

Petition for *Inter Partes* Review of
U.S. Patent No. 9,058,153

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA MOBILITY LLC AND GOOGLE, LLC,
Petitioners,

v.

MULTIFOLD INT'L INC. PTE. LTD.,
Patent Owner.

Case IPR2025-00041

Patent No. 9,058,153

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,058,153**

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LISTING OF EXHIBITS

Exhibit	Description
1001	U.S. Pat. No. 9,058,153 to Sirpal
1002	File History for U.S. Pat. No. 9,058,153 to Sirpal
1003	Declaration of Dr. Jeffrey J. Rodriguez
1004	U.S. Pub. 2010/0248788 A1 to Yook
1005	U.S. Pub. 2007/0085759 A1 to Lee
1006	U.S. Patent No. 8,677,284 to Aguilar
1007	U.S. Pub. 2007/0024645 A1 to Purcell
1008	Features at a Glance - Windows XP Professional Features for IT Professionals _ Microsoft Learn
1009	Curriculum Vitae of Dr. Jeffrey J. Rodriguez
1010	Scheduling Order in the Google and Motorola District Court Actions, dated April 29, 2024

LIST OF CHALLENGED CLAIMS

Limitation	Claim Language
1[P]	A method, comprising:
1[A]	providing a device having a first display and a second display;
1[B]	displaying a first window of a multi-display application on the first display and the second display;
1[C]	receiving an input to launch a second application; in response to receiving the input: displaying a second window of the second application on the second display; and
1[D]	in response to opening the second window, automatically minimizing the first window to fit the first display; and displaying the minimized first window of the multi-display application on the first display.
3	The method of claim 1, wherein the second application is a second multi-display application
4	The method of claim 1, wherein the minimized first window displays only a portion of the content displayed on the window of the multi-display application
5	The method of claim 1, further comprising: placing a focus on the second window of the second application.
6	The method of claim 1, wherein the input comprises a tap on the at least one of the first display or the second display.
7	The method of claim 6, wherein the tap is on an icon representing the second application.
9	The method of claim 1, wherein the first window of the multi-display application is displayed in one of a portrait max configuration and a landscape max configuration.
10	The method of claim 1, wherein the first and second displays are logical portions of a single screen.
17[P]	A dual display communication device, comprising:
17[A]	a first display; a second display;
17[B]	a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method comprising:
17[C]	displaying a first window of a multi-display application on the first display and the second display;
17[D]	receiving, by the first display, input to activate a second application; and in response to receiving the input: displaying

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	a second window of the second application on the first display; and
17[E]	in response to opening the second window, automatically minimizing the first window to fit the second display; and displaying the minimized first window of the multi-display application on the second display.
18	The device of claim 17, wherein the minimized first window displays only a portion of the content displayed on the first window of the multi-display application, when the first window was displayed on the first and second touch sensitive displays.
20	The device of claim 17, further comprising: receiving second input to open a third application; opening a third window on the second display; and in response to receiving the second input, displaying the third window on the second display, wherein the first window is no longer displayed on the second display.

I. Introduction

Petitioners Motorola Mobility LLC and Google LLC (“Petitioners”) respectfully request *inter partes* review of claims 1, 3-7, 9, 10, 17, 18, and 20 (the “Challenged Claims”) of U.S. Patent No. 9,058,153 (Ex. 1001, “’153 patent”), which is assigned to Multifold International Incorporated Pte. Ltd. (“Multifold” or “Patent Owner”).

II. Mandatory Notices

A. Real Party-in-Interest

Pursuant to 37 C.F.R. § 42.8(b)(1), Petitioners identify Motorola Mobility LLC¹ and Google LLC as the real parties-in-interest.²

B. Related Matters

¹ Petitioner Motorola Mobility LLC is a direct, wholly owned subsidiary of Motorola Mobility Holdings LLC, which is indirectly a wholly-owned subsidiary of Lenovo Group Ltd. Motorola Mobility Holdings LLC and Lenovo Group Ltd. are not real parties-in-interest to this proceeding.

² Google LLC is a subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc. XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest to this proceeding.

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The '153 patent is currently the subject of patent infringement lawsuits brought by Patent Owner, which includes Case No. 1-23-cv-01173 against Google LLC in the District Court for the District of Delaware (“Google Action”) and Case No. 1-23-cv-01323 against Motorola Mobility LLC in the District Court for the District of Delaware (“Motorola Action”). Motorola Mobility LLC was served with the complaint on October 18, 2023 and Google LLC was served with the complaint on November 20, 2023. Thus, this petition is timely under 35 U.S.C. § 315(b). The '153 patent was previously asserted in *Multifold International Incorporated Pte. Ltd. v. Samsung Electronics Co., Ltd. et al*, Case No. 2-21-cv-00371 (E.D. Tex.), which was dismissed on June 2, 2022, with the court’s grant of a joint motion to dismiss.

C. Notice of Counsel and Service Information

Petitioners designate the following counsel:

Counsel For Petitioner Motorola: (1) Christopher J. Higgins (lead counsel) (Registration No. 66,422), (2) T. Vann Pearce (backup counsel) (Registration No. 58,945).

Service Information for Petitioner Motorola: Orrick, Herrington & Sutcliffe LLP, 2100 Pennsylvania Avenue NW, Washington, DC 20037, Telephone: (202) 339-8600, Facsimile: (202) 339-8500, Email: 0CHPTABDocket@orrick.com, TVPPTABDocket@orrick.com.

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Counsel For Petitioner Google: (1) Naveen Modi (backup counsel) (Registration No. 46,224, naveenmodi@paulhastings.com), (2) Joseph E. Palys (backup counsel) (Registration No. 46,508, josephpalys@paulhastings.com), (3) Daniel Zeilberger (backup counsel) (Registration No. 65,349, danielzeilberger@paulhasings.com), (4) Howard Herr (backup counsel) (*pro hac vice* to be filed), (5) Quadeer Ahmed (backup counsel) (Registration No. 60,835, quadeerahmed@paulhastings.com), and (6) David Valente (Reg. No. 76,287, davidvalente@paulhastings.com).

Service Information for Petitioner Google: Paul Hastings LLP, 2050 M Street NW, Washington, D.C. 20036, Tel.: 202.551.1700, Fax: 202.551.1705, email: PH-Google-Multifold-IPR@paulhastings.com.

Petitioners' Powers of Attorney are attached.

The USPTO is authorized to charge the filing fee and any other fees incurred by Petitioners to the deposit account of Orrick, Herrington, & Sutcliffe LLP: 15-0665.

III. Requirements for IPR

A. Standing

Petitioners certify that the '153 patent is available for IPR, and that Petitioners are not barred or estopped from requesting this review.

B. Challenge and Relief Requested

Petitioners rely on the following references:

U.S. Patent App. Pub. No. 2010/0248788 (“Yook”), published on September 30, 2010 (Ex. 1004).

U.S. Patent App. Pub. No. 2007/0085759 (“Lee”), published on April 19, 2007 (Ex. 1005)

U.S. Patent No. 8,677,284 (“Aguilar”), filed on November 4, 2009 and issued on March 18, 2014 (Ex. 1006).

U.S. Patent Pub. No. 2007/0024645 (“Purcell”), filed on May 19, 2006 and published on February 1, 2007 (Ex. 1007).

These references all predate the Challenged Claims’ earliest possible priority date of October 1, 2010³ and are prior art at least under pre-AIA 35 U.S.C. § 102(a), (b), and/or (e).

Petitioners requests that the Challenged Claims be determined unpatentable and cancelled on the following grounds:

Ground 1: Yook anticipates the Challenged Claims under pre-AIA 35 U.S.C §102(a).

³ Petitioners do not concede that the ’153 patent is entitled to such a priority date.

Ground 2: Yook renders the Challenged Claims obvious under pre-AIA 35 U.S.C §103.

Ground 3: Lee anticipates the Challenged Claims under pre-AIA 35 U.S.C §102(b).

Ground 4: Lee renders the Challenged Claims obvious under pre-AIA 35 U.S.C §103.

Ground 5: Aguilar anticipates the Challenged Claims under pre-AIA 35 U.S.C §102(e).

Ground 6: Aguilar renders the Challenged Claims obvious under pre-AIA 35 U.S.C §103.

Ground 7: Purcell anticipates claims 1, 4-5, 9, 17, and 18 under pre-AIA 35 U.S.C §102(b).

Ground 8: Purcell in view of Yook renders the Challenged Claims obvious under pre-AIA 35 U.S.C §103.

This Petition is supported by the Declaration of Dr. Jeffrey Rodriguez (Ex. 1003).

IV. Discretionary Denial is Unwarranted

A. 35 U.S.C. § 314(a)

The factors set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”) strongly favor institution here.

1. Possibility of a stay

Petitioners may request a stay of the Litigation if institution is granted. The district court has not indicated how it will rule on such a motion. Thus, this factor is neutral. *See, e.g., Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020).

2. The court’s trial date

This factor favors institution. Trial in the *Motorola* Action is scheduled for August 3, 2026. Ex. 1010, ¶23. Trial in the *Google* Action is scheduled for November 16, 2026. *Id.* This IPR should conclude months before either trial. Accordingly, this factor weighs heavily against a discretionary denial.

3. Investment in the parallel proceeding

This factor favors institution. To date, the parties and Court have invested relatively little in the Google and Motorola Actions, particularly as to invalidity. Discovery recently commenced and the parties have served their respective contentions. The claim construction process has not begun, and the claim construction hearing is scheduled for June 27, 2025, after the expected date of the institution decision. No depositions have occurred, no expert discovery has been conducted, and no summary judgment motions have been filed. *See Sand Revolution* at 11.

Moreover, Petitioners proceeded with reasonable diligence. Patent Owner has asserted sixteen patents and initially over 100 asserted claims in the litigation. Petitioners filed this Petition within three months of receiving Patent Owner's infringement contentions and just two weeks after Patent Owner was required to narrow the number of Asserted Claims from 100 to 40. "[I]t is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding." *Fintiv* at 11.

4. Overlap of issues with the parallel proceeding

This factor favors institution. Petitioners are challenging claims 1, 3-7, 9, 10, 17, 18, and 20, and claims 1, 3, 5-7, 9, 10, and 20 are not asserted in the district court litigation. Moreover, because this proceeding will conclude prior to any trial in the district court and prior to pretrial proceedings, even if the claims were the same, this factor would favor institution. *Medtronic, Inc. v. Teleflex Innovations S.À.R.L.*, IPR2020-00138, Paper 20 (PTAB Jun. 26, 2020).

5. Overlap of parties

Petitioners and Patent Owner are parties in the *Motorola* Action and *Google* Action. This, however, is of little moment as the parties overlap in most situations where the patent-at-issue is both the subject of an IPR petition and asserted in district court.

6. Other circumstances that impact the Board's exercise of discretion, including the merits

The strength of this Petition strongly favors institution. *See Fintiv* at 14-15 (instituting particularly meritorious petitions is favored because it “may serve the interest of overall system efficiency and integrity”). Petitioners present four grounds of anticipation in this Petition, which demonstrates the strength of the prior art with respect to the Challenged Claims. Moreover, the prior art presented by Petitioners was not before the examiner during prosecution, further strengthening the invalidity grounds presented.

B. 35 U.S.C. § 325(d)

Denial under Section 325(d) also would be inappropriate. The petition relies upon prior art references that were not of record during prosecution of the '153 patent. *See generally* Ex. 1002. More importantly, following amendments during prosecution, none of the prior art references were compared to the claims that were broadened in post-allowance amendments. In addition, all of the cited prior art references in this Petition disclose the ability to automatically minimize a first window when returning to a single display from a dual-display. As this limitation was added to overcome the cited prior art during prosecution, denial under 325(d) would be inappropriate.

V. Overview Of The '153 Patent

A. The Patent's Admitted Prior Art

It is well known that “handheld computing devices, such as cellular phones, tablets, and E-readers, make use of a touch screen display....” Ex. 1001, 1:22-24. The '153 Patent further notes that through the proliferation of touch screen devices and the increasing complexity of user interface options, screen space was at a premium. *Id.*, 1:33-48. The specification further notes that an interface for user input would obscure portions of a single display and cause visual clutter. *Id.*, 1:42-48. Thus, the patent describes how this is particularly a problem for “single display touch screen devices” while also disclosing that dual screen devices are already present in the prior art. Ex. 1001, cover.

B. The Patent's Alleged Invention

The '153 Patent describes the alleged invention as addressing “a need for a dual multi-display handheld computing device that provides for enhanced power and/or versatility...” Ex. 1001, 1:52-53. One aspect is minimizing a first application to a smaller size when a second application is opened. *Id.*, Abstract; 1:60-2:2. The Challenged Claims are directed to resizing a window to display on one of two displays when two applications are open on a device. In other words, the Challenged Claims are directed to exactly what the '153 Patent describes as the prior art.

C. Relevant Prosecution History

During prosecution, the as-filed claims were rejected over several prior art references, including U.S. App. Pub. No. 2011/0230178 A1 (“Jones”). To overcome these rejections, Applicant, in a September 3, 2014 Amendment and Response, amended the asserted claims to include limitations related to a “hinge” that connected the two physically separate screens as well as the automatic minimization of the first window when reduced from full display:

1. (Currently Amended) A method, comprising:
providing a device having two or more screens attached by a hinge, wherein a first screen includes a first display and a second screen includes a second display;
displaying a first window of a multi-screen application on ~~at least a portion of a first display of a first screen and at least a second portion of a second display of a second screen;~~
receiving, ~~by at least one of the first display or the second display,~~ an input to launch a second application;
in response to receiving the input:
displaying a second window of the second application on the ~~at least one of the first display or the second display;~~ and
in response to opening the second window, automatically minimizing the first window to fit the first display;
displaying ~~a the~~ minimized first window of the multi-screen application on the ~~other of the first display or the second display.~~

Ex. 1002, (Sept. 3, 2014 Amendment), at 2. The examiner allowed the claims based on this amendment.

However, like in Patent No. 9,134,756 (co-petitioned for *inter partes* review), after the notice of allowance, Patent Owner amended the claims to delete the term

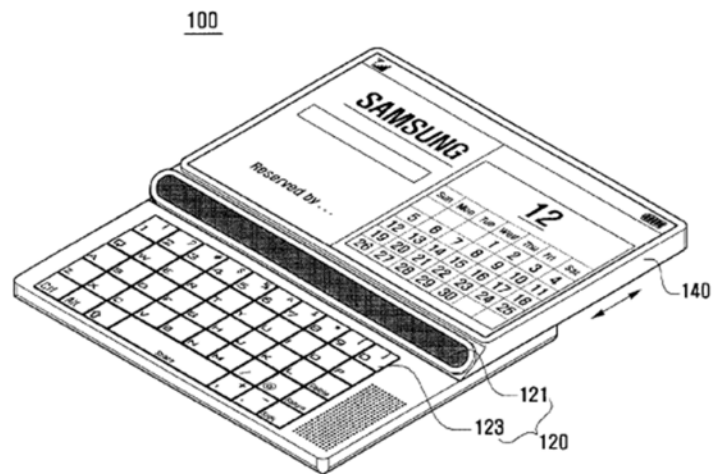
“hinge” from independent claim 1, and replaced the term “screen” with the term “display” in all three independent claims (in a December 24, 2015 Amendment and Request for Continued Examination). Applicants stated that no new matter was added by these amendments. *Id.* at 6. The examiner did not issue any new substantive office action or rejections for these broadened claims.

VI. Prior Art Overview

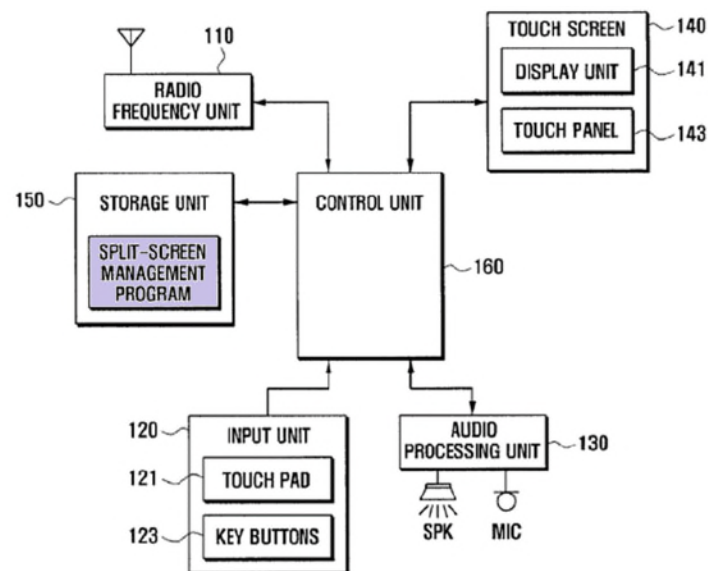
A. Yook

U.S. Patent Application Publication No. 2010/0248788 A1 to Yook was filed on March 22, 2010, claiming priority to provisional application number 61/163,259 filed on March 25, 2009, and published on September, 30, 2010. Yook qualifies as prior art under at least pre-AIA 35 U.S.C. § 102(a) and (e).

Yook is directed to a multi-display and multi-screen device that includes a touch screen user interface. Ex. 1003, ¶52; Ex. 1004, Figs. 1-13, ¶¶[0006]-[0009]. As part of the mobile terminal depicted in Fig. 1, Yook further describes how the touchscreen can be controlled to display multiple applications at once across its two logical displays. *See, e.g.*, Ex. 1003, ¶52; Ex. 1004, Abstract. In particular, Yook discloses a split-screen management program (purple) in Fig. 2 that is stored on the device for the purpose of controlling the two or more logical displays of the screen to divide the screen into logical displays if requested by a user. Ex. 1003, ¶52; Ex. 1004, ¶[0026].



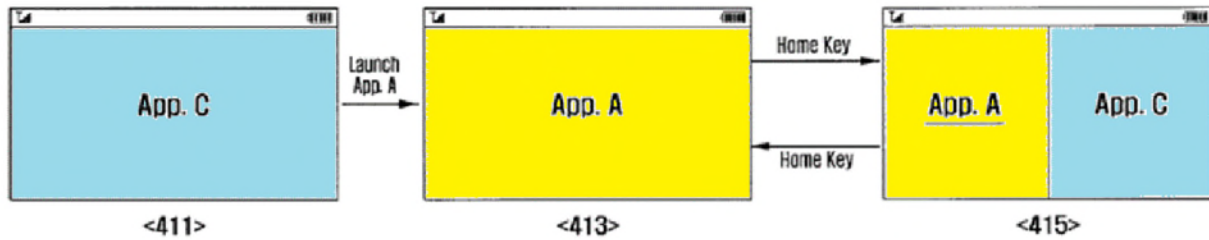
Ex. 1004, Fig. 1.



Id., Fig. 2.

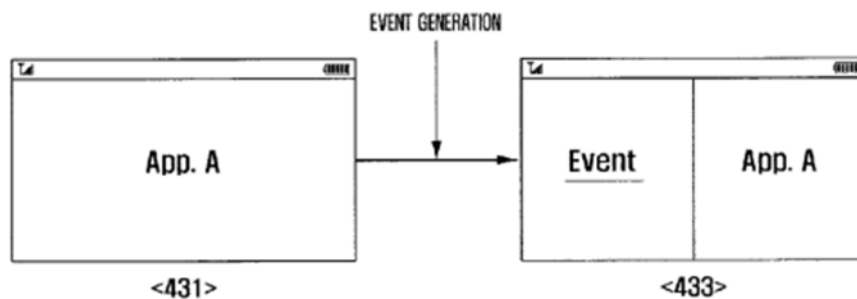
Yook provides several examples of how a user of the device can interact with the device and stored program in order to display multiple applications at once. Ex. 1003, ¶52. Fig. 4b provides one example:

FIG . 4b



Yook provides multiple examples of opening two applications on two separate displays and switching between split-screen mode and full-screen mode. Ex. 1003, ¶52; Ex. 1004, ¶¶[0046]-[0047]. As shown below in Fig. 4d, when one application is displayed across both displays and an event occurs, the main application is automatically minimized to a single display and the event occupies the second display. Ex. 1004, ¶[0051].

FIG . 4d



B. Lee

U.S. Patent Application Publication No. 2007/0085759 A1 to Lee was filed on October 12, 2006 and published on April 19, 2007. Lee qualifies as prior art under at least pre-AIA 35 U.S.C. §102(a) and (b).

Lee is directed to a multi-display and multi-screen device that includes a touch screen user interface. Ex. 1003, ¶53; Ex. 1005, Figs. 1-11, ¶¶[0002]-[0009]. Figs. 4 and 10D provide one example of Lee's use of a divided display to show two open applications across both displays and Fig. 6 shows one application open across both displays. Ex. 1005, ¶¶[0046]-[0048].

