensed location of the gesture. The state of the device commonly refers to one or more of a configuration of the device 100, a display orientation, and user and other inputs received by the device 100. Context commonly refers to one or more of the particular application(s) selected by the gesture and the portion(s) of the application currently executing, whether the application is a single- or multi-screen application, and whether the application is a multi-screen application displaying one or more windows in one or more screens or in one or more stacks. Sensed location of the gesture commonly refers to whether the sensed set(s) of gesture location coordinates are on a touch sensitive display 110, 114 or a gesture capture region 120, 124, whether the sensed set(s) of gesture location coordinates are associated with a common or different display or screen 104,108, and/or what portion of the gesture capture region contains the sensed set(s) of gesture location coordinates.

Ex.1001, 17:48-67. The claims are consistent with this disclosure. For example, the claims specify that the input “represents an instruction to [reveal] a desktop or application.” The processor then selects or determines the desktop or application and causes it to be displayed in a separate step from and in response to the user input. Thus, the claims explicitly require a *user* providing an input to display an application and a *processor* determining and causing an application to be

displayed. In this way, the claims explicitly require a separate step of the processor determining and causing the desktop or application to be displayed, in addition to the user selection of the desktop or application.

The Petition fails to demonstrate that any prior art teaches that a *processor* determines and causes to be displayed a first desktop or application on a first display and a second desktop or application on a second display. And in some cases, the Petition fails to address this limitation at all. *First*, the Petition alleges Yook discloses Element 1[A] because it describes “how a user can select one out of multiple running applications to reveal on each display. For example, as shown in Fig. 5, a user can select by the touchscreen one of App.A, App.B, App.C, or App.F from a stack in order to display on the first display.” Pet., 26. But this disclosure addresses how a *user* selects an app to display on the first display. As discussed above, a *user* selection of an app does not meet Element 1[A]’s requirement of a separate step of the *processor* selecting a desktop or application to display based on an instruction to display a desktop or application. Thus, the Petition fails to demonstrate that Yook suggests this limitation.

Second, Petitioners’ analysis of Lee does not address the selecting steps at all. For Element 1[A], the Petition merely describes Lee as follows: “Lee’s device receives an input for an instruction to reveal an application, and in response to that

input, reveals the application on both the first display and the second display, which displays the application (yellow) on the first display.” Pet., 46. This is at most an allegation that Lee’s device displays an application on the first display, but does not discuss how Lee’s device selects the application to display on the first display as claimed. Nothing in Petitioners’ allegations addresses Element 1[A]’s selection step for the processor to select a desktop or application. Nor does Lee teach such a selection. Thus, the Petition also fails to demonstrate that Lee suggests this limitation.

Third, Petitioners’ analysis of Aguilar similarly fails to address the claimed requirements for the processor. Petitioners’ Aguilar-based arguments for Element 1[A] do not address the selection step at all. Pet., 58-61 (failing to identify how Aguilar suggests a selection step). And for Element 1[B], Petitioners merely allege that “Aguilar describes a process whereby a user can select from a smaller spindle of applications to display on the second display (green box)... In the example shown, the Audio application is selected, but if the user keeps scrolling, as shown in Fig. 5c, the Phone application may be selected and revealed on the second display (green box).” Pet., 62. But like for Yook, Aguilar’s disclosure for these elements at most suggests *user* selection of an application. Again, a *user* selection cannot meet the Element 1[A] and 1[B]’s requirement of a separate step where the

processor selects a desktop or application to display based on an instruction to display a desktop or application. Thus, Aguilar does not suggest these limitations.

Fourth, Petitioners’ Purcell analysis also fails to address the selection step. With respect to Element 1[A], Petitioners allege that “[a]s also shown in Fig. 2, the first application (yellow) can be displayed only on the first display (orange box). Either scenario meets the claim.” Pet., 77. But this allegation does not address the requirement that a processor selects the application to be displayed on the first display— Petitioners at most allege that an application is displayed, without a selection step. Likewise for Element 1[B], Petitioners allege “Purcell discloses receiving a second input to reveal a second application, and in response to that input, displaying a second application on the second display.” But again, this is at most a teaching of displaying an application on the second display. It does not follow from this disclosure that Purcell’s processor performs the required selection of the application to display on the second display. As with the other references, the Petition fails to show how Purcell suggests the required steps to be performed by the processor.

Accordingly, the Petition has not demonstrated that any of the four references suggest the selection steps of claim 1 or the determining steps of claim 7.

VII. CONCLUSION

For the foregoing reasons, the Board should deny institution.

Date: February 28, 2025

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner's Preliminary Response ("POPR") consists of 3058 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The POPR complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Dated: February 28, 2025

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, pursuant to 37 CFR § 42.6(e), a true and correct copy of the foregoing **PATENT OWNER'S PRELIMINARY RESPONSE** have been served electronically via email on counsel of record for Petitioners:

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