FIG. 4

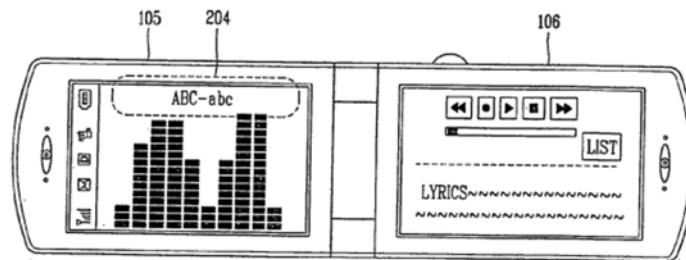
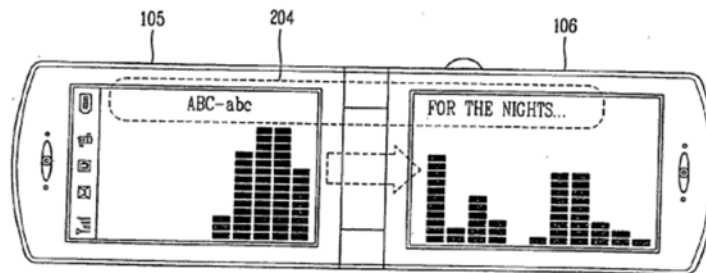
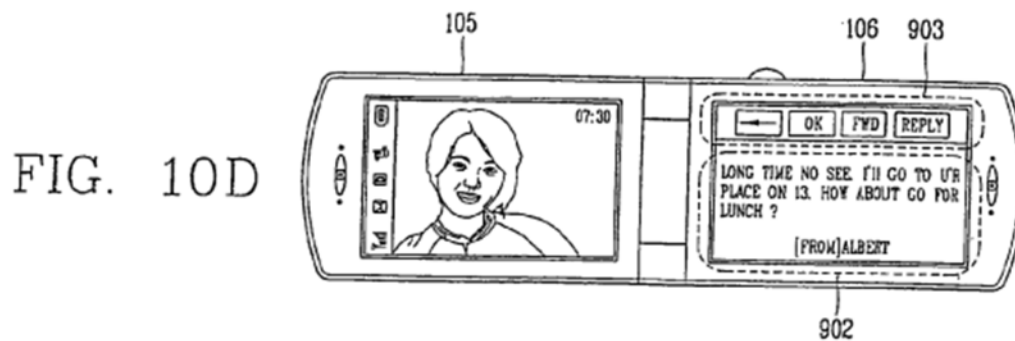
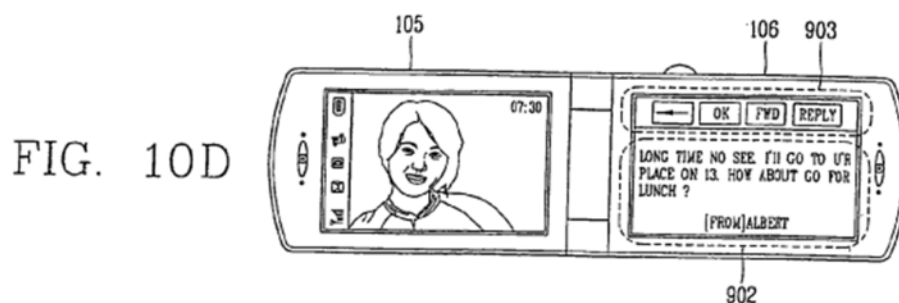
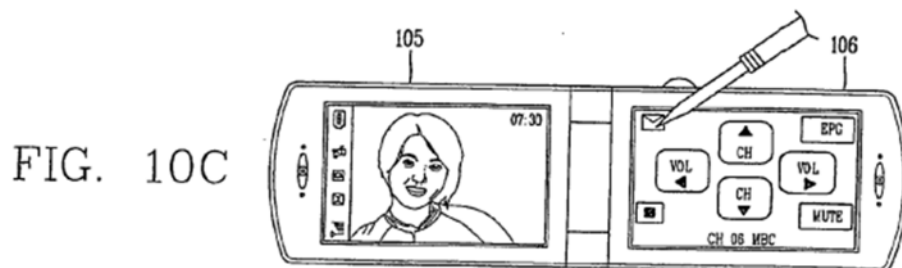


FIG. 6





Lee provides an example of displaying one application across two separate displays and then switching to displaying two applications, one per separate display. *Id.*, ¶¶[0053]-[0054]. As shown below in Figs. 10C-10D, when one application is displayed across both displays and a user selects a new application icon, the main application is automatically minimized to a single display and the other application is displayed on the second display. Ex. 1005, ¶[0053].

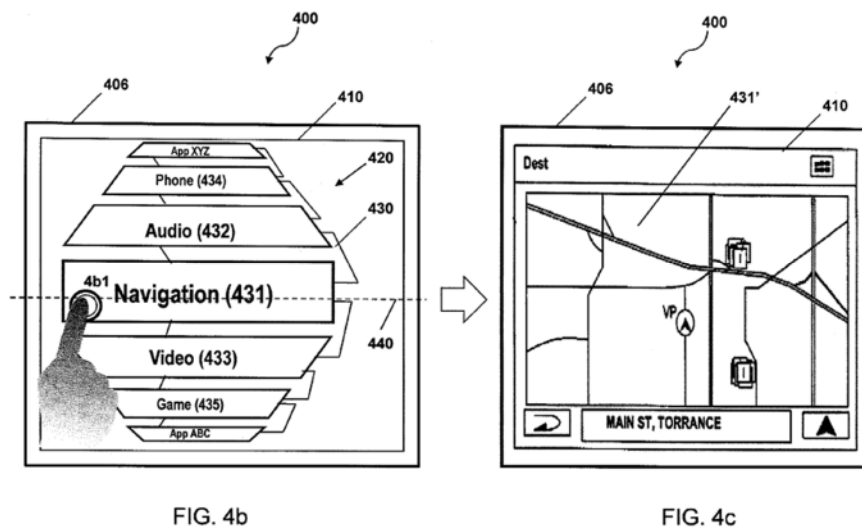


C. Aguilar

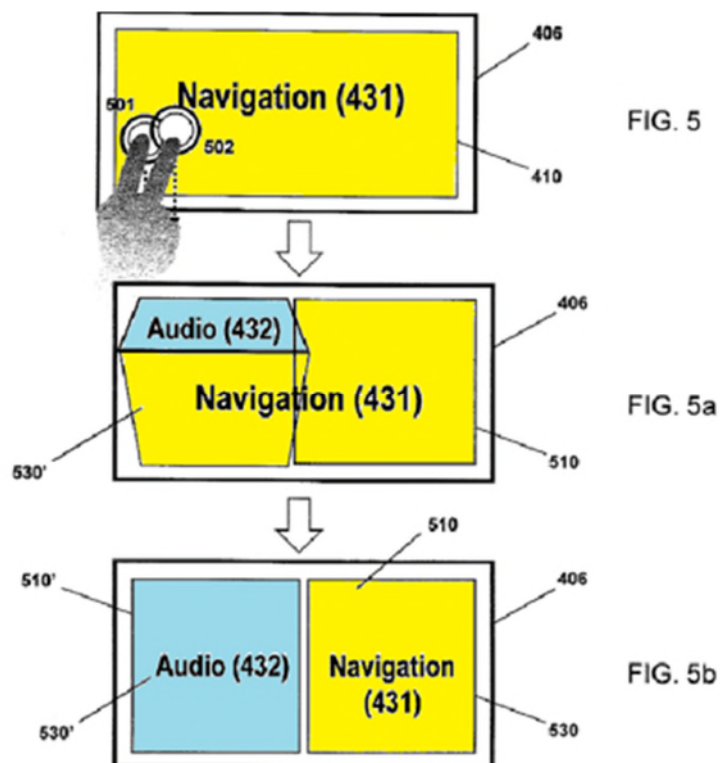
U.S. Patent No. 8,677,284 A1 to Aguilar was filed on November 4, 2009, published on May 5, 2011, and issued on March 18, 2014. Aguilar qualifies as prior art under at least pre-AIA 35 U.S.C. § 102(a) and (e).

Aguilar is directed to a multi-display device that is able to display a single application across the entire screen, or divide the screen into multiple displays for multiple applications. Ex. 1003, ¶54; Ex. 1006, Abstract, Figs. 4-9. Aguilar is directed to overcoming drawbacks in computer technologies that have placed limitations on the use and functionality of smaller touchscreen devices. Ex. 1006, 1:14-22. Aguilar describes a touchscreen device that can be divided into multiple logical displays and display content from different applications at once, allowing a user to multitask. *Id.*, 2:1-5, 26-41, 5:5-19, 6:48-7:63.

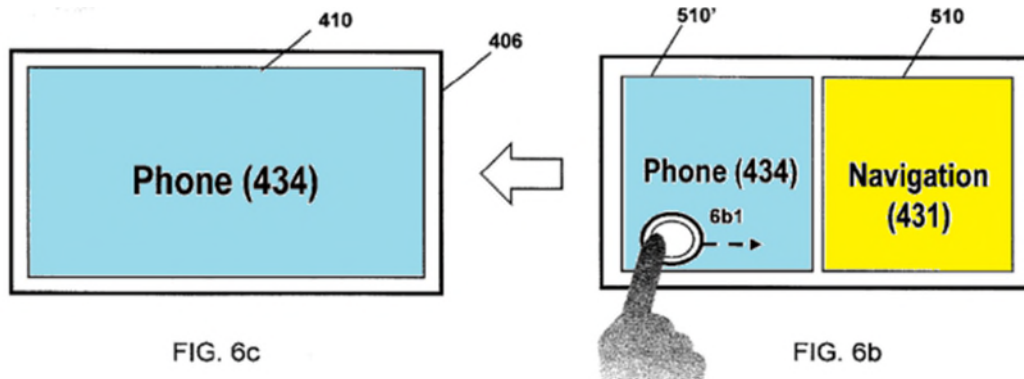
Aguilar demonstrates in Fig. 4 how its device can display a single application across the entire screen (all of the logical displays). *Id.*, 5:56-6:22.



Aguilar then demonstrates in Fig. 5 how its software and controller interface can permit a user to divide the screen into two displays and launch a second application on one of the two displays. *Id.*, 6:48-67.



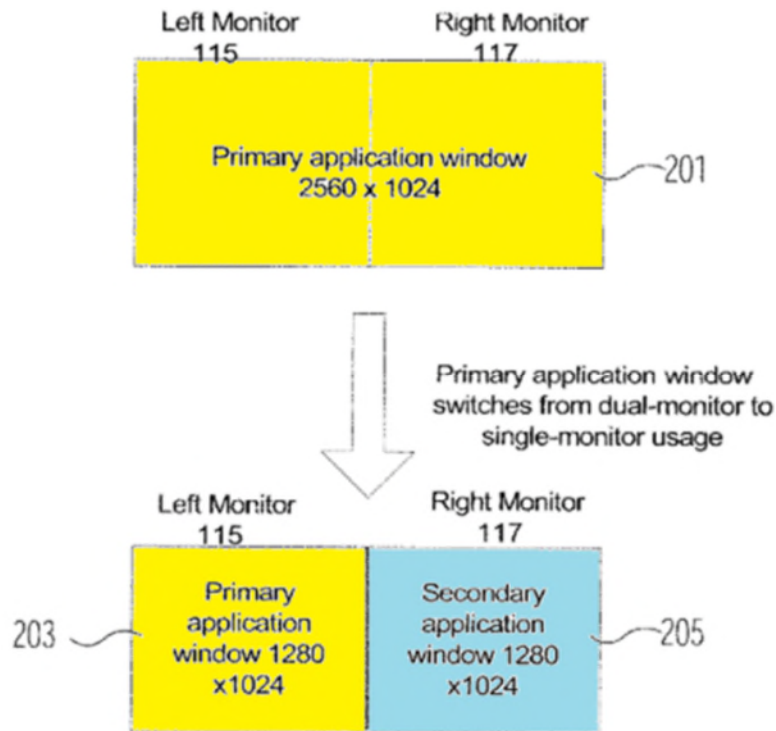
Demonstrating additional functionality, Aguilar also describes how a user can revert back from the two display and two application arrangement to a single application covering both displays in Figs. 6b and 6c. *Id.*, 7:42-54.



D. Purcell

U.S. Patent Application Publication No. 2007/0024645 A1 to Purcell was filed on May 19, 2006, and published on February 1, 2007. Purcell qualifies as prior art under at least pre-AIA 35 U.S.C. § 102(b).

Purcell is directed to a system with multiple display monitors that is used to display multiple applications at the same time to a user. Ex. 1003, ¶55; Ex. 1007, Abstract. Purcell notes that its multiple display system may be operated with the Windows operating system, which supported multiple application displays. *Id.*; Ex. 1007, ¶[0003]. Fig. 2 of Purcell is illustrative of its system:



Purcell explains that a primary application window 201 (yellow) can run with a single window and span both monitors/displays. *Id.*, ¶[0016]. Purcell then notes “to permit another application to execute concurrently and display an image window adjacent to an image window of the primary application, system 100 dynamically changes the primary application image window size to match that of a left monitor (monitor 115).” *Id.* The system then “initiates execution of a secondary application that displays an associated image window on the right monitor (117).” *Id.*

VII. Level of Ordinary Skill in the Art and Claim Construction

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. Ex. 1003, ¶42.

The specification of the '153 patent includes definitions for many of the terms that appear in the Challenged Claims. *See* Ex. 1001, 2:38-5:41. For purposes of this proceeding only, Petitioners have applied the definitions set forth in the '153 patent and do not believe any further construction is necessary in order to determine that the Challenged Claims are invalid over the prior art.

VIII. The Challenged Claims Are Unpatentable

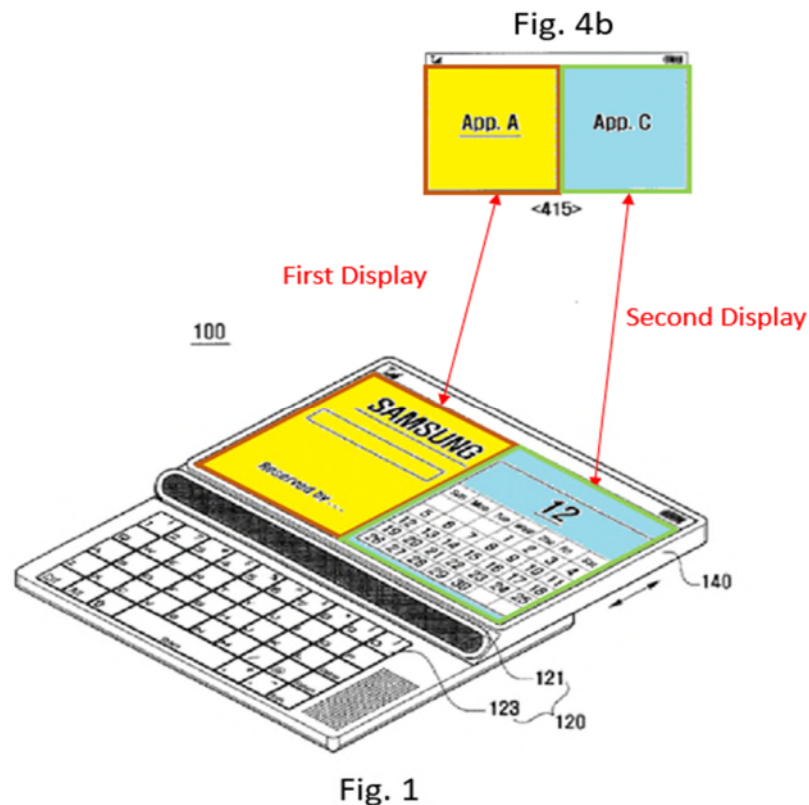
A. Ground 1: Claims 1, 3-7, 9, 10, 17, 18, and 20 Are Anticipated by Yook

1. Claim 1

1[P] A method, comprising:

If the preamble is limiting, Yook discloses performing a method as claimed. Ex. 1003, ¶60. Yook discloses a “method of supporting divided screen areas” on a mobile terminal. *Id.*; Ex. 1004, Abstract. Yook discloses a device that comprises two displays (always signified by orange and green outlines) and a processor for

controlling the two displays in order to divide a screen into logical portions.⁴ Ex. 1004, Figs. 1, 2, 4b; Ex. 1003, ¶¶61, 67.



Ex. 1004, Figs. 1, 4b (annotated). *Id.*, Fig. 2. In addition, Yook provides examples of how a user can perform various operations on this device to view

⁴ The outlines from Yook for each logical display have been exemplarily drawn to encompass a portion of a screen, but could encompass more or less of the screen without affecting Yook's disclosure of each claim element in the '153 patent. (See *e.g.*, Ex. 1001, 3:62-4:3.)

information from multiple applications at the same time. *See id.*, Figs. 3-13 and associated specification text; Ex. 1003, ¶63.

1[A] providing a device having a first display and a second display:

Yook discloses a device having a first display and a second display. Ex. 1003, ¶64.

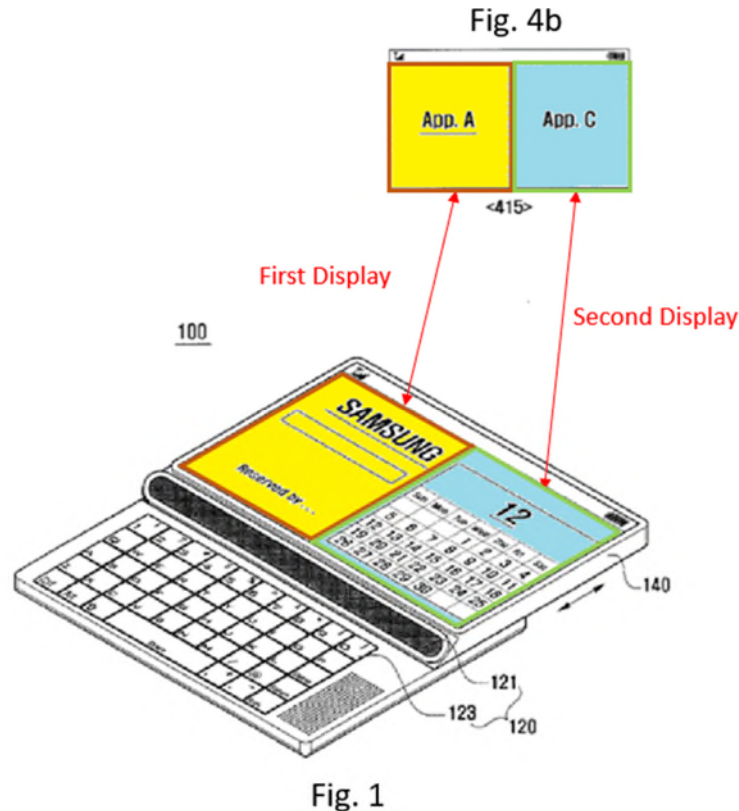
The '153 patent provides the following definition for “display:”

The term “display” refers to a portion of one or more screens used to display the output of a computer to a user. A display may be a single-screen display or a multi-screen display, referred to as a composite display. A composite display can encompass the touch sensitive display of one or more screens. ***A single physical screen can include multiple displays that are managed as separate logical displays. Thus, different content can be displayed on the separate displays although part of the same physical screen.***

Ex. 1001, 3:62-4:3. Yook’s displays meet this definition. Ex. 1003, ¶66.

As shown in annotated Figs. 1 and 4b below, Yook discloses two displays, a first display (orange outline) and a second display (green outline), each of which is

a portion of one or more screens that is used to display an application window to a user.⁵ *Id.*

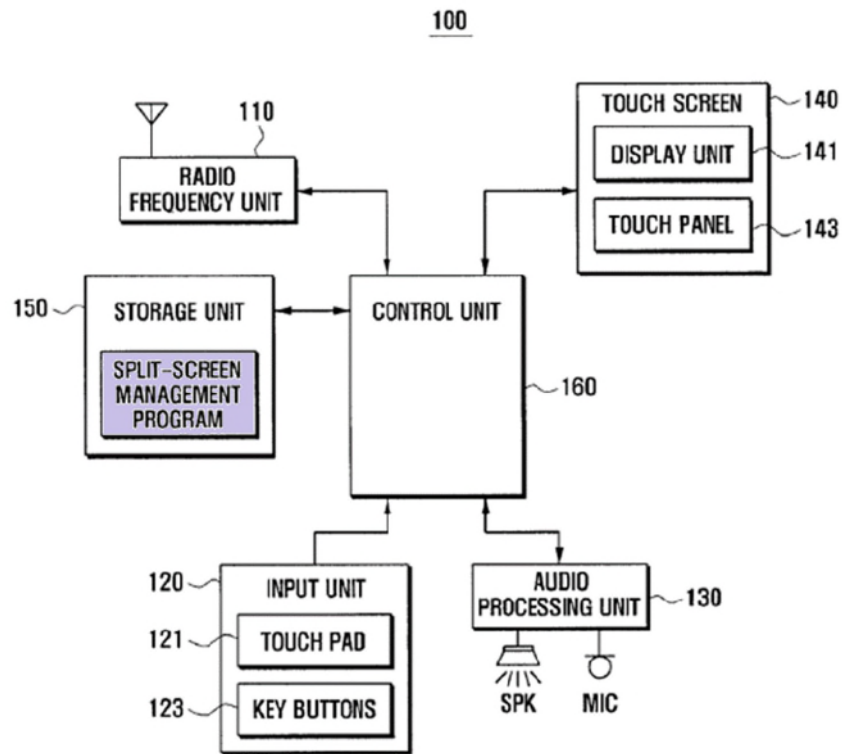


See also Ex. 1004, ¶¶[0024]-[0037].

In addition, Yook discloses that its single physical screen is divided into separate logical displays through the use of a split-screen management program

⁵ An **orange** outline refers to a first display and a **green** outline refers to a second display. The locations of the first and second displays may vary in different examples because they are logical displays.

(purple below) that controls the two or more logical displays of the screen to divide the screen into the logical displays if requested by user input. Ex. 1004, Fig. 2, ¶[0026]; Ex. 1003, ¶67.

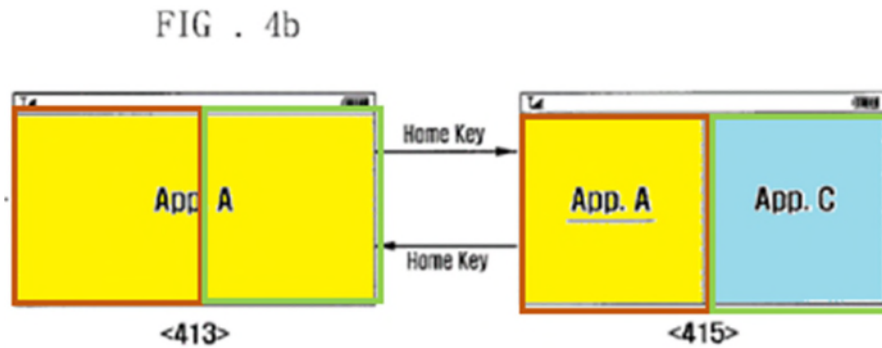


1[B] displaying a first window of a multi-display application on the first display and the second display;

Yook discloses that a first window of a multi-display application can be displayed on the first display and the second display. Ex. 1003, ¶68.

As defined in the '153 patent, a window is a “displayed image on at least part of a display.” Ex. 1003, ¶69; Ex. 1001, 5:18-21.

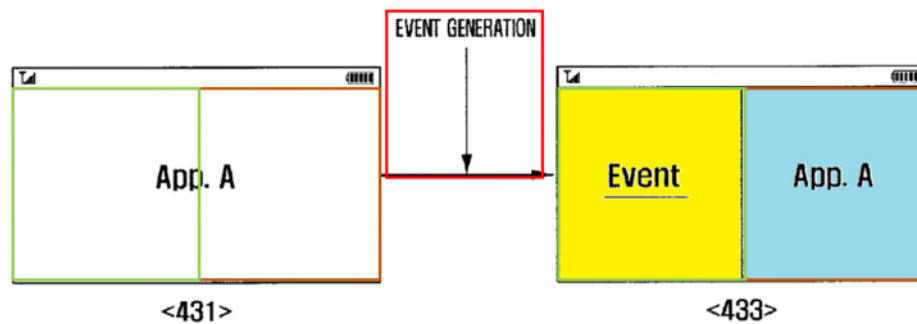
As shown in Fig. 4b, Yook's device can switch between full screen mode for a single application and split-screen mode for two applications in which a window is displayed across one or both displays. Ex. 1003, ¶70.



Element 413 in Fig. 4b shows application window “A” (App.A) displayed on both the first and second displays of the screen. Ex. 1003, ¶70; Ex. 1004, Fig. 4b, ¶[0046-47]. By pressing the “Home” key, a user can toggle back and forth between a split-screen mode and a full screen mode for application “A.” *Id.*

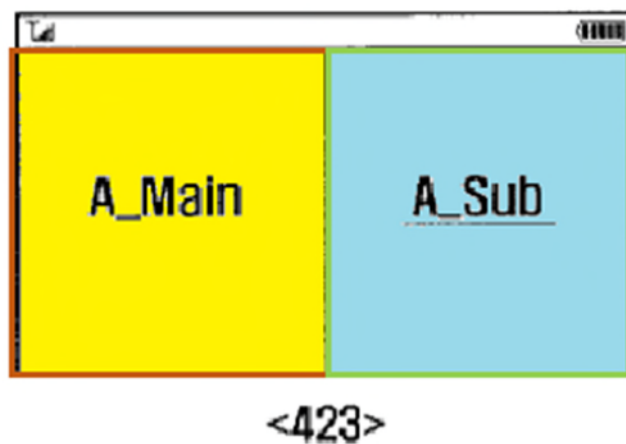
Yook provides further examples of its split-screen programming in Fig. 4d, which shows App.A displayed on both the first and second display areas. Upon an “Event Generation,” App.A is shown only on a first display (orange) and the second application launches and displays on the second display (green). Ex. 1004, ¶[0051]; Ex. 1003, ¶71.

FIG . 4d



Yook further demonstrates that App.A is a multi-display application that can be subdivided onto both the first and second displays in Fig. 4c below. Ex. 1003, ¶72.

FIG . 4c

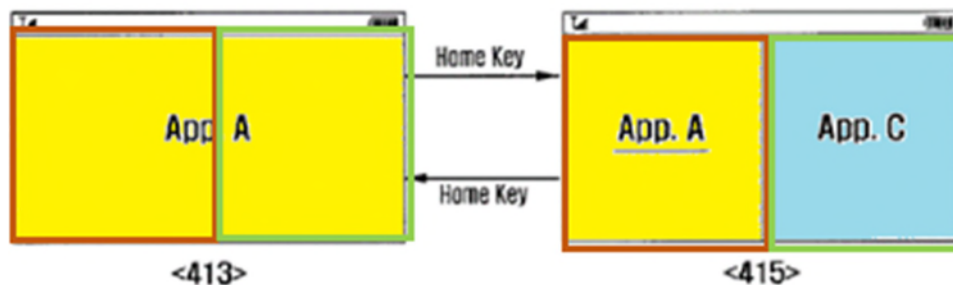


1[C] receiving an input to launch a second application; in response to receiving the input: displaying a second window of the second application on the second display; and

Yook discloses receiving an input to launch a second application, and in response to that input, displaying a second window of a second application on the second display. Ex. 1003, ¶74. Yook exemplifies this in multiple ways.

As shown in Fig. 4b below, Yook’s device can launch a second application (e.g., App.C) and display it on the second display (green outline). Ex. 1003, ¶70.

FIG . 4b



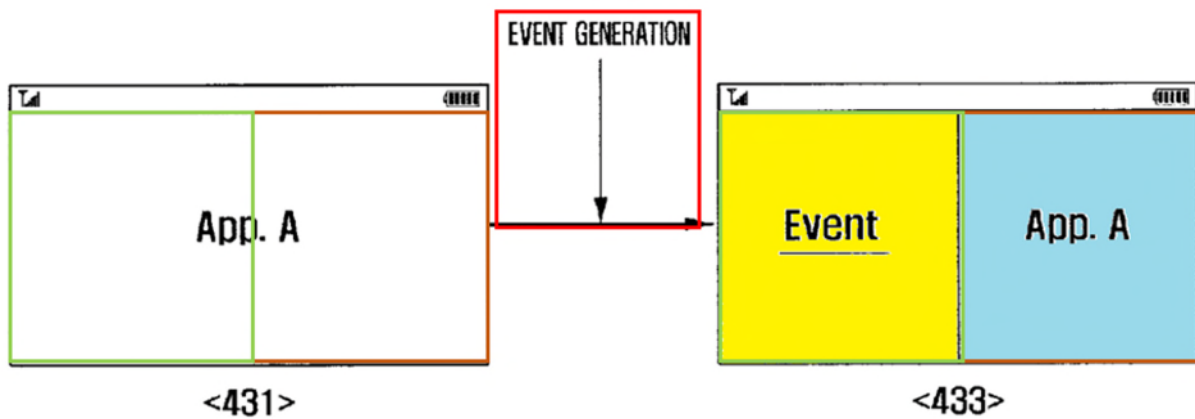
As an example, Yook describes how, in response to receiving a user input signal, the device launches a first application (e.g., a web browser) on the first display, which as shown above can be in full screen across both displays, and then launch a second application (e.g., Twitter) on the second display. Ex. 1003, ¶75; Ex. 1004, ¶¶[0096]-[0097] (describing a user generating an “input signal” to launch Twitter on one display and a web browser on the other display).



Ex. 1004, Fig. 10 (annotated).

As another example, Fig. 4d, demonstrates how an “Event Generation” input that is generated by a user is used to launch a second application, which is then displayed on the second (green outline) display. Ex. 1003, ¶¶71, 76; Ex. 1004, ¶[0051].

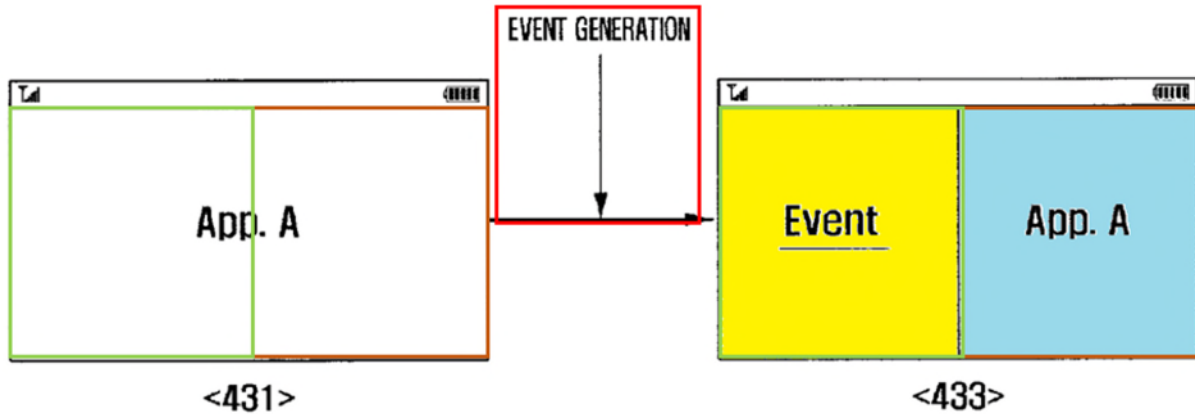
FIG . 4d



1[D] in response to opening the second window, automatically minimizing the first window to fit the first display; and displaying the minimized first window of the multi-display application on the first display.

Yook discloses that, in response to opening the second window, the first window is automatically minimized to fit the first display (orange) and then displayed. Ex. 1003, ¶78. Yook discloses that when the split-screen mode is entered upon receiving an input to do so, the first window is “resized” to fit the smaller first display of the split screen display. Ex. 1003, ¶79; *see, e.g.*, Ex. 1004, ¶¶[0039], [0048], [0051]. For example, with respect to Fig. 4d, Yook explains that when an “event” condition input is generated, the mobile terminal 100 can activate an application program.” Ex. 1004, ¶[0051]. Then, “as illustrated in screen 433, the mobile terminal 100 can display the functional view area App.A as to the function ‘A’ on one divided screen area through resizing, and display a functional view area Event as to the event handling application program on the other divided screen area.” *Id.* Thus, App.A transforms to a minimized display mode “through resizing,” which is identical to minimizing the application to fit a single logical display. Ex. 1003, ¶80.

FIG . 4d



Referring again to Yook's example in Fig. 10, the windows are automatically resized to fit the smaller split-screen displays. Ex. 1003, ¶81; Ex. 1004, ¶[0097]. Yook describes how when two applications are selected to be opened, each application is sized "on corresponding divided screen areas of the display unit 141." *Id.* Yook discloses that this example utilizes the same split-screen management program disclosed in Fig. 2. Ex. 1003, ¶80; Ex. 1004, ¶[0096].

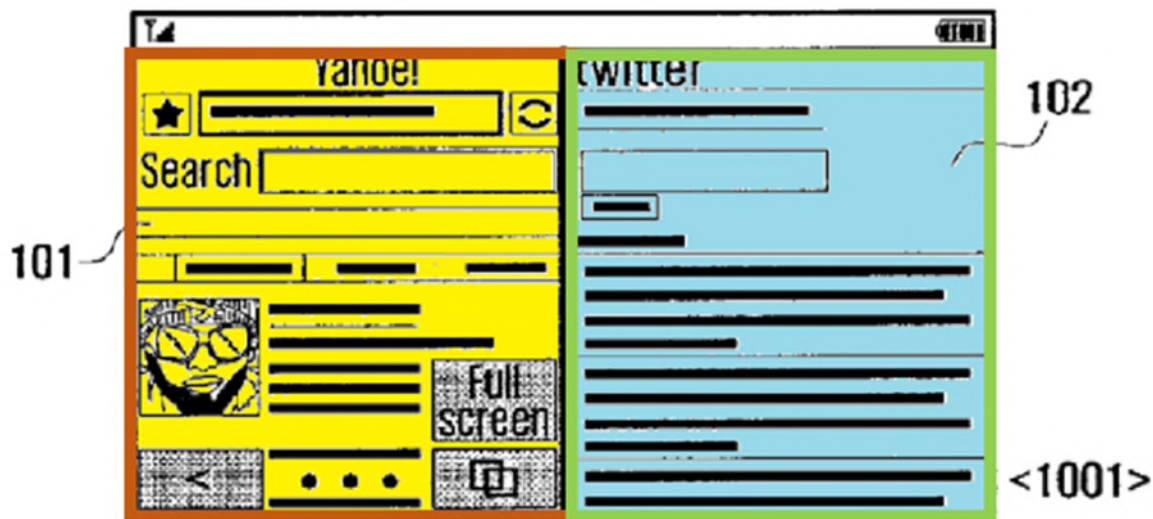
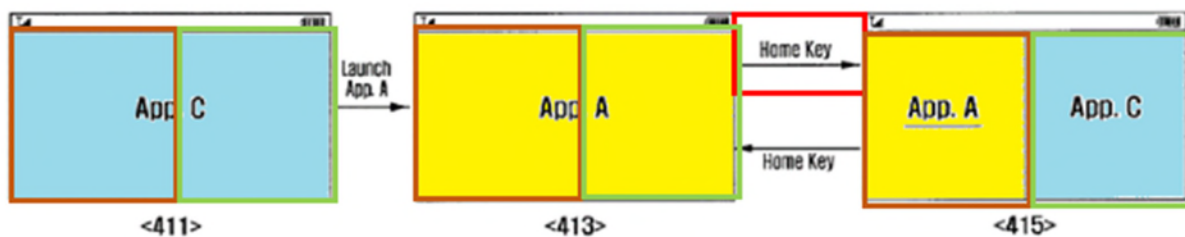


Fig. 4b also demonstrates App.A automatically resizing/minimizing to fit on the first display (orange). Ex. 1003, ¶82. These examples all separately meet the claim.

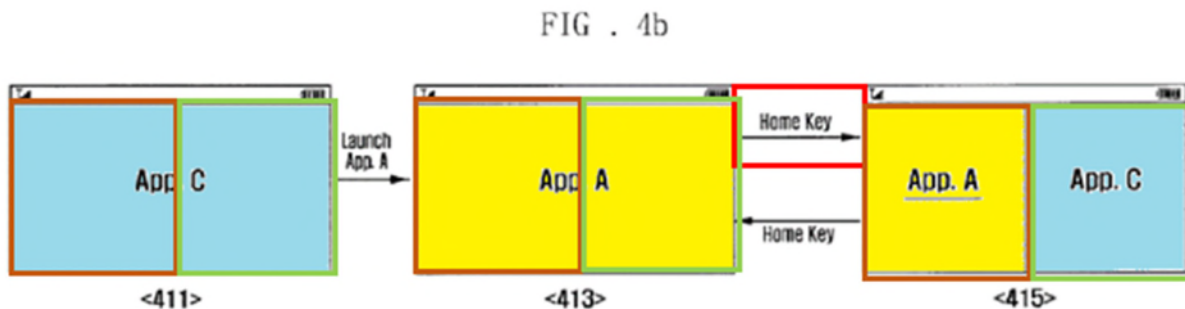
FIG . 4b



2. Claim 3 - The method of claim 1, wherein the second application is a second multi-display application

Yook discloses that the second application is a second multi-display application. Ex. 1003, ¶83. Yook notes that “to support divided-screen area transition, the mobile terminal 100 can perform ... display a separate search view area, select a desired icon in the search view area, and replace one functional view area being output with a functional view area related to the selected icon.” Ex. 1004,

¶[0061]. Fig. 4b, for example, demonstrates how both App.A and App.C are able to be displayed on both logical displays as multi-display applications. Ex. 1003, ¶84; Ex. 1004, ¶[0047].



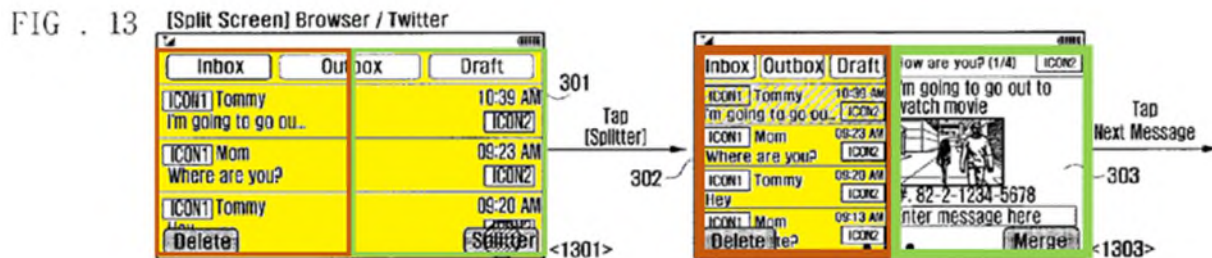
3. Claim 4 - The method of claim 1, wherein the minimized first window displays only a portion of the content displayed on the window of the multi-display application

Yook discloses a minimized first window displaying only a portion of the original content compared to the full screen display. Ex. 1003, ¶87. For example, Yook discloses that a minimized window “is one of a resized and a simplified version of the functional view area App.A,” displaying only a portion of the original content. Ex. 1003, ¶88, 91; Ex. 1004, Fig. 4c, 4d, ¶¶[0048],[0051]. Also, Yook discloses that an application can be “resized and changed in attribute” to display only a portion of the original content. Ex. 1003, ¶89; Ex. 1004, ¶[0050].

Further, Yook’s device can “reformat” or “adjust the functional view area” of a display. Ex. 1003, ¶90; Ex. 1004, ¶[0035]. In addition, Fig. 13 below shows that the “Inbox,” “Outbox,” and “Draft” icons at the top of the display are a portion

of their original content, and the “Splitter” icon is deleted in the minimized window.

Ex. 1003, ¶92.



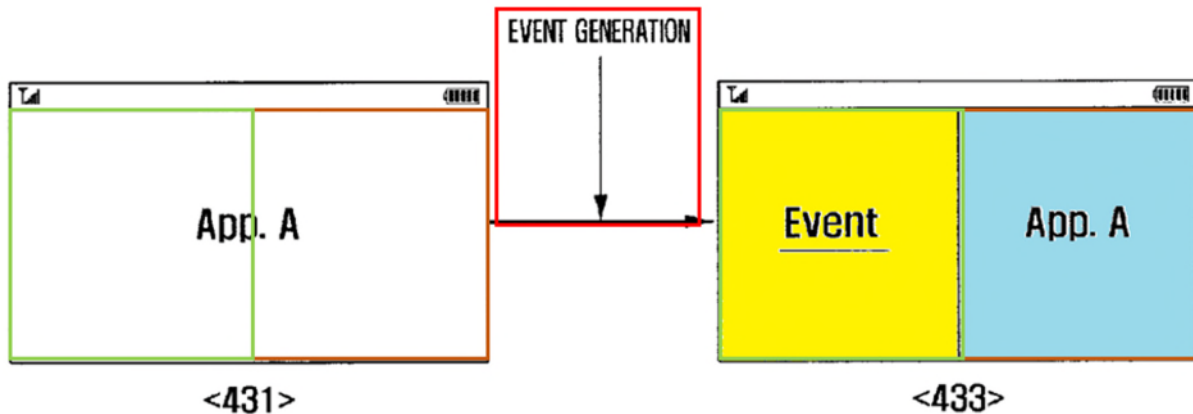
Yook also discloses how the logical view areas between the first and second displays can be dragged in either direction so as to make one of the logical display areas larger so that “additional information can be displayed in the view area.”

Ex. 1003, ¶93; Ex. 1004, ¶[0083]. When this occurs, for the other view area that was made smaller, a “portion of information displayed on the view area can be hidden.” *Id.*

**4. Claim 5 - The method of claim 1, further comprising:
placing a focus on the second window of the second
application.**

Yook discloses this claim. Ex. 1003, ¶94. The '153 patent explains that focus “refers to being active and/or selected to receive input.” Ex. 1001, 5:35-41. Yook explains that the incoming event in Fig. 4d that is on the second display allows input, which places it in focus according to the '153 patent. Ex. 1003 ¶96; Ex. 1004, ¶[0051],[0054]

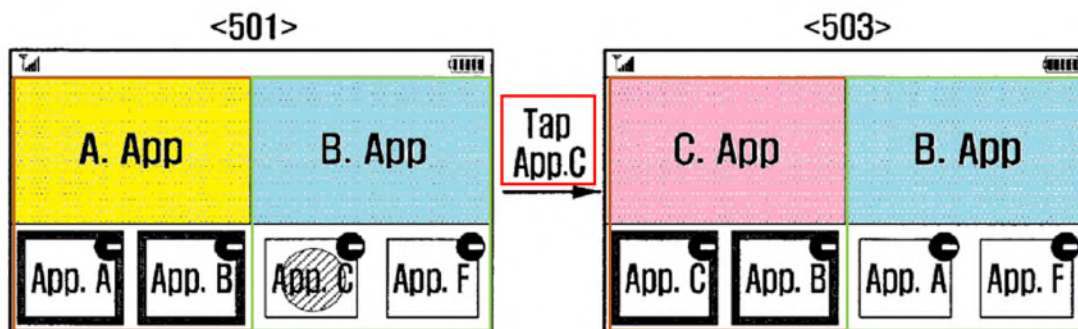
FIG . 4d



5. **Claim 6 - The method of claim 1, wherein the input comprises a tap on the at least one of the first display or the second display.**

Yook discloses this claim. Ex. 1003, ¶97. For example, in Fig. 5a, the user “taps” an icon representing an application (e.g., an icon of the second application) to open it on either display. Ex. 1004, ¶¶[0047],[0058]. Yook also discloses the “Home Key” of Fig. 4b as a “touch input.” *Id.*

FIG . 5a



6. **Claim 7 - The method of claim 6, wherein the tap is on an**

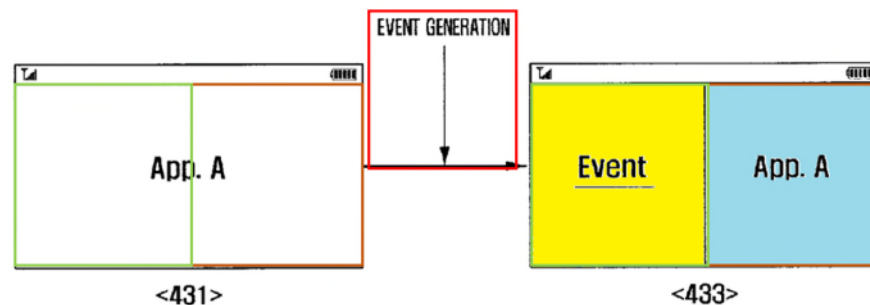
icon representing the second application.

See Claim 6.

7. **Claim 9 - The method of claim 1, wherein the first window of the multi-display application is displayed in one of a portrait max configuration and a landscape max configuration.**

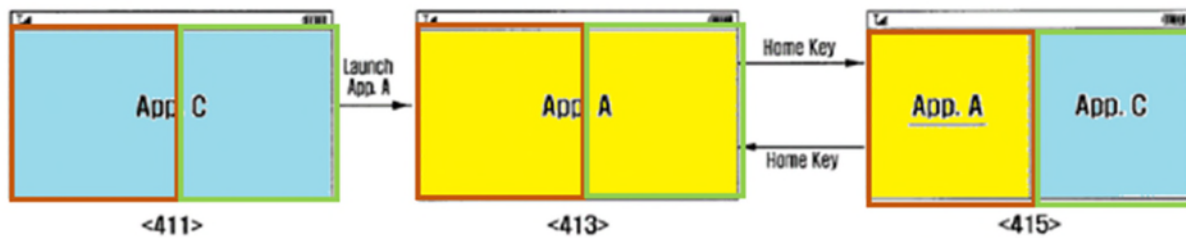
Yook discloses that the first window of the first multi-display application is displayed in a landscape max configuration, which is a landscape mode across both displays. Ex. 1003, ¶100. Yook shows this in numerous examples, including Fig. 4d, which shows App.A in landscape max mode. Ex. 1003, ¶101.

FIG . 4d



Yook further discloses this with respect to Fig. 4b, where each application may be displayed in landscape max mode. Ex. 1003, ¶102.

FIG . 4b



8. **Claim 10 - The method of claim 1, wherein the first and second displays are logical portions of a single screen.**

See claim 1[A].

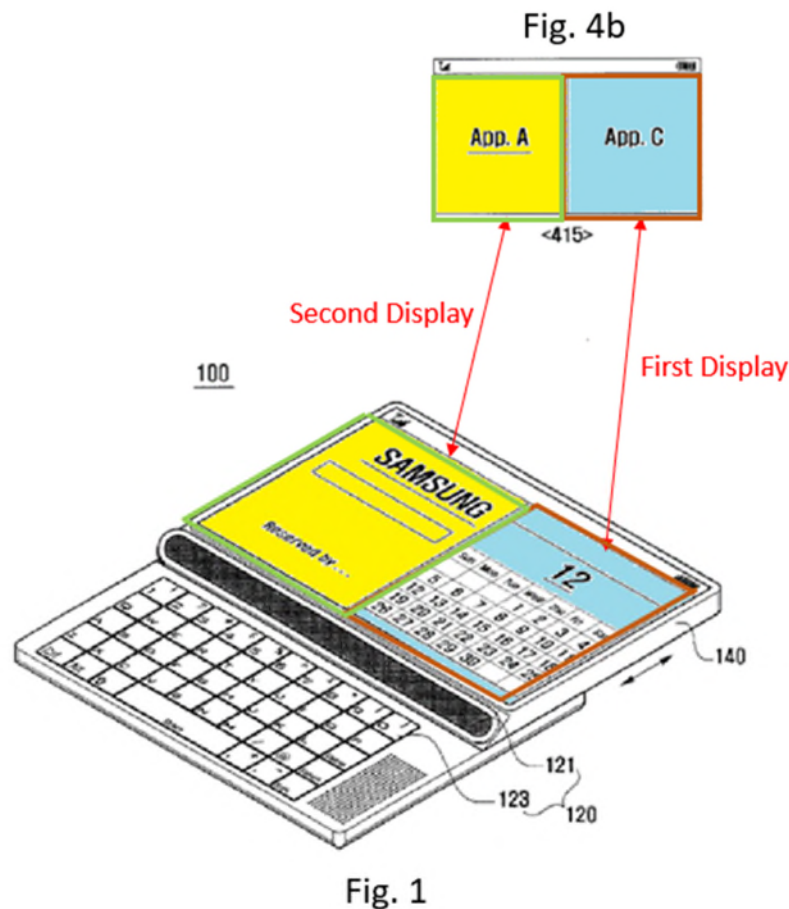
9. **Claim 17**

17[P] A dual display communication device, comprising:

If the preamble is limiting, Yook discloses a dual display communication device. See Claim 1[P], 1[A] (showing first and second displays on Yook's mobile communication device).

17[A] a first display; a second display;

Yook discloses a first display (orange) and a second display (green). Ex. 1003, ¶105, 106; Ex. 1004, Figs 1, 4b (annotated below).

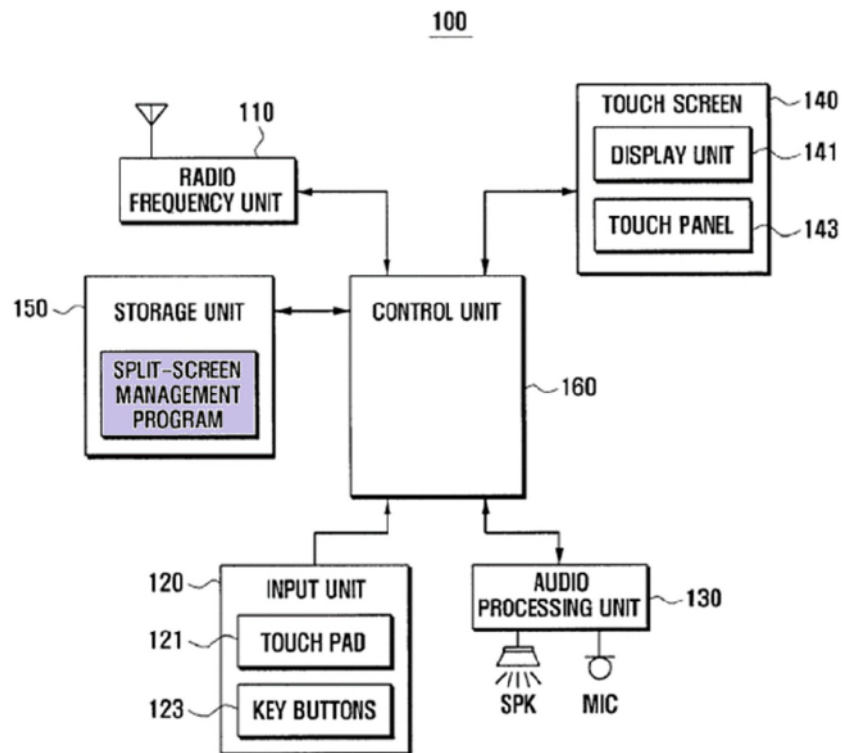


See also Ex. 1004, ¶¶[0024]-[0037].

17[B] a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method comprising:

Yook discloses this limitation. Ex. 1003, ¶109. Yook discloses that its separate logical displays are managed through the use of a split-screen management program (purple below, annotated Fig. 2) stored on the device in the storage unit 150 (“ROM”) and executed by the Control Unit processor. Ex. 1003, ¶107; Ex. 1004, Fig. 2, ¶[0026]. “ROM ... may store ... software or computer code

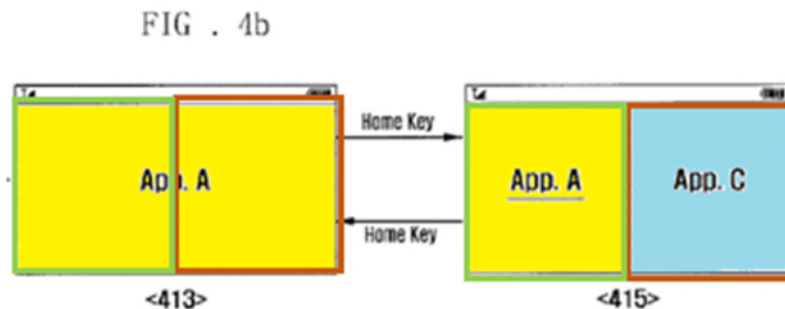
that when accessed and executed by the ... processor ... implement the processing methods described herein.” Ex. 1004, ¶[0117]. A POSITA would have understood that ROM is a non-transitory computer readable medium that comprises computer executable instructions. Ex. 1003, ¶108.



17[C] displaying a first window of a multi-display application on the first display and the second display;

Yook discloses that a first window of a multi-display application can be displayed on both the first display (orange) and second display (green). Ex. 1003, ¶111.

As shown in Fig. 4b, Yook's device can switch between full screen mode for a multi-display application and split-screen mode for two applications in which a window is displayed across one or both displays. Ex. 1003, ¶112.



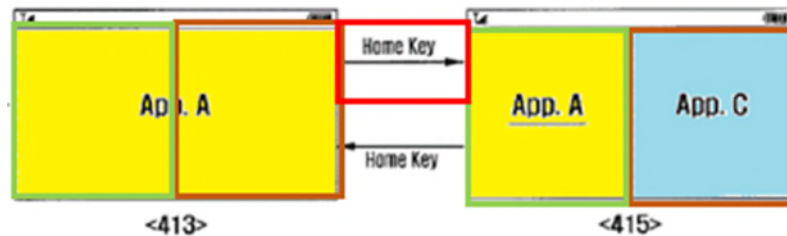
17[D] receiving, by the first display, input to activate a second application; and in response to receiving the input: displaying a second window of the second application on the first display; and

Yook discloses this limitation. Ex. 1003, ¶113. “The user generates an input signal to activate a function ‘A’ in screen 411, the mobile terminal 100 can display a functional view area App.A as to the function ‘A’ on the display unit 141, as illustrated in screen 413.” Ex. 1004, Fig. 4b, ¶[0046]. Then, a user can “generate[] an input signal corresponding to one of a particular key and a touch event like the ‘Home’ key in screen 413...to simultaneously output two functional view areas App.C and App.A.” *Id.*, ¶[0047].

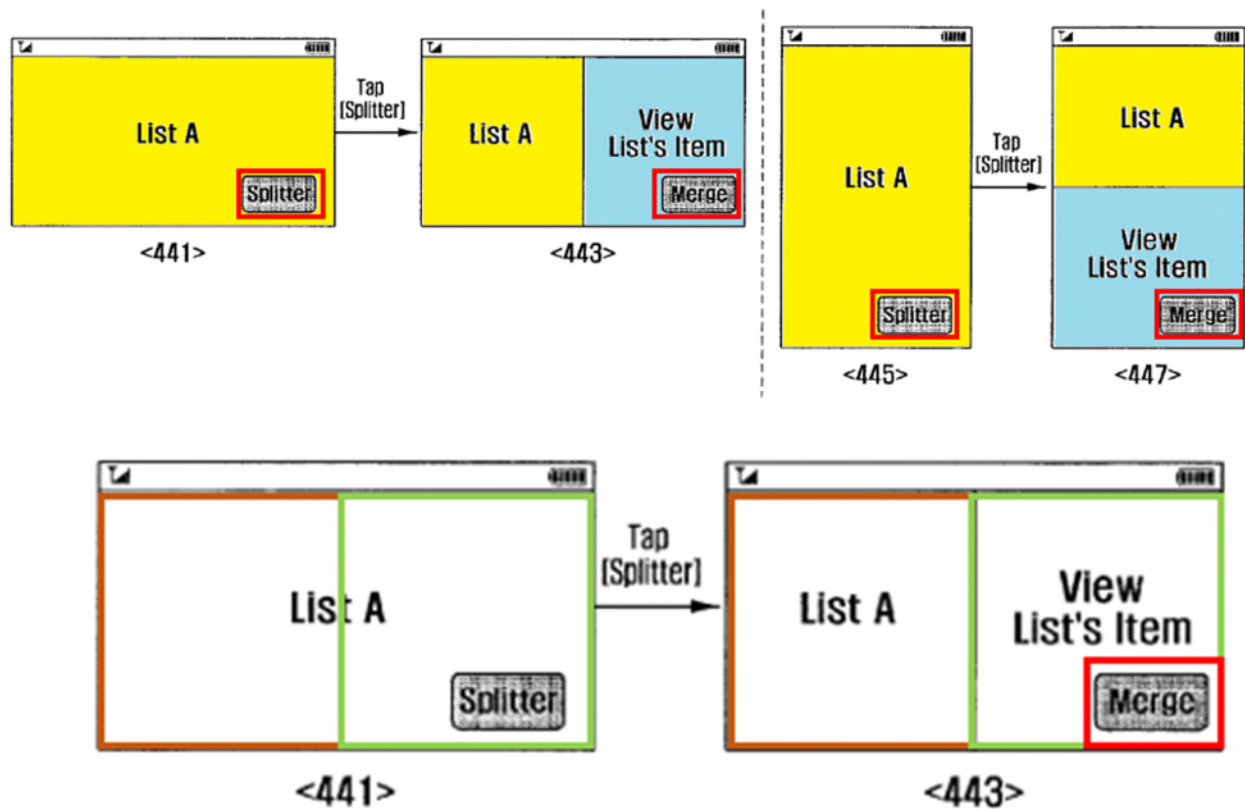
As shown in Fig. 4b below, Yook discloses that in response to receiving the input from touching the ‘Home’ key (red outline) on the first display, a first window

of the second application (App.C) is displayed on the first display (orange). *Id.*, Ex. 1003, ¶114.

FIG . 4b



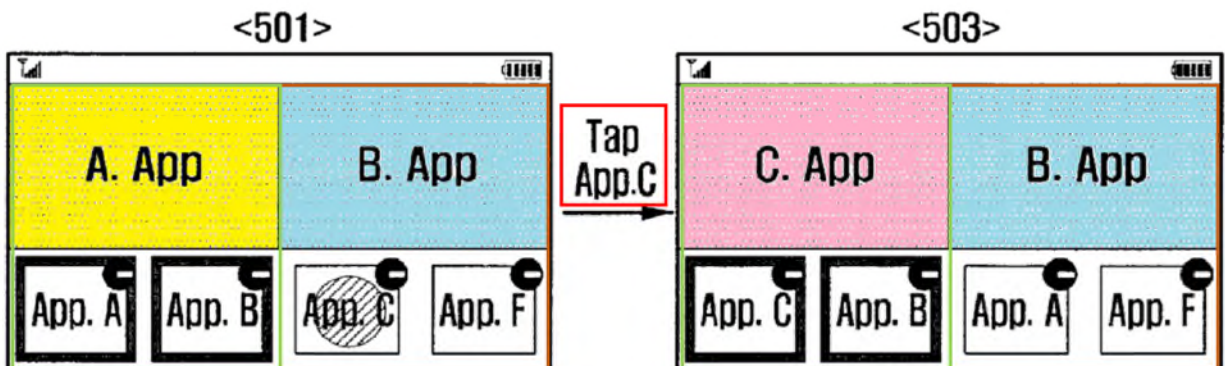
Yook describes how the first input can be a touch screen input gesture on the first display, where the input causes a second application window to be displayed on the first display. Ex. 1003, ¶115. For example, Fig. 4e shows splitter and merge input buttons that cause a second application to be displayed on the first display. Ex. 1003, ¶115. As annotated Fig. 4e shows below, upon touching the “Splitter” button, application “A” is divided into two windows each displaying its own display. *Id.*



Ex. 1004, Fig. 4e.

Yook demonstrates various other methods of screen division and display via on-screen inputs as shown below in Fig. 5a. Ex. 1003, ¶116.

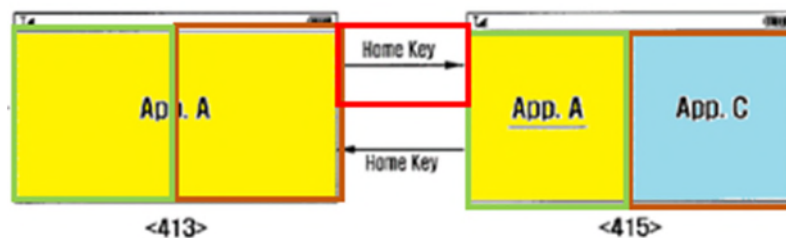
FIG . 5a



17[E] in response to opening the second window, automatically minimizing the first window to fit the second display; and displaying the minimized first window of the multi-display application on the second display.

Yook discloses that, in response to opening the second window on the second display (green outline), the first window is automatically minimized to fit the second display and then displayed on the second display. Ex. 1003, ¶117. Yook discloses that when the split-screen mode is entered, the first window is automatically “resiz[ed]” and minimized to fit the smaller second display of the split screen display. Ex. 1003; ¶118; Ex. 1004, ¶[0051]. As shown below in Fig. 4b below, App.C window is automatically minimized to fit the second display (green). Ex. 1003, ¶118; Ex. 1004, ¶[0047].

FIG . 4b



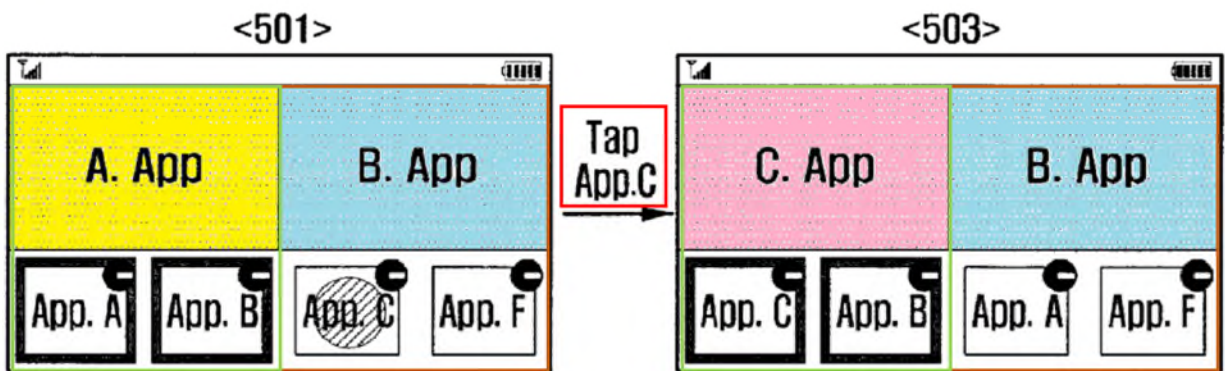
- 10. Claim 18 - The device of claim 17, wherein the minimized first window displays only a portion of the content displayed on the first window of the multi-display application, when the first window was displayed on the first and second touch sensitive displays.**

See Claim 4.

- 11. Claim 20 - The device of claim 17, further comprising: receiving second input to open a third application; opening a third window on the second display; and in response to receiving the second input, displaying the third window on the second display, wherein the first window is no longer displayed on the second display.**

Yook discloses this claim. Ex. 1003, ¶120. As Fig. 5a shows below, a first window of a first application “A” is displayed on the second display (green) and a second window of a second application “B” is displayed on the first display (orange). *Id.*, ¶121. When an input is received (“Tap App.C”) a third window for a third application “C” is then displayed on the second display (green), replacing application “A.” *Id.*; Ex. 1004, ¶¶[0059]-[0061].

FIG . 5a



B. Ground 2: Claims 1, 3-7, 9, 10, 17, 18, and 20 are Obvious Over Yook

The Challenged Claims are anticipated by Yook. Because Yook anticipates the Challenged Claims, Yook also renders those claims obvious. “[A] disclosure that anticipates under § 102 also renders the claim invalid under § 103, for

‘anticipation is the epitome of obviousness.’” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1373 (Fed. Cir. 2019).

To the extent Patent Owner argues that Yook does not anticipate, then the claims would have been, at a minimum, rendered obvious in light of Yook when considered in view of the knowledge of a POSITA for at least the reasons set forth above. Ex. 1003, ¶122. As described above, Yook is from the same field of endeavor and directed to the same purported problem as the Challenged Claims, so it is analogous art.

First, any differences in terminology between Yook and the ’153 patent are, at most, no more than obvious variants and not patentable distinctions. *Id.*, ¶123. For example, a “functional view area” (Yook) can encompass a display as claimed in the ’153 patent. *Id.*, ¶124; Ex. 1004, ¶[0039] (“When two instances of a user function are activated, the control unit can control the display unit to divide the screen into two areas, and cause two functional view areas to be displayed. . . .”); Ex. 1001, 3:62-4:3 (“The term “display” refers to a portion of one or more screens used to display the output of a computer to a user. “). The same is true for other terminology differences between Yook and the ’153 patent. Ex. 1003, ¶125.

Second, to the extent Patent Owner argues that the various “examples” of how a user may interact with Yook’s disclosed system constitute separate embodiments, Petitioners disagree. As described above, Yook discloses a system

and associated components and then provides various examples of the many functionalities a user can implement on that system. Ex. 1003, ¶126. Even if considered separate embodiments, which they are not, a POSITA would have been motivated to try each and every one of Yook’s disclosed “examples” on the disclosed system in Yook. *Id*; see *Unification Techs. LLC v. Micron Tech. Inc.*, No. 2023-1348, 2024 WL 3738401, at *6 (Fed. Cir. Aug. 9, 2024) (affirming obviousness over a single reference that taught every limitation in view of expert’s testimony about what a POSITA would have understood from the reference’s disclosures); *Monsanto Tech. LLC v. E.I. DuPont De Nemours & Co.*, 878 F.3d 1336, 1347 (Fed. Cir. 2018) (affirming PTAB’s determination “that a PHOSITA would have been motivated to combine elements of [a single prior art reference]” to find claim obvious).

For example, a POSITA would have understood that selecting applications for various logical display areas as depicted in Fig. 5a would be included with Fig. 4d, where App.C may be selected for viewing in place of the generated event/function. Ex. 1003, ¶127; Ex. 1005 ¶¶[0059]-[0061]. Even if Yook discloses teachings of different embodiments – it does not – it would have been obvious to a POSITA to combine those teachings. Ex. 1003, ¶128. “Combining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness.” *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009).

Third, for claims 4 and 18, to the extent Patent Owner argues that Yook does not expressly disclose that a portion of the contents of the original window are displayed on the reduced size first window, Petitioners disagree for the reasons above, but a POSITA would have understood that it was commonplace for a reduced-size version of an application window to display only a portion of the contents of a maximized version of the application window. Ex. 1003, ¶129. Further, a simplified version of an application window necessarily displays only a portion of the contents of the maximized version of the application window. *Id.*

Based on the disclosures from Yook explained in Sections VIII.A.3 and VIII.A.9, a POSITA would have found it readily obvious and understood that a reformatted display area as discussed in Ex. 1005, ¶[0035], a simplified version window as discussed in Ex. 1005, ¶[0048], or a reduced size window as shown in Fig. 13, would all disclose that only a “portion” of the original window contents would be displayed. Ex. 1003, ¶¶129-131. Thus, claims 4 and 18 would have been obvious to a POSITA at the time of the alleged invention. *Id.*

C. Ground 3: Claims 1, 3-7, 9, 10, 17, 18, and 20 Are Anticipated by Lee

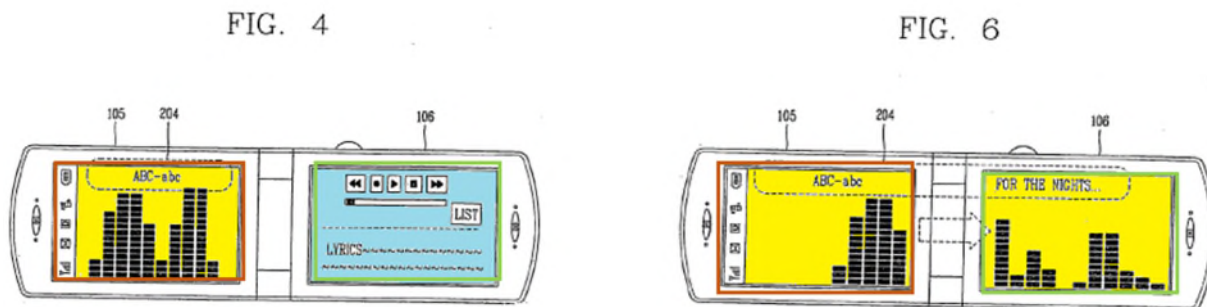
1. Claim 1

1[P] A method, comprising:

If the preamble is limiting, Lee discloses this limitation. Ex. 1003, ¶134. Lee discloses systems and methods for performing the steps below. *See, e.g.*, Ex. 1005, Abstract.

1[A] providing a device having a first display and a second display:

Lee discloses a device with a first display (orange) and a second display (green). Ex. 1003, ¶135. Lee discloses a mobile device that has two touch screens, where each touch screen display can display content. Ex. 1003, ¶137. Figs. 4 and 6 show two examples of the display of two different applications (blue and yellow) on both displays (Fig. 4) and one application spread across both displays (Fig. 6). *Id.*; Ex. 1005, ¶¶[0014]-[0017].

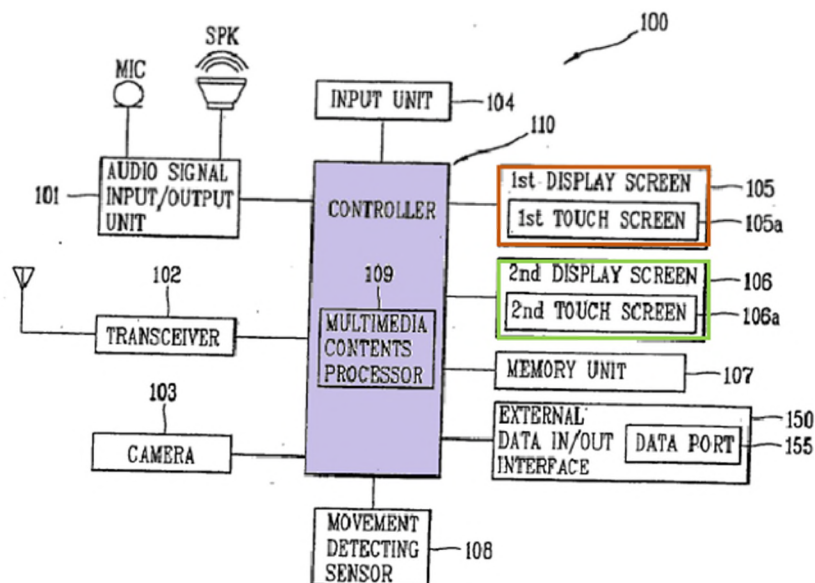


The '153 patent defines the term “display,” as either a “single screen display” or a “multi-screen display.” Ex. 1001, 3:62-65. The only difference is that a single screen display is one physical screen that can be logically divided into multiple displays and the multi-screen display may be two separate physical screens, each

with one or more displays. Ex. 1003, ¶136; *id.* Accordingly, Lee's multi-screen display meets the claim. Ex. 1003, ¶137.

Lee's device includes a Controller with a Multimedia Contents Processor (purple) that controls a 1st display screen and a 2nd display screen. Ex. 1003, ¶138; Ex. 1005, Fig. 1.

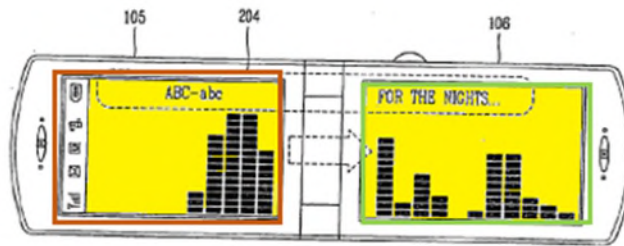
FIG. 1



1[B] displaying a first window of a multi-display application on the first display and the second display;

Lee discloses displaying a first window of a multi-display application on the first display and the second display. Ex. 1003, ¶139. As shown in Fig. 6, the multimedia window is displayed on both the first display and the second display. Ex. 1003, ¶140; Ex. 1005, ¶[0048].

FIG. 6

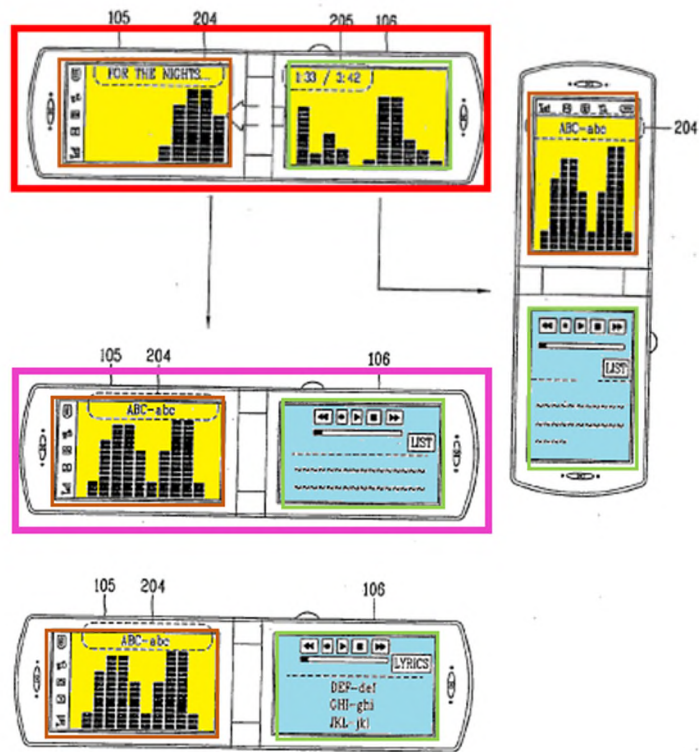


Lee describes Fig. 6 (and Figs. 7-8) as showing when “a main image of the first display screen expands to the second display screen...” Ex. 1005, ¶[0048]. Lee notes that one reason this is done in its device is because when an application is relegated to a single display, it may only display a “portion of the original image.” Ex. 1003, ¶141; *id.*

1[C] receiving an input to launch a second application; in response to receiving the input: displaying a second window of the second application on the second display; and

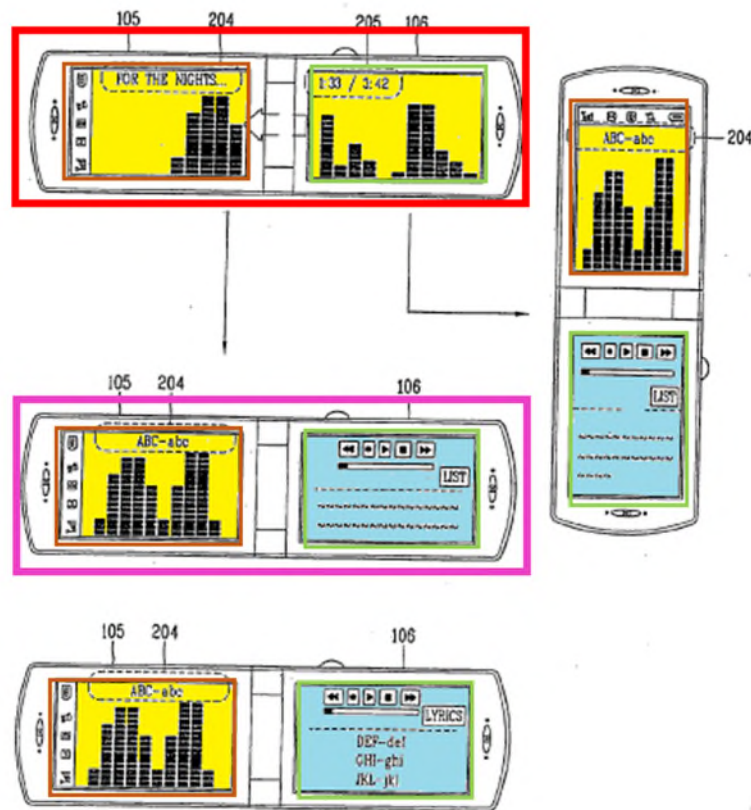
Lee discloses receiving an input to launch a second application, and in response to receiving the input, displaying a second window of the second application on the second display. Ex. 1003, ¶142. Lee discloses that a user may wish to “multitask” among several applications and discloses how a user can display two different application windows using the two displays. *Id.*; Ex. 1005, ¶¶[0049]-[0053]. Lee begins this discussion with Fig. 9, which shows the device displaying a window of a first application on both the first and second display in the red outline:

FIG. 9



Ex. 1005, Fig. 9. If an input is received by the device (e.g., screen rotation, touch screen input, or dedicated button), then the second display changes as shown in the pink outline below. Ex. 1003, ¶144; Ex. 1005, ¶[0049].

FIG. 9



As shown in the pink outline above, the second display now displays a window for a second application. *Id.*

[1D] in response to opening the second window, automatically minimizing the first window to fit the first display; and displaying the minimized first window of the multi-display application on the first display.

Lee discloses, in response to opening the second window, automatically minimizing the first window to fit the first display and displaying the minimized first window of the multi-display application on the first display. Ex. 1003, ¶145. As shown above in annotated Fig. 9, the first window (yellow) is automatically

minimized to fit the smaller first display (orange outline). *Id.*, ¶146; Ex. 1005, ¶¶[0094]-[0095]. Lee describes how the original window is minimized and expressly discloses that the minimized window may only display a “portion of the original image” from the multi-display format. *Id.*; Ex. 1005, ¶[0048].

2. Claim 3 - The method of claim 1, wherein the second application is a second multi-display application.

Lee discloses that the second application is a second multi-display application. Ex. 1003, ¶147. Lee discusses how its screen management program is flexible and that any application window displayed on the first or second display can, based upon input, “expand the screen information” to exist on the other display as well. Ex. 1003, ¶148; Ex. 1005, ¶[0037]. Further, Lee teaches that a first display screen and second display screen can be implemented in a same hardware configuration, so that the two screens operate as one big display screen, with the option to partition the screen into separate display regions. *Id.*, Ex. 1005, ¶[0035]. Thus, the applications that run on Lee’s device are multi-display applications. *Id.*

3. Claim 4 - The method of claim 1, wherein the minimized first window displays only a portion of the content displayed on the window of the multi-display application.

Lee discloses that the minimized first window displays only a portion of the content displayed on the window of the multi-display application. Ex. 1003, ¶149. As shown above in Section VIII.C.1., Lee discloses that a first window is

automatically minimized to fit the first display. *See* Claim 1[D]. Lee further expressly discloses that this resized first window may “only display a portion of the original image.” Ex. 1003, ¶150; Ex. 1005, ¶[0048]. Lee discusses how various other content can be displayed when the window is expanded across both the first and second display. *Id.* Further, Lee discloses some information may not be available because of the smaller area of the first display, and as such, “the first display screen may only display a portion of the original image.” *Id.*

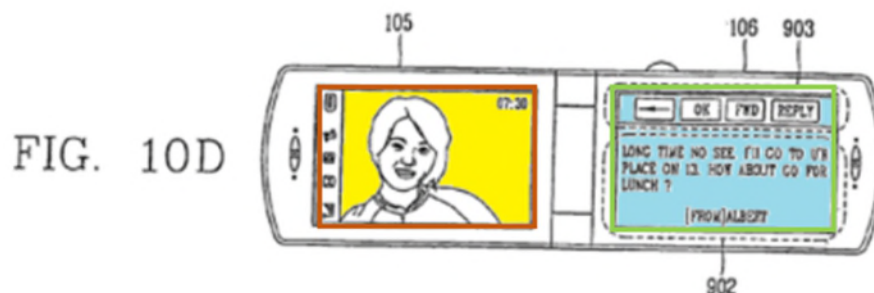
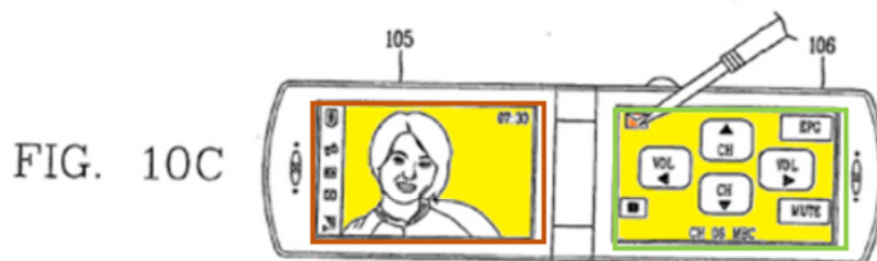
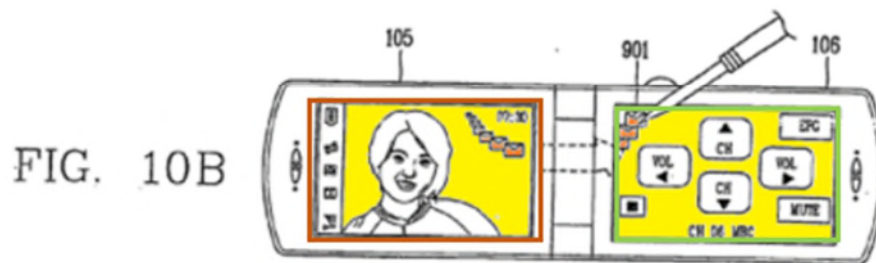
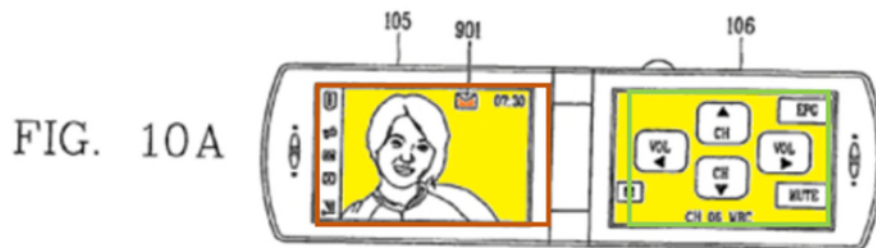
**4. Claim 5 - The method of claim 1, further comprising:
placing a focus on the second window of the second
application.**

Lee discloses that the focus can be placed on the second window of the second application. Ex. 1003, ¶151. As one example, Fig. 9 shows when Lee’s device transitions from displaying a single application to displaying two application window: a multimedia player and a control menu application. Ex. 1003, ¶153; Ex. 1005, ¶¶[0049]-[0050]. The ’153 patent defines focus as “being active and/or selected to receive input.” Ex. 1005, 5:35-36. Focus is placed on the second window because the control menu application is able to control the device. *Id.*

**5. Claim 6 - The method of claim 1, wherein the input
comprises a tap on the at least one of the first display or the
second display.**

Lee discloses this claim. Ex. 1003, ¶154. For example, in Fig. 10, the user can move an icon representing an application (e.g., text messaging) between

displays. Ex. 1003, ¶155; Ex. 1005, ¶[0052]. The user then “taps” the icon to open it. *Id.*; Ex. 1005, ¶[0053].



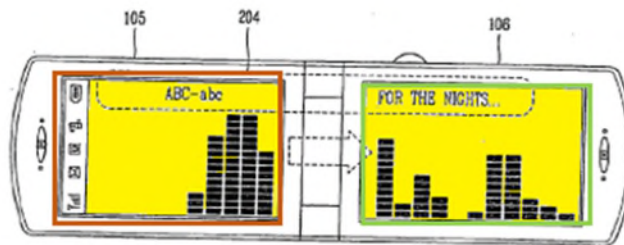
6. **Claim 7 - The method of claim 6, wherein the tap is on an icon representing the second application.**

See Claim 6.

7. **Claim 9 - The method of claim 1, wherein the first window of the multi-display application is displayed in one of a portrait max configuration and a landscape max configuration.**

Lee discloses this claim. Ex. 1003, ¶157. Lee shows, at least in Fig. 6, that the first window is displayed in landscape format across both the first and second displays, which meets the landscape max configuration. *Id.*, ¶158; Ex. 1005, ¶[0017].

FIG. 6



8. **Claim 10 - The method of claim 1, wherein the first and second displays are logical portions of a single screen.**

See claim 1[B]. Lee discloses that “[t]he above-described first display screen 105 and second screen 106 can be implemented in a same hardware configuration (i.e., one big display screen being partitioned to have separate display regions) or be implemented as the separate independent units respectively.” Ex. 1005, ¶[0035]. Based on this disclosure, a POSITA would have understood that the separate display regions in Lee’s one big display screen are logical portions of a single screen. Ex. 1003, ¶160.

9. Claim 17

17[P] A dual display communication device, comprising:

If the preamble is limiting, Lee discloses a dual display communication device. Ex. 1003, ¶161. Lee's device is a dual-display communication device with a designated first display (orange) and a second display (green). *Id.*

FIG. 4

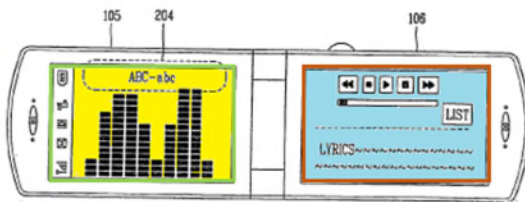
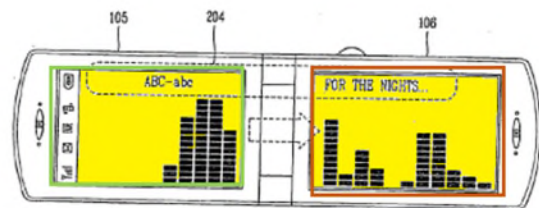


FIG. 6



17[A] a first display; a second display

Lee discloses a device with a first display (orange outline) and a second display (green outline). Ex. 1003, ¶164. Lee discloses a mobile device that has two touch screens, where each touch screen display can display content. *Id.*, ¶165; Ex. 1005, ¶[0017].

FIG. 4

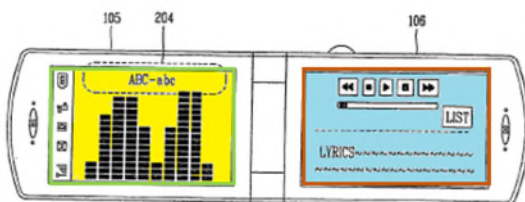
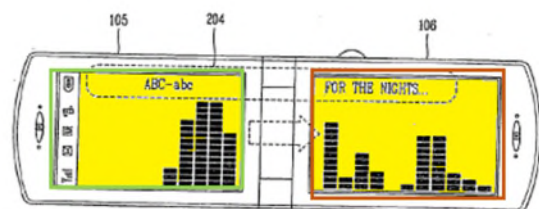


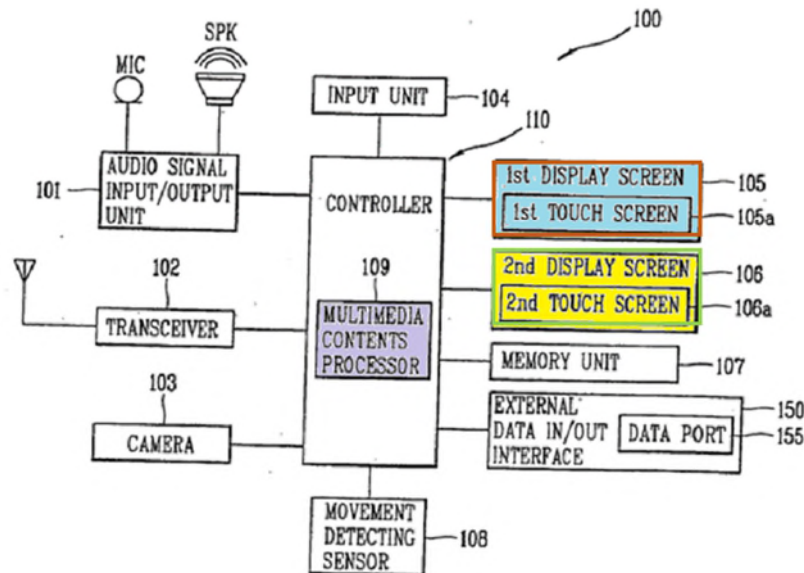
FIG. 6



17[B] a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method comprising:

Lee discloses a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method. Ex. 1003, ¶166. Lee discloses, as shown below in Fig. 1, a controller (110) and a multimedia contents processor (109) that executes instructions (“operational programs and data”) stored in memory that perform the claimed method. Ex. 1003, ¶167; Ex. 1005, ¶¶[0012],[0027],[0031]. This Multimedia Contents Processor manages and controls a 1st display screen and a 2nd display screen. *Id.* A POSITA would have understood that a controller necessarily includes a processor because it executes programs. Ex. 1003, ¶167. A POSITA would also understand that operational programs include computer executable instructions. *Id.* A POSITA would further understand that the memory unit (element 107) is a non-transitory computer readable medium because it stores operational programs in a mobile device. *Id.*

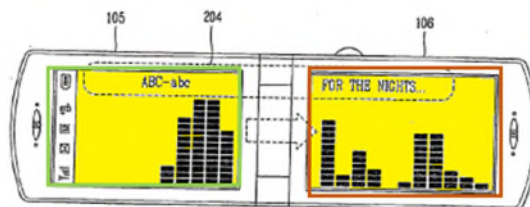
FIG. 1



17[C] displaying a first window of a multi-display application on the first display and the second display;

Lee discloses displaying a first window of a multi-display application on the first display and the second display. Ex. 1003, ¶168. As shown in Fig. 6, the multimedia window is displayed on both the first display and the second display. Ex. 1003, ¶169; Ex. 1005, ¶[0048].

FIG. 6

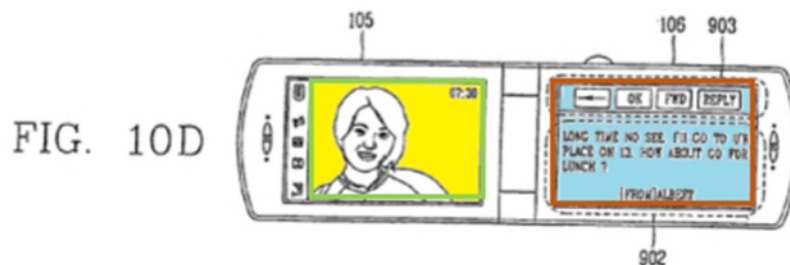
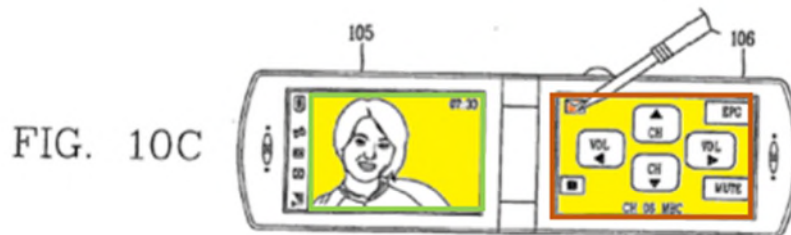
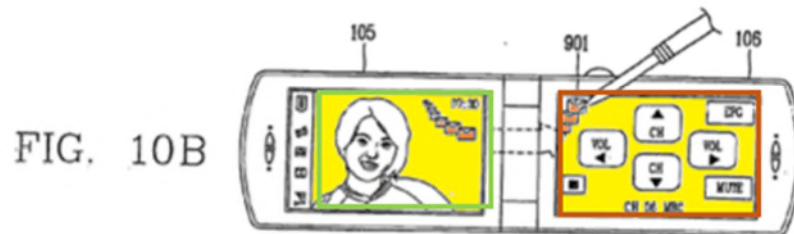
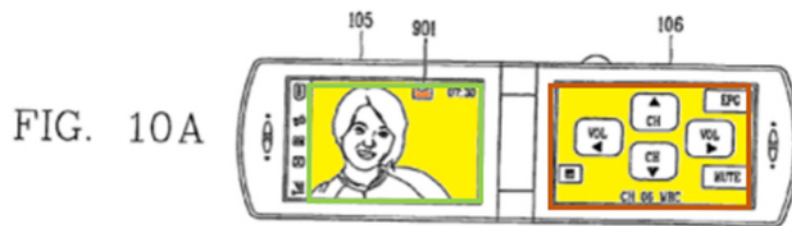


Lee describes Fig. 6 as showing when “a main image of the first display screen expands to the second display screen...” Ex. 1003, ¶170; Ex. 1005, ¶[0048]. Lee notes that one reason this is done in its device is because when an application is relegated to a single display, it may only display a “portion of the original image.” *Id.*

17[D] receiving, by the first display, input to activate a second application; and in response to receiving the input: displaying a second window of the second application on the first display; and

Lee discloses receiving, by the first display, input to activate a second application; and in response to receiving the input: displaying a second window of the second application on the first display. Ex. 1003, ¶171. As previously explained in Section VIII.C.1., Lee demonstrates in Fig. 9 displaying a second application in response to receiving an input (e.g., screen rotation, touch screen button, or dedicated button). *See* claim 1[C]; Ex. 1003, ¶172.

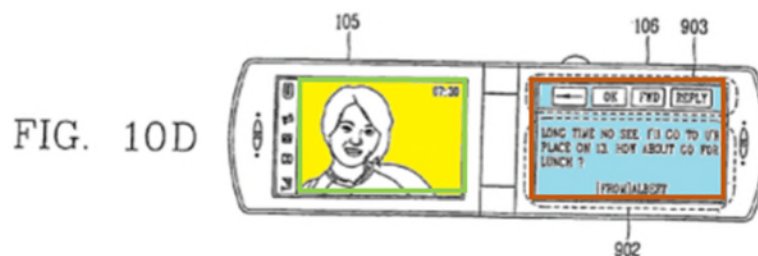
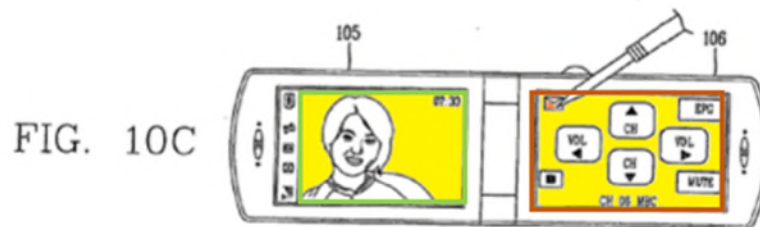
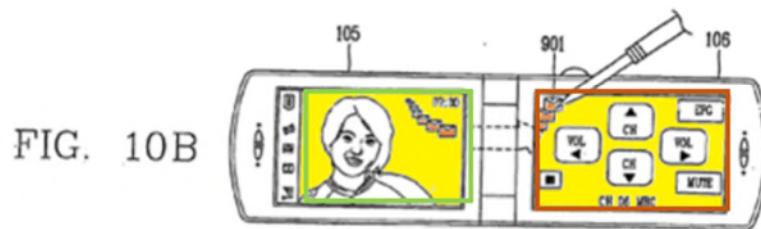
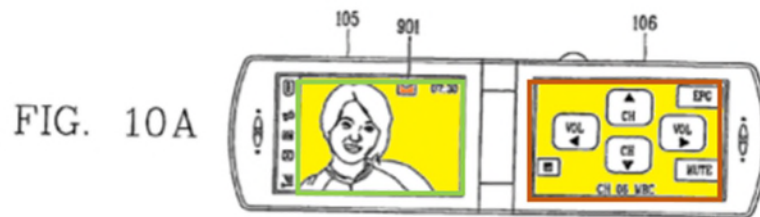
Lee further discloses that the input can be received by a first display. Ex. 1003, ¶173. For example, in Fig. 10, the device receives an input by the first display or second display (e.g., a tap on the touchscreen) in order to open a second application (e.g., text messaging). *Id.*; Ex. 1005, ¶¶[0051]-[0053]. When the email icon is selected, the email application is displayed on the first display (orange). *Id.*



17[E] in response to opening the second window, automatically minimizing the first window to fit the second display; and displaying the minimized first window of the multi-display application on the second display.

Lee discloses in response to opening the second window, automatically minimizing the first window to fit the second display; and displaying the minimized first window of the multi-display application on the second display. Ex. 1003, ¶174.

As previously explained in Section VIII.C.1., Fig. 10 shows the first window (yellow) is automatically minimized to fit the second display and then displayed on the second display (green). See claim 1[D]; Ex. 1003, ¶175; Ex. 1005, ¶¶[0051-53].

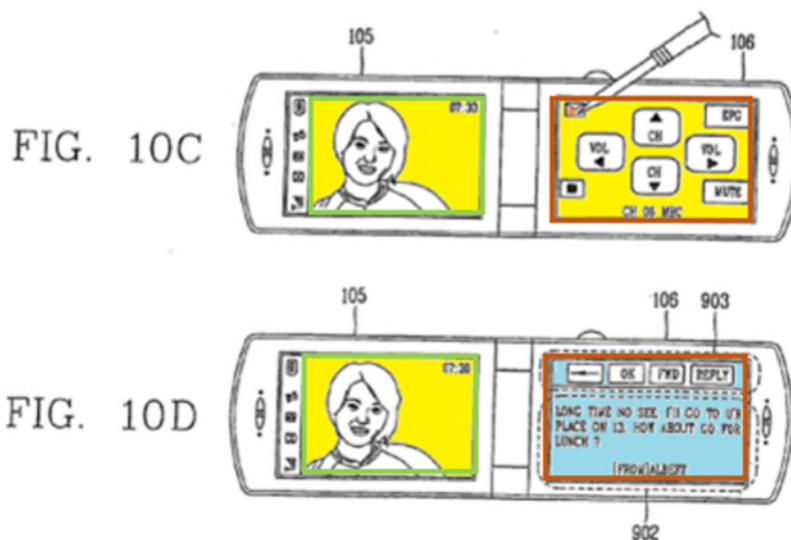


10. **Claim 18 - The device of claim 17, wherein the minimized first window displays only a portion of the content displayed on the first window of the multi-display application, when the first window was displayed on the first and second touch sensitive displays.**

See Claim 4.

11. **Claim 20 - The device of claim 17, further comprising: receiving second input to open a third application; opening a third window on the second display; and in response to receiving the second input, displaying the third window on the second display, wherein the first window is no longer displayed on the second display.**

Lee discloses this claim. Ex. 1003, ¶177. Lee shows in Fig. 10C how a user can select an icon (orange) to open a message application, and the application associated with the icon will be displayed on whichever display the icon is located. Ex. 1003, ¶178; Ex. 1005, ¶¶[0051]-[0053]. Therefore, if the icon is left on the second display (green), then the third application window will be opened on the second display and replace the currently open first window. Ex. 1003, ¶179.



D. Ground 4: Claims 1, 3-7, 9, 10, 17, 18, and 20 are Obvious Over Lee

The Challenged Claims are anticipated by Lee. Because Lee anticipates the Challenged Claims, Lee also renders those claims obvious. “[A] disclosure that anticipates under § 102 also renders the claim invalid under § 103, for ‘anticipation is the epitome of obviousness.’” *Realtime Data*, 912 F.3d at 1373.

To the extent Patent Owner argues that Lee does not anticipate, then the claims would have been, at a minimum, rendered obvious in light of Lee when considered in view of the knowledge of a POSITA for at least the reasons set forth above. Ex. 1003, ¶180. As described above, Lee is from the same field of endeavor and directed to the same purported problem as the Challenged Claims, so it is analogous art.

First, any differences in terminology between Lee and the ’153 patent are, at most, no more than obvious variants and not patentable distinctions. *Id.*, ¶181. For example, a “first display screen” (Lee) is not meaningfully different from a “display” as the ’153 Patent defines the term. *Id.*; Ex. 1005, ¶[0035] (“The above-described first display screen 105 and second screen 106 can be implemented in a same hardware configuration (i.e., one big display screen being partitioned to have separate display region) or be implemented as the separate independent units respectively.”); Ex. 1001, 3:62-4:4 (“The term “display” refers to a portion of one

or more screens used to display the output of a computer to a user. “). The same is true for other terminology differences between Lee and the ’153 patent. Ex. 1003, ¶181.

Second, to the extent Patent Owner are that the various “examples” of how a user may interact with Lee’s disclosed system constitute separate embodiments, Petitioners disagree. As described above, Lee discloses a system and associated components and then provides various examples of the many functionalities a user can implement. *Id.*, ¶182. These are not separate embodiments. *Id.* However, if the Board accepts Patent Owner’s potential view, then a POSITA would have been motivated to try each and every one of Lee’s disclosed “examples” on the disclosed system in Lee. *Id.* “Combining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness.” *Boston Scientific Scimed*, 554 F.3d at 991 (Fed. Cir. 2009).

Third, for claims 4 and 18, to the extent Patent Owner argues that Lee does not expressly disclose that a portion of the contents of the original window are displayed on the reduced size first window, Petitioners disagree for the reasons above, but a POSITA would have understood that it was commonplace for a reduced-size version of an application window to display only a portion of the contents of a maximized version of the application window. Ex. 1003, ¶183. For example, Lee discloses that a first window is automatically minimized to fit the first

display. See Claim 1[D]. Lee further expressly discloses that this resized first window may display “only display a portion of the original image.” Ex. 1003, ¶184; Ex. 1005, ¶[0048]. If not found to expressly disclose claim 4, a POSITA would have found it obvious that a reduced size display would only display a portion of the contents of its larger related display. Ex. 1003, ¶185. This would be further reinforced by the teachings and suggestions by Lee that a “portion” of an original image is displayed when using the split screen function. Ex. 1003, ¶183. Thus, claims 4 and 18 would have been obvious to a POSITA at the time of the alleged invention.

E. Ground 5: Claims 1, 3-7, 9, 10, 17, 18, and 20 Are Anticipated By Aguilar

1. Claim 1

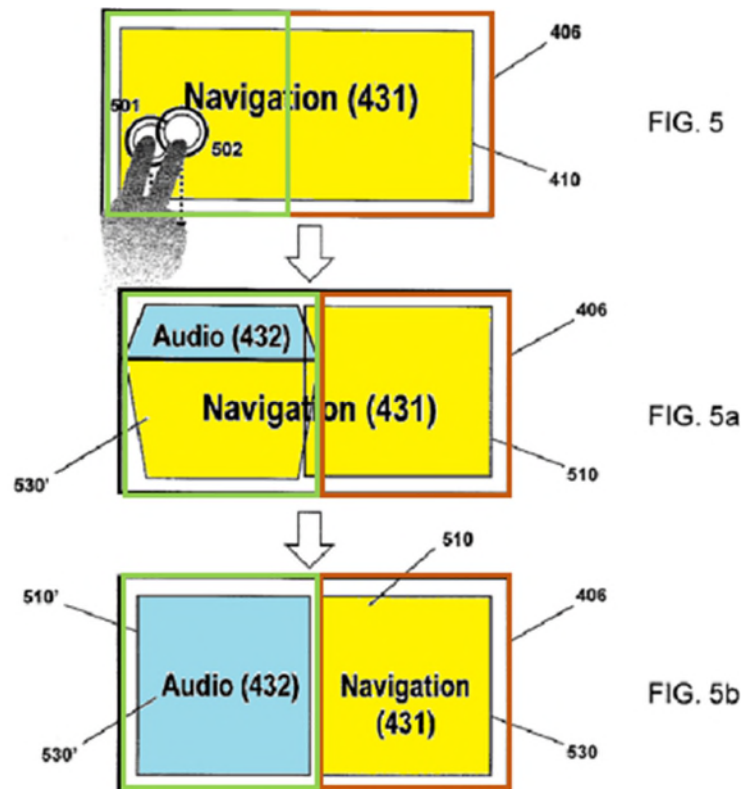
1[P] A method, comprising:

If the preamble is limiting, Aguilar discloses this limitation. Ex. 1003, ¶188. Aguilar discloses systems and methods for performing the steps below. See, e.g., Ex. 1006, Abstract. Aguilar describes a device that allows a user to perform many different functions related to the display of multiple applications. Ex. 1003, ¶189.

1[A] providing a device having a first display and a second display:

Aguilar discloses a device with a first display (green) and a second display (orange). Ex. 1003; ¶190. As shown below in Fig. 5, Aguilar provides that a “user can also split the user interface to at least two display segments which may contain

different applications.” Ex. 1006, Figs. 5a-b, 5:13-16. A POSITA would understand that these “display segments” are managed by the processor as separate logical displays. Ex. 1003, ¶191; Ex. 1006, Abstract, 5:13-16.

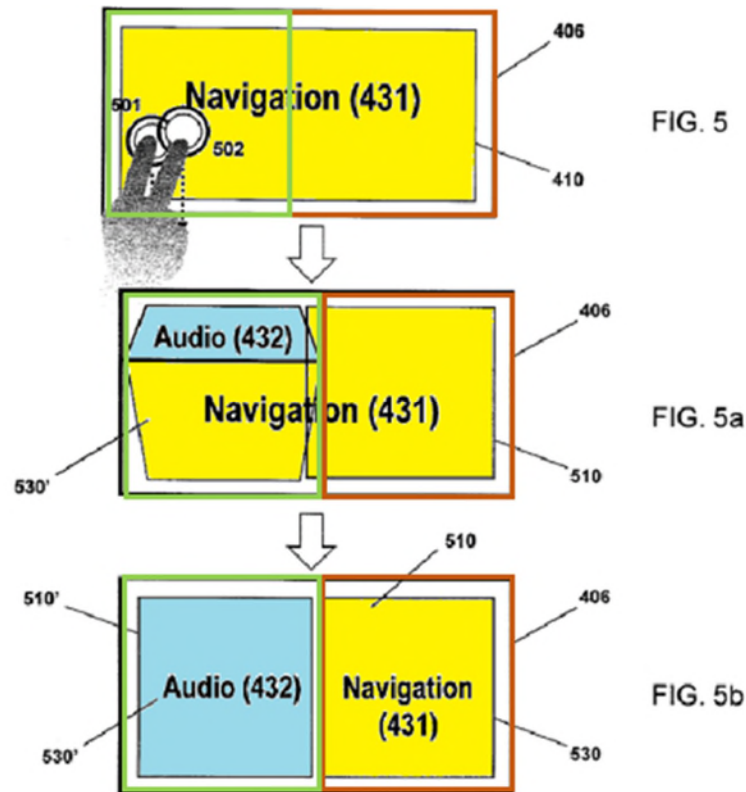


Aguilar further states “if the user wishes to have a ‘dual view’ on the screen 410, the user may be allowed to split the screen 410 *into at least two display segments* (530, 530’) by using the ‘two finger dragging down’ gesture...” Ex. 1006, 6:48-52.

1[B] displaying a first window of a multi-display application on the first display and the second display;

Aguilar discloses that a first window of a multi-display application (yellow) can be displayed on both the first display (green) and the second display (orange).

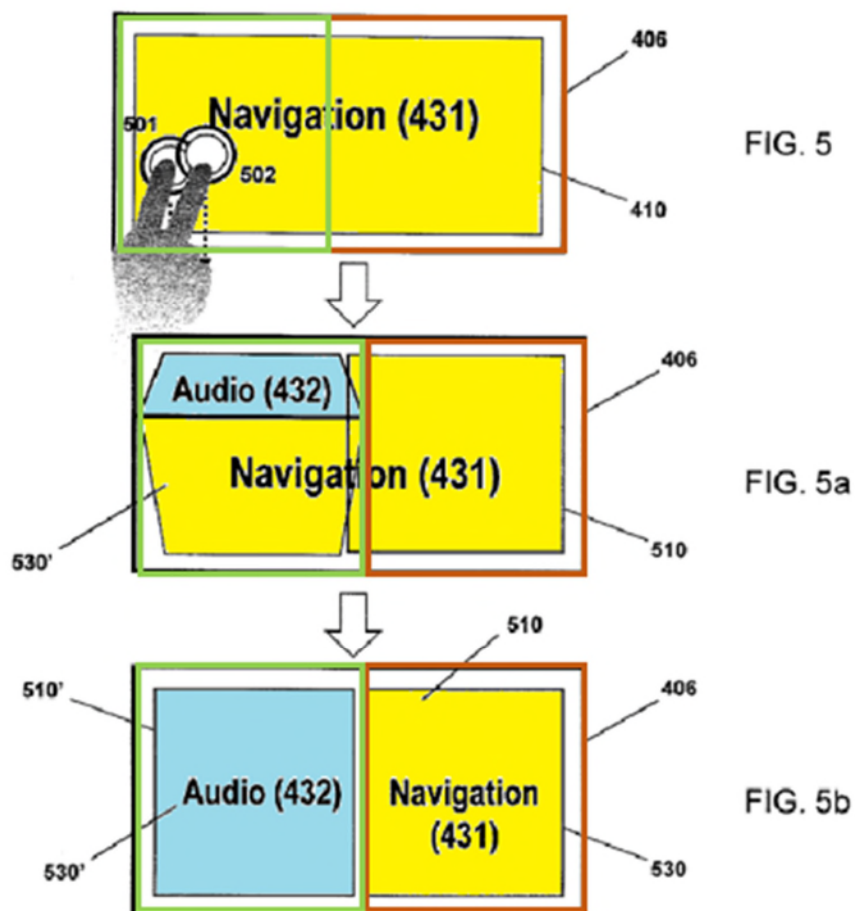
Ex. 1003, ¶193. Fig. 5 shows that a first window of a multi-display application (yellow) is displayed on both the first and second display. Ex. 1003, ¶194; Ex. 1006, 6:48-67.



As shown, the Navigation application (yellow) is a multi-display application capable of different displays. Ex. 1003, ¶195; Ex. 1006, 5:54-62, 6:23-47. Aguilar discloses that any application can be maximized to encompass both displays upon user input or minimized to a single display. *Id.*, 7:42-45, 55-64. Thus, all of the applications disclosed in Aguilar are multi-display applications. Ex. 1003, ¶195.

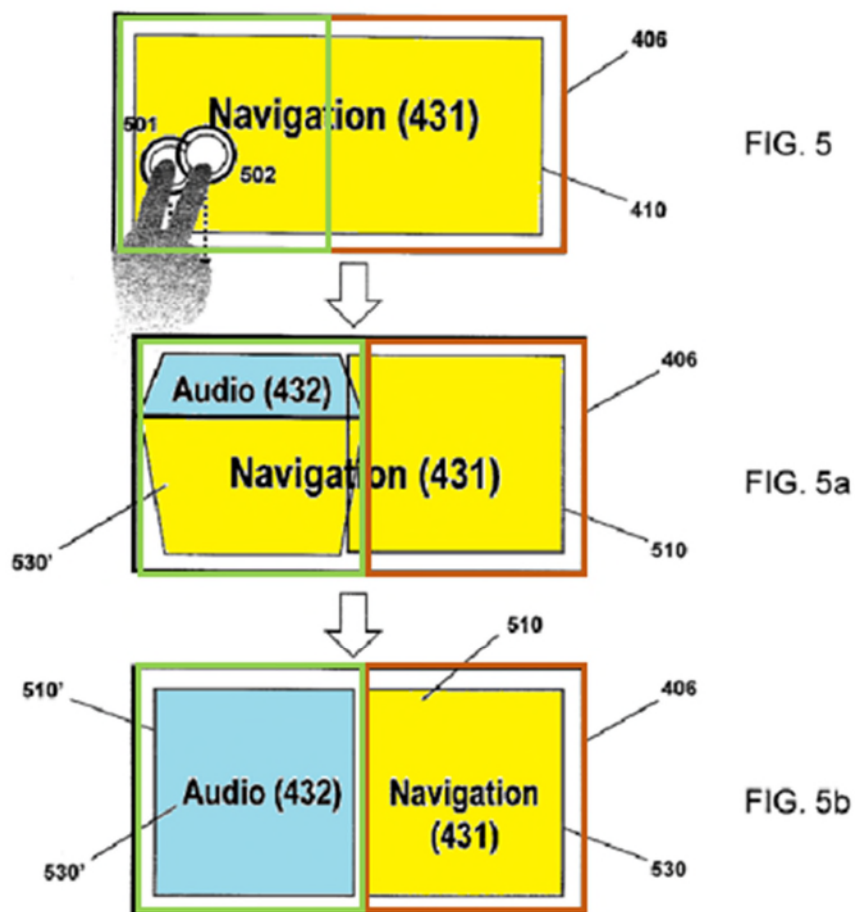
1[C] receiving an input to launch a second application; in response to receiving the input: displaying a second window of the second application on the second display; and

Aguilar discloses this limitation. Ex. 1003, ¶196. In Fig. 5 and its associated text, Aguilar describes how a user can generate an input (501 and 502) with two fingers on the touch screen that cause a second window of a second application to launch (Audio (432)) on the second display (510'). Ex. 1006, Fig. 5, 6:48-7:63.



1[D] in response to opening the second window, automatically minimizing the first window to fit the first display; and displaying the minimized first window of the multi-display application on the first display.

Aguilar discloses this limitation. Ex. 1003, ¶198. Aguilar depicts and describes how the first window of the first application that is displayed across both the first and second display, is resized to fit only on the first display (orange outline) when the second application (blue) is launched. Ex. 1003, ¶199; Ex. 1006, Fig. 5, 6:48-7:63.



2. Claim 3 - The method of claim 1, wherein the second application is a second multi-display application

Aguilar discloses that the second application is a second multi-display application. Ex. 1003, ¶200. Aguilar describes how any of the applications it discusses in the specification (e.g., Phone, Navigation, Audio) are multi-display applications because they can be displayed in either a single display format or across the entire screen in a multi-display format. Ex. 1003, ¶195. Thus, with respect to Fig. 5, an exemplary second application is Audio or Phone. Aguilar specifically describes how one application can be maximized to encompass both displays (*see* Fig. 6b and 6c) and also how the same application can be minimized to be shown on only one display (*see* Fig. 5 and 5a). *Id.*; Ex. 1006, 7:38-54. Thus, a second application is a multi-display application. Ex. 1003, ¶195.

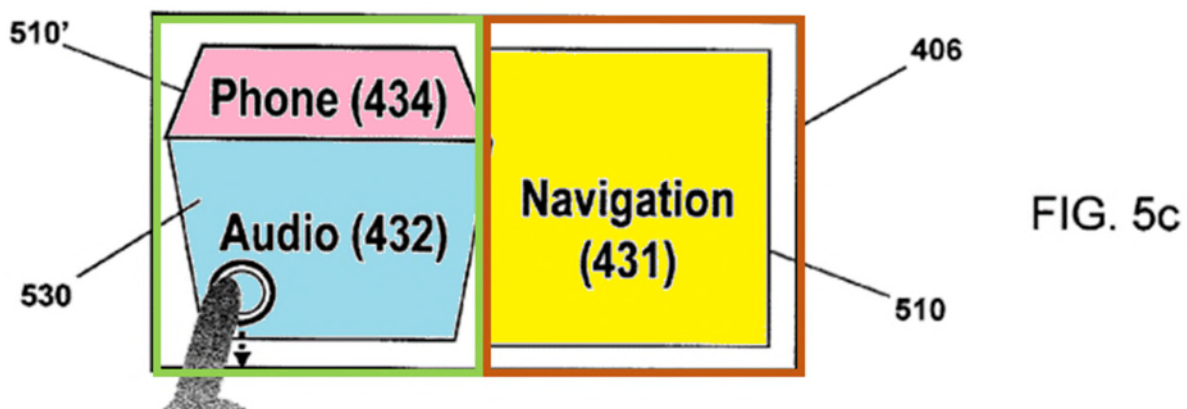
3. Claim 4 - The method of claim 1, wherein the minimized first window displays only a portion of the content displayed on the window of the multi-display application.

Aguilar discloses the minimized first window displays only a portion of the content displayed on the window of the multi-display application. Aguilar describes its split-window displays as displaying smaller “portions” or segments of the original full screen display. Ex. 1003, ¶202; Ex. 1006, 7:55-63, 7:65-8:6. Aguilar also notes how the font size may change depending on the size of the window shown on the displays. Ex. 1006, 5:54-6:3. In addition, when the Navigation application

of Fig. 5 enters the split screen mode in Figs. 5a and 5b, it necessarily displays a portion of its content at least because the aspect ratio changes. Ex. 1003, ¶202.

**4. Claim 5 - The method of claim 1, further comprising:
placing a focus on the second window of the second
application.**

Aguilar discloses this claim. Ex. 1003, ¶203. For example, as shown in Fig. 5c, after the second window of the second application is launched and appears in the second display, the second display is capable of receiving user input in the form of a gesture. Ex. 1003, ¶204; Ex. 1006, Fig. 5c, 7:1-10. Accordingly, the second display (green) is in focus because it is active and can receive input.



**5. Claim 6 - The method of claim 1, wherein the input
comprises a tap on the at least one of the first display or the
second display.**

Aguilar discloses this claim. For example, the user can initiate the spindle selection view shown in Fig. 4d on either display. Ex. 1006, 6:48-7:10. The user can then

“press” or “tap twice” on a panel icon representing an application to open it. *Id.*,
7:1-7:10.

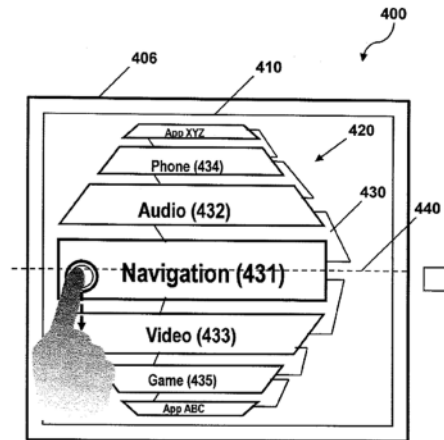


FIG. 4d

6. **Claim 7 - The method of claim 6, wherein the tap is on an icon representing the second application.**

See Claim 6.

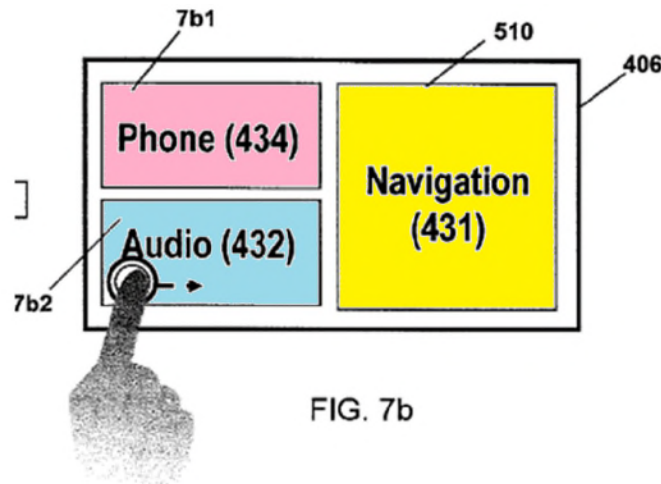
7. **Claim 9 - The method of claim 1, wherein the first window of the multi-display application is displayed in one of a portrait max configuration and a landscape max configuration.**

Aguilar discloses this claim. Fig. 5 shows the Navigation application in the landscape max orientation across both the first and second displays. Ex. 1003, ¶208.



FIG. 5

The landscape display mode demonstrated in Fig. 5 is larger than the smaller landscape mode possible in Aguilar's system and Aguilar notes that this display mode is possible for any of the applications on its system. Ex. 1003, ¶209; Ex. 1006, Fig. 7b, 7:65-8:18.



8. **Claim 10 - The method of claim 1, wherein the first and second displays are logical portions of a single screen.**

See claim 1[B].

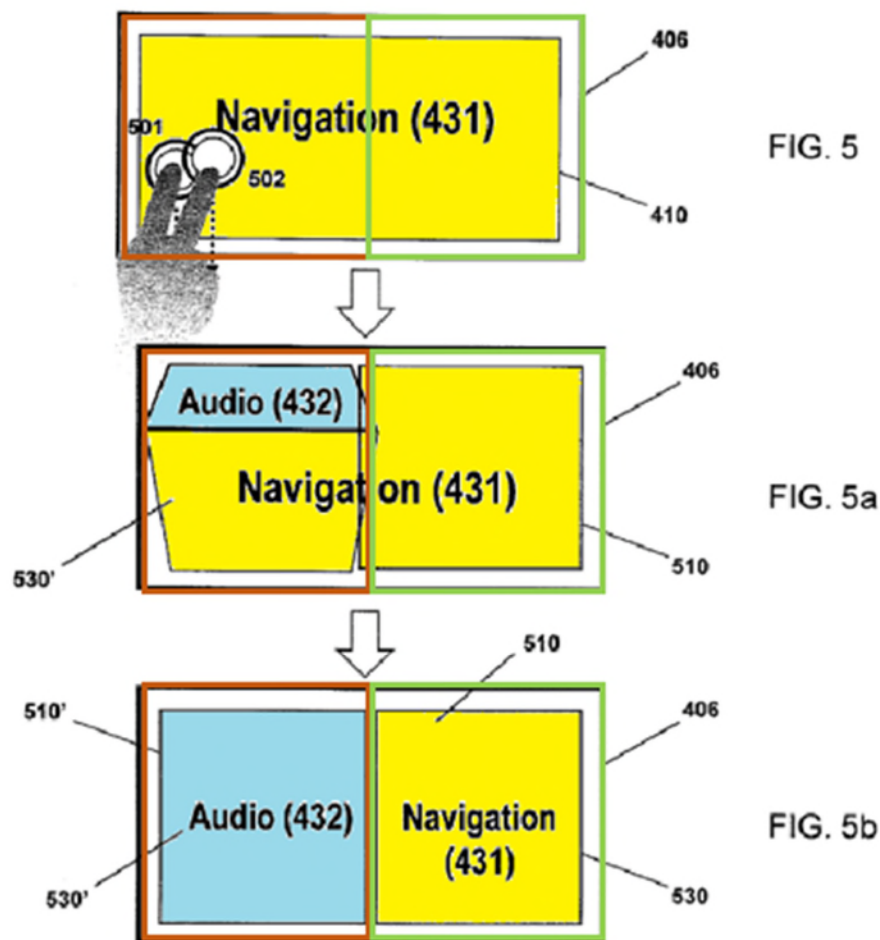
9. **Claim 17**

17[P] A dual display communication device, comprising:

If the preamble is limiting, Aguilar discloses a dual display communication device because it includes a screen with at least two displays that communicates to a user. See Claim 1[P], 1[A].

17[A] a first display; a second display

Aguilar discloses a device with a first display (orange outline) and a second display (green outline). Ex. 1003, ¶212; Ex. 1006, Fig. 5. As shown below in Fig. 5, Aguilar provides that a “user can also split the user interface to at least two display segments which may contain different applications.” Ex. 1006, 5:13-16, Figs. 5a-b. A POSITA would understand that these “display segments” are managed by the processor as separate logical displays, each of which may contain a different application from other logical displays. Ex. 1003, ¶213; Ex. 1006, 9:13-25.



Aguilar further describes its device as “if the user wishes to have a ‘dual view’ on the screen 410, the user may be allowed to split the screen 410 into at least two display segments (530, 530’) by using the ‘two finger dragging down’ gesture...” Ex. 1003, ¶214; Ex. 1006, 6:48-52.

17[B] a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method comprising:

Aguilar discloses a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method. Ex. 1003, ¶215. As shown below in Fig. 9 of Aguilar, there is a display controller, VRAM, and video generating unit (purple) that are part of the process for storing and executing the instructions and commands to perform the screen splitting functions for the user interface. Ex. 1003, ¶216; Ex. 1006, 9:13-25. A POSITA would have understood that a controller necessarily includes a processor because it executes programs. Ex. 1003, ¶216. A POSITA would also understand that operational programs include computer executable instructions. *Id.* A POSITA would further understand that a VRAM is a memory unit, which is a non-transitory computer readable medium because it stores operational programs in a mobile device. *Id.*

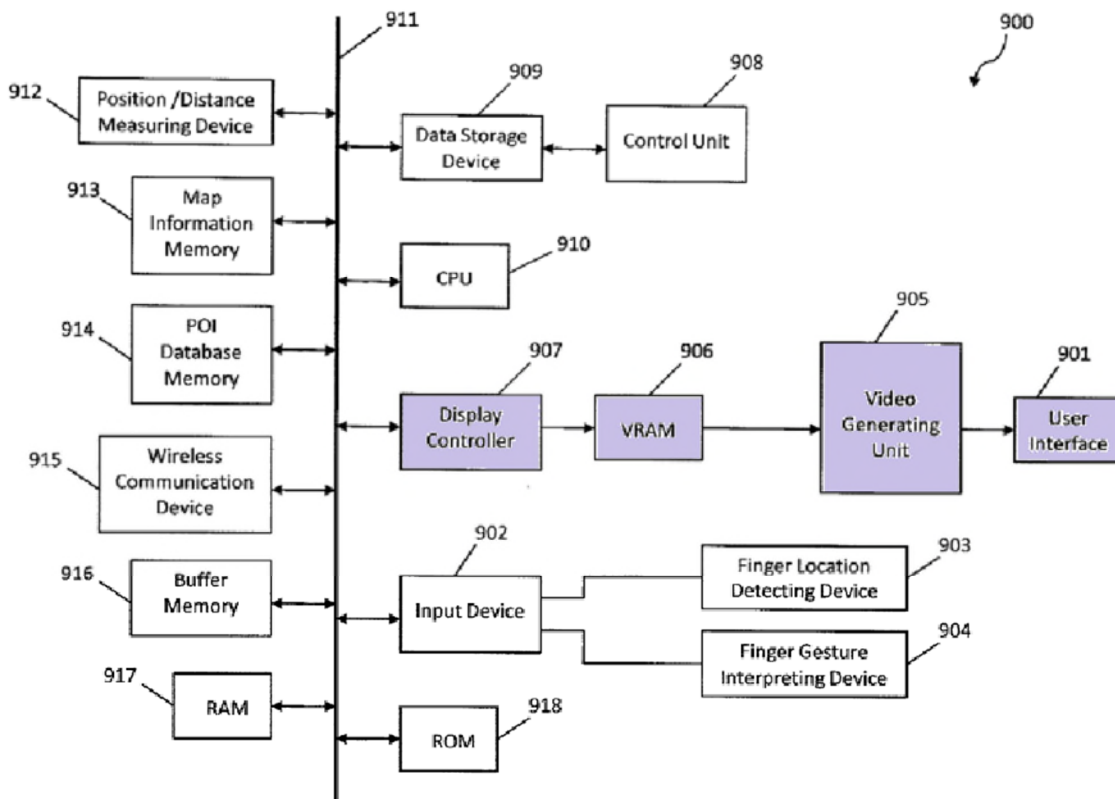
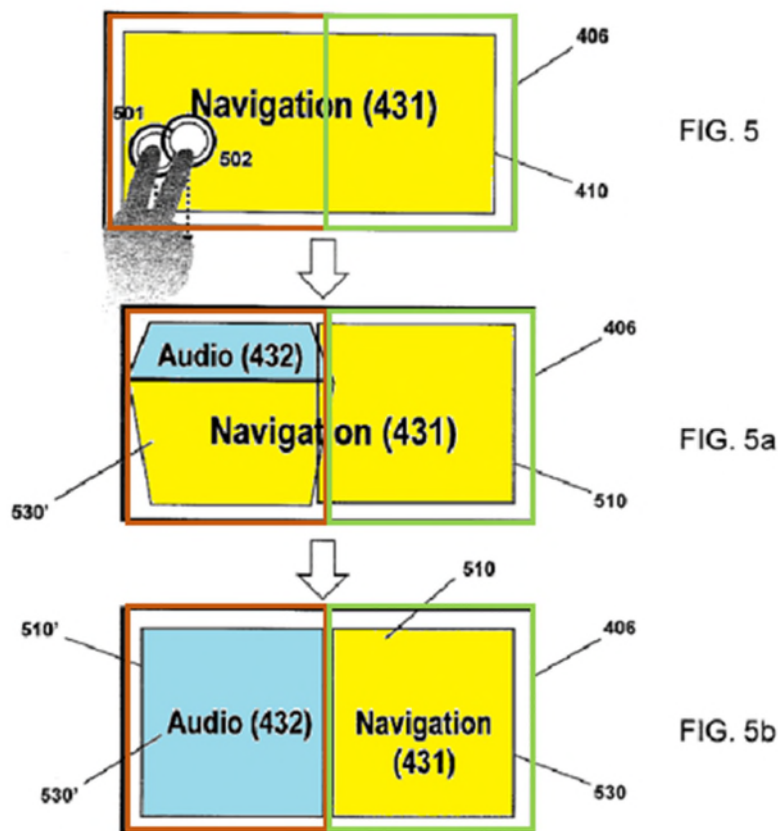


FIG. 9

17[C] displaying a first window of a multi-display application on the first display and the second display;

Aguilar discloses that a first window of a first multi-display application (yellow) can be displayed on both the first display and the second display. Ex. 1003, ¶217. With reference again to Fig. 5, Aguilar shows that a first window of a first application (yellow) is displayed on both the first and second display. Ex. 1003, ¶218.

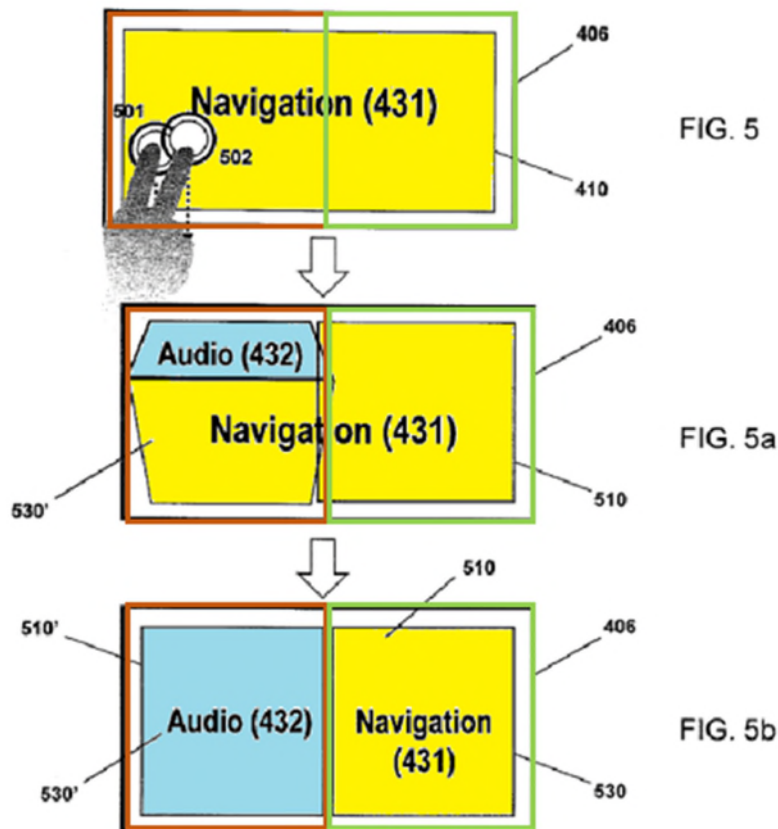


Ex. 1006, Fig. 5, 6:48-7:63. As previously explained for claim 1[B], Aguilar discloses that the exemplary applications used therein are multi-display applications. Ex. 1003, ¶219.

17[D] receiving, by the first display, input to activate a second application; and in response to receiving the input: displaying a second window of the second application on the first display; and

Aguilar discloses receiving, by the first display (orange), input to activate a second application (blue); and in response to receiving the input: displaying a second window of the second application on the first display. Ex. 1003, ¶220. In Fig. 5 and its associated text, Aguilar describes how a user can generate an input

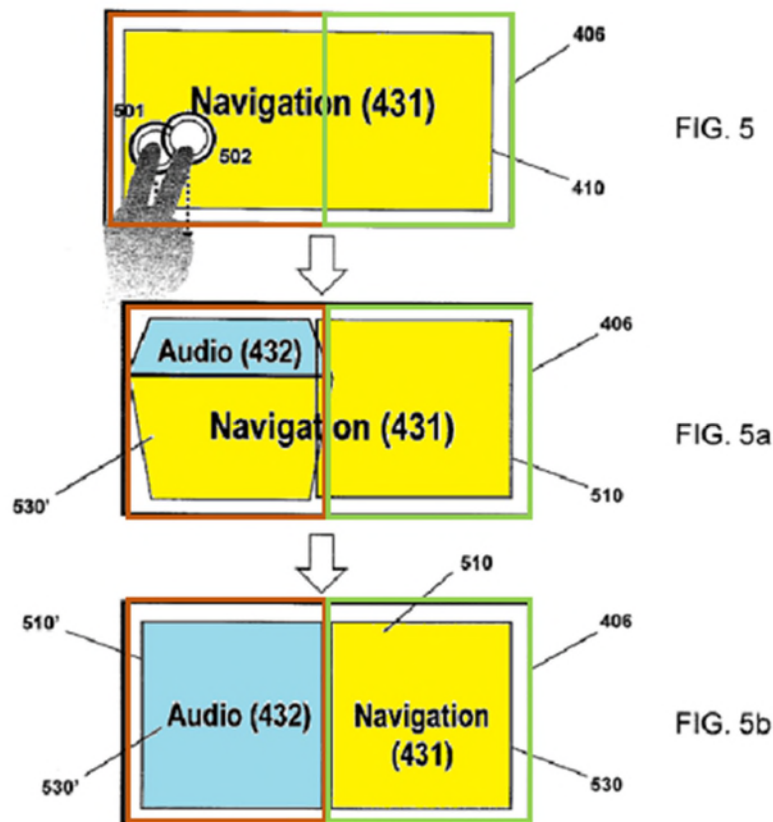
(501 and 502) with two fingers on the first display touch screen that cause a second window of a second application to launch (Audio (432)) on the first display (510')(orange outline). Ex. 1003, ¶221; Ex. 1006, Fig. 5, 6:48-7:63.



17[E] in response to opening the second window, automatically minimizing the first window to fit the second display; and displaying the minimized first window of the multi-display application on the second display.

Aguilar discloses this limitation. Ex. 1003, ¶222. Aguilar depicts and describes how the first window of the first application (yellow) that is displayed across both the first and second display, is resized to fit only on the second display

(green outline) when the second application (blue) is launched. Ex. 1003, ¶223; Ex. 1006, Fig. 5, 6:48-7:63.

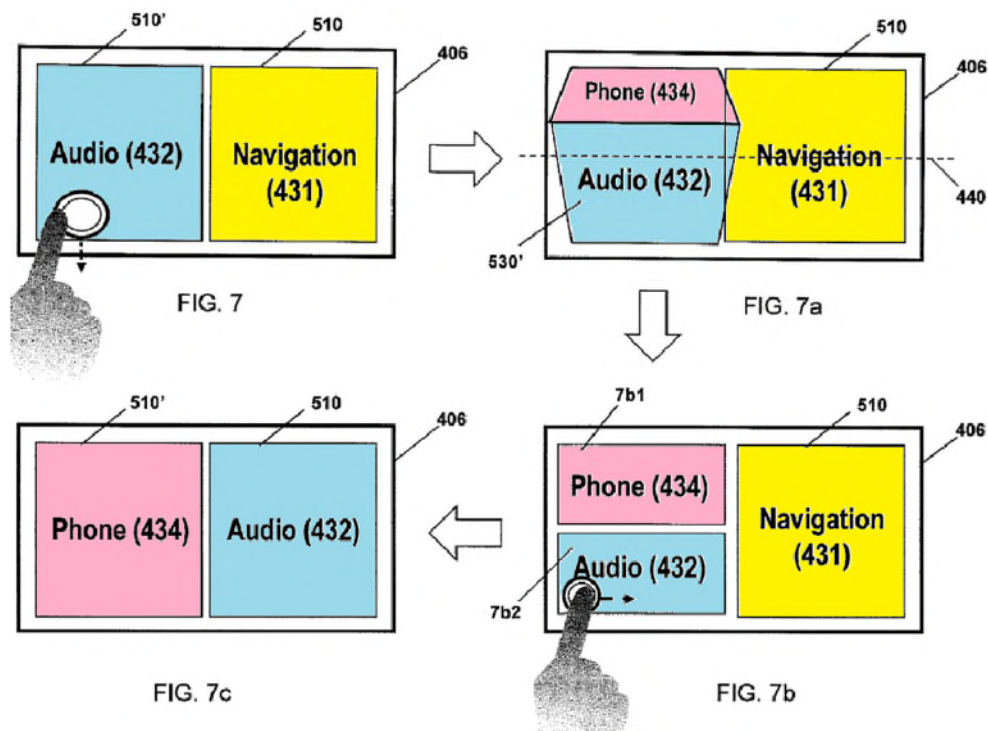


10. **Claim 18** - The device of claim 17, wherein the minimized first window displays only a portion of the content displayed on the first window of the multi-display application, when the first window was displayed on the first and second touch sensitive displays.

See Claim 4.

11. **Claim 20** - The device of claim 17, further comprising: receiving second input to open a third application; opening a third window on the second display; and in response to receiving the second input, displaying the third window on the second display, wherein the first window is no longer displayed on the second display.

Aguilar discloses this claim. Ex. 1003, ¶225. Aguilar notes how different windows from different applications may be opened on either display. Ex. 1003, ¶226; *see, e.g.*, Ex. 1006, 6:23-46, 6:48-67, 7:7-10. Although the example of Fig. 7-7c shows a third application (e.g., Audio) being opened and displayed on the first display, the same functionality is present for the second display. *Id.*



F. Ground 6: Claims 1, 3-7, 9, 10, 17, 18, and 20 are Obvious Over Aguilar

The Challenged Claims are anticipated by Aguilar. Because Aguilar anticipates the Challenged Claims, Lee also renders those claims obvious. “[A] disclosure that anticipates under § 102 also renders the claim invalid under § 103, for ‘anticipation is the epitome of obviousness.’” *Realtime Data*, 912 F.3d at 1373.

To the extent Patent Owner argues that Aguilar does not anticipate, then the claims are, at a minimum, rendered obvious in light of Aguilar when considered in view of the knowledge of a POSITA for at least the reasons set forth above. Ex. 1003, ¶227. As described above, Aguilar is from the same field of endeavor and directed to the same purported problem as the Challenged Claims, so it is analogous art.

First, any differences in terminology between Aguilar and the '153 patent are, at most, no more than obvious variants and not patentable distinctions. Ex. 1003, ¶228. For example, “display segments” (Aguilar) is not meaningfully different from a “display” as the '153 Patent defines the term. Ex. 1003, ¶228; Ex. 1006, 2:28-41 (“The display apparatus may include a display screen to display at least one application thereon” and the ability to “split the display screen to at least two display segments...”); Ex. 1001, 3:62-4:4 (“The term “display” refers to a portion of one or more screens used to display the output of a computer to a user. “). The same is true for other terminology differences between Aguilar and the '153 patent. Ex. 1003, ¶228.

Second, to the extent Patent Owner argues that the various “examples” of how a user may interact with Aguilar’s disclosed system constitute separate embodiments, Petitioners disagree. As described above, Aguilar discloses a system and associated components and then provides various examples of the many

functionalities a user can implement. These are not separate embodiments. However, if the Board accepts Patent Owner's potential view, then a POSITA would have been motivated to try each and every one of Aguilar's disclosed "examples" on the disclosed system in Aguilar – just as Aguilar discloses. Ex. 1003, ¶229. "Combining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness." *Boston Scientific Scimed*, 554 F.3d at 991 (Fed. Cir. 2009).

Third, for claims 4 and 18, to the extent Patent Owner argues that Aguilar does not expressly disclose that a portion of the contents of the original window are displayed on the reduced size first window, Petitioner disagrees for the reasons above, but a POSITA would have understood that it was commonplace for a reduced-size version of an application window to display only a portion of the contents of a maximized version of the application window. Ex. 1003, ¶230. For example, Aguilar discloses that a first window is automatically minimized to fit the first display. See Claim 1[D]. Aguilar further expressly discloses that this resized first window will display only smaller "portions" or segments of the original full screen display. Ex. 1003, ¶231; Ex. 1006, 7:65-8:6. If not found to expressly disclose claims 4 and 18, a POSITA would have found it obvious that a reduced size display would only display a portion of the contents of its larger related display. Ex. 1003, ¶232. This would be further reinforced by the teachings and suggestions

by Aguilar that a “portion” of an original window is displayed when using the split screen function. *Id.*, ¶230. Thus, claims 4 and 18 would have been obvious to a POSITA at the time of the alleged invention.

G. Ground 7: Claims 1, 4-5, 9, 17, and 18 Are Anticipated By Purcell

1. Claim 1

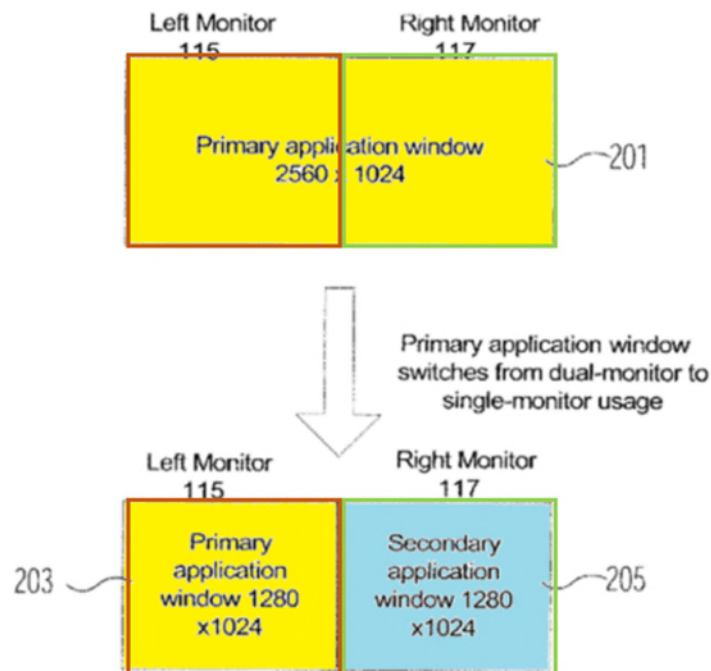
1[P] A method, comprising:

If the preamble is limiting, Purcell discloses a method or “screen sharing function.” Ex. 1003, ¶235; Ex. 1007, Abstract.

1[A] providing a device having a first display and a second display:

Purcell discloses a device with a first display (orange outline) and a second display (green outline). Ex. 1003, ¶236; Ex. 1007, Abstract, Fig. 2. Purcell is directed a system with multiple display monitors that is used to display multiple applications at the same time to a user. *Id.*, Abstract. Fig. 2 (annotated below) is illustrative of the exemplary device and system:

FIGURE 2



1[B] displaying a first window of a multi-display application on the first display and the second display;

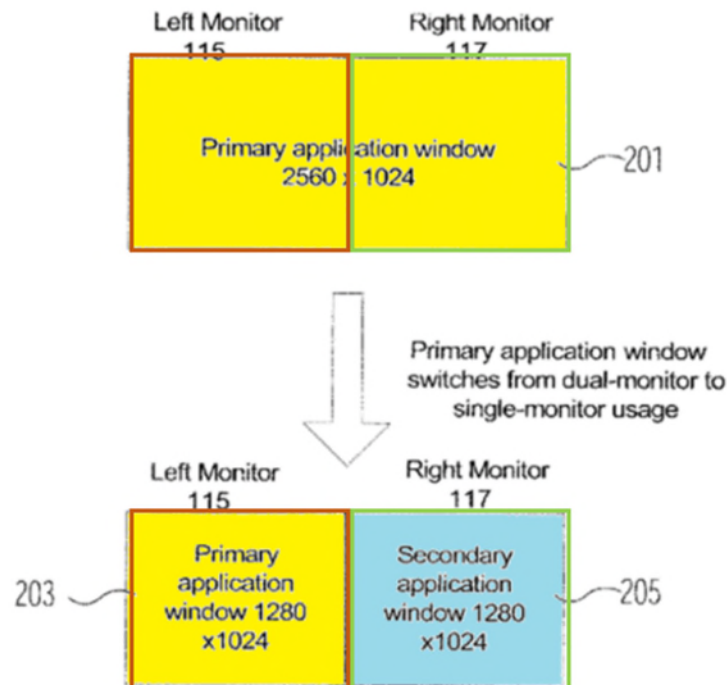
Purcell discloses this limitation. Ex. 1003, ¶238. Purcell explains that a first application (e.g., a primary application window) as shown in Fig. 2 above (yellow) can be displayed on both a single or multiple displays and is a multi-display application. Ex. 1003, ¶239; Ex. 1007, ¶[0016].

1[C] receiving an input to launch a second application; in response to receiving the input: displaying a second window of the second application on the second display; and

Purcell discloses this limitation. Ex. 1003, ¶240. Purcell describes that in response to a “user command,” “system 100 dynamically changes the primary

application image window size to match that of a left monitor (monitor 115).” Ex. 1003, ¶241; Ex. 1007, ¶[0013],[0016] The system then “initiates execution of a secondary application that displays an associated image window on the right monitor (monitor 117).” *Id.* This displays the second application on the second display. *Id.*

FIGURE 2



1[D] in response to opening the second window, automatically minimizing the first window to fit the first display; and displaying the minimized first window of the multi-display application on the first display.

Purcell discloses this limitation. Ex. 1003, ¶242. Purcell’s system, based on user input, “initiates execution of a secondary application that displays an

associated image window on the right monitor (monitor 117).” Ex. 1003, ¶243; Ex. 1007, ¶[0016]. In response to opening the second window, the primary application window is reduced to fit on the first display. Ex. 1003, ¶243; Ex. 1007, ¶¶[0016],[0019]. Purcell notes that “to permit another application to execute concurrently and display an image window adjacent to an image window of the primary application, system 100 dynamically changes the primary application image window size to match that of a left monitor (monitor 115).” *Id.*

2. Claim 4 - The method of claim 1, wherein the minimized first window displays only a portion of the content displayed on the window of the multi-display application.

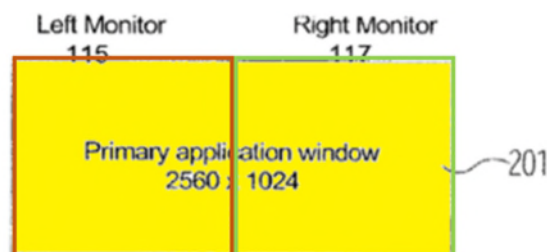
Purcell discloses that the minimized first window displays only a portion of the content displayed on the window of the multi-display application. Ex. 1003, ¶244. As part of the dynamic resizing described in Purcell, the primary application window changes size and is reduced to a portion of the amount of pixels it displays. Ex. 1003, ¶245; Ex. 1007, ¶¶[0016], [0019]. For example, the primary application window may comprise a total of 2,621,440 pixels. Ex. 1003, ¶245; Ex. 1007, ¶¶[0016]. When minimized for display on only the first display, the primary application window is reduced to only a portion of the original pixels and may display only 1,310,720 pixels. *Id.* Accordingly, the minimized window displays only a portion of the content of the first application window. Ex. 1003, ¶245.

**3. Claim 5 - The method of claim 1, further comprising:
placing a focus on the second window of the second
application.**

Purcell discloses that the focus can be placed on the second window of the second application. Ex. 1003, ¶246. When the secondary application window is launched and displayed on the second display, a user is able “to interact with both applications,” respectively. Ex. 1003, ¶247; Ex. 1007, ¶[0016]. Accordingly, a focus has been placed on the second window of the second application.

**4. Claim 9 - The method of claim 1, wherein the first window
of the multi-display application is displayed in one of a
portrait max configuration and a landscape max
configuration.**

Purcell discloses this claim. Ex. 1003, ¶248. Purcell shows in Fig. 2 how the primary application window can be displayed in landscape mode across both displays, which is in landscape max configuration. Ex. 1003, ¶249.



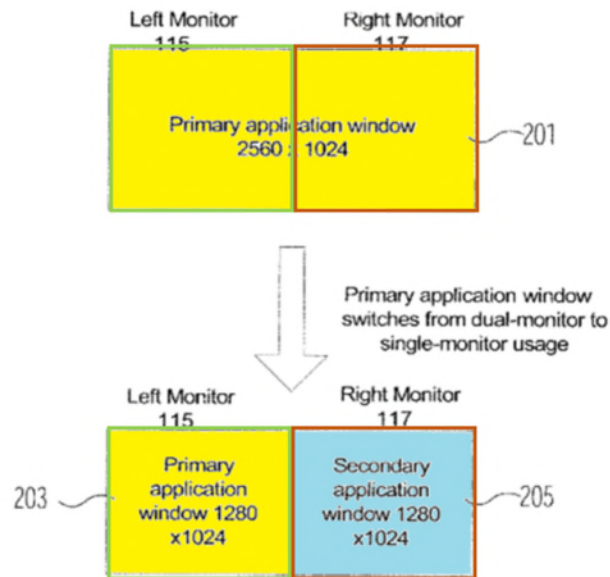
5. Claim 17

17[P] A dual display communication device, comprising:

If the preamble is limiting, Purcell discloses a dual display communication device. See Claim 1[P], 1[A].

17[A] a first display; a second display;

Purcell discloses a device with a first display (orange outline) and a second display (green). Ex. 1003, ¶251; Ex. 1007, Fig. 2 (below). Purcell is directed a system with multiple display monitors that is used to display multiple applications at the same time to a user. Ex. 1007, Abstract.

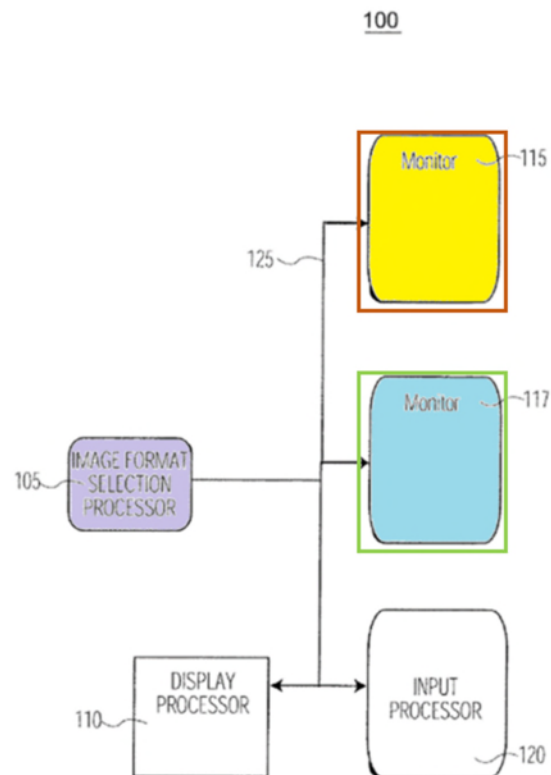


Ex. 1007, Fig. 2.

17[B] a non-transitory computer readable medium that stores computer executable instructions that when executed by at least one processor perform a method comprising:

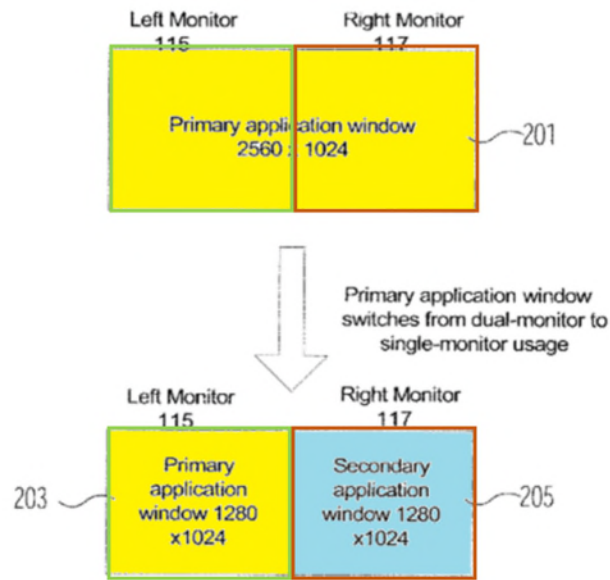
Purcell discloses this limitation. Ex. 1003, ¶253. Purcell discloses that an image format selection processor and a display processor execute computer readable instructions stored in the system in order to perform the method steps recited in claim 17. Ex. 1003, ¶254; Ex. 1007, ¶¶[0004],[0013]-[0015].

FIGURE 1



17[C] displaying a first window of a multi-display application on the first display and the second display;

Purcell discloses this limitation. Ex. 1003, ¶255. Purcell explains that a primary application window 201 (yellow) can run with a single window and span both monitors/displays. Ex. 1003, ¶256; Ex. 1007, ¶[0016].

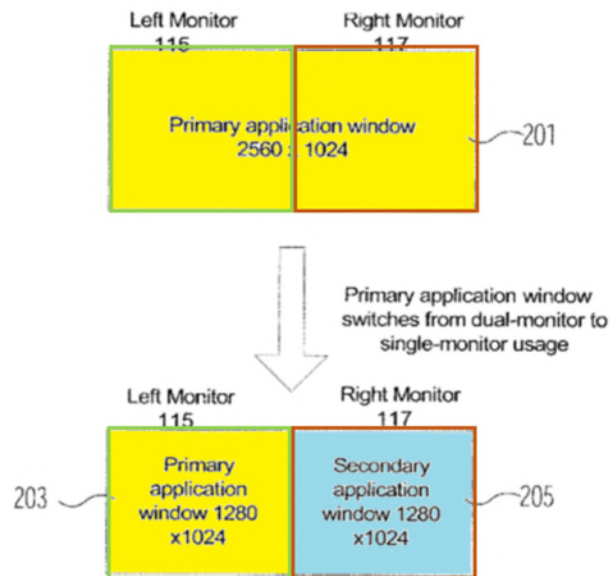


Id., Fig. 2.

17[D] receiving, by the first display, input to activate a second application; and in response to receiving the input: displaying a second window of the second application on the first display; and

Purcell discloses this limitation. Ex. 1003, ¶257. Purcell describes how “to permit another application to execute concurrently and display an image window adjacent to an image window of the primary application, system 100 dynamically changes the primary application image window size to match that of a left monitor (monitor 115).” Ex. 1003, ¶258; Ex. 1007, ¶[0016] The system then “initiates execution of a secondary application that displays an associated image window on the right monitor (monitor 117).” *Id.* The processor initiates the resizing “in response to the received command data” that Purcell teaches can be user input via

“a touch screen.” Ex. 1003, ¶258; Ex. 1007, ¶[0013]. The second application (blue) is displayed on the first display (orange outline).

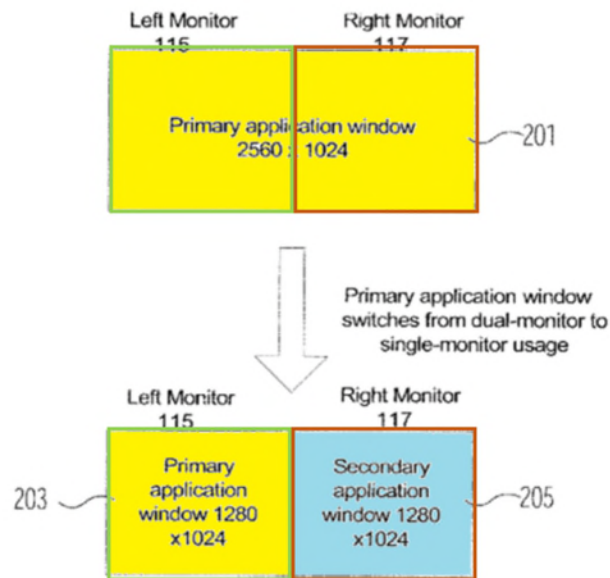


Ex. 1007, Fig. 2.

17[E] in response to opening the second window, automatically minimizing the first window to fit the second display; and displaying the minimized first window of the multi-display application on the second display

Purcell discloses this limitation. Ex. 1003, ¶259. Purcell’s system, based on user input, “initiates execution of a secondary application that displays an associated image window on the right monitor (monitor 117).” Ex. 1003, ¶260; Ex. 1007, ¶[0016]. As part of the dynamic resizing described in Purcell, the primary application window (yellow) changes size and is reduced to a portion of the amount of pixels it displays. Ex. 1003, ¶260; Ex. 1007, ¶¶[0016],[0019]. Purcell notes that

“to permit another application to execute concurrently and display an image window adjacent to an image window of the primary application, **system 100 dynamically changes the primary application image window size to match that of a left monitor** (monitor 115).” *Id.*



Ex. 1007, Fig. 2.

6. **Claim 18 - The device of claim 17, wherein the minimized first window displays only a portion of the content displayed on the first window of the multi-display application, when the first window was displayed on the first and second touch sensitive displays.**

See Claim 4.

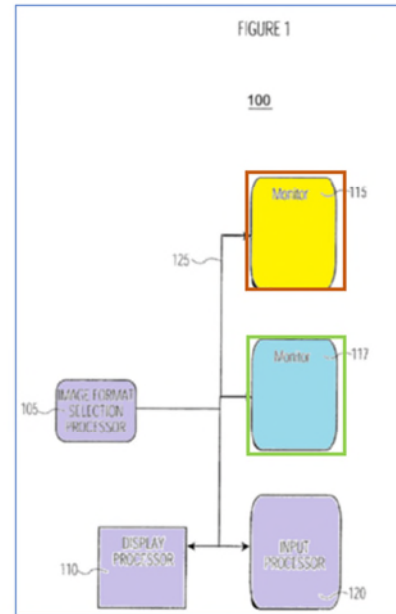
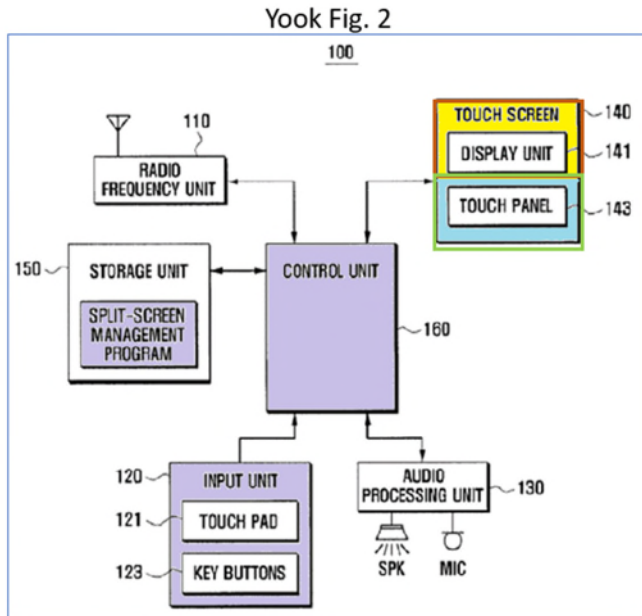
H. Ground 8: Claims 1, 3-7, 9, 10, 17, 18, and 20 are Obvious Over Purcell in View of Yook

A POSITA would have been motivated to combine the teachings of Purcell’s dual monitor display system with the teachings of Yook’s dual-display system to

achieve additional user display options that were commonplace in the industry at the time. Ex. 1003, ¶268. Both Purcell and Yook are directed to the same general problem of reducing burdensome aspects of users interacting with multiple applications at the same time. Ex. 1003, ¶263. Thus, they are analogous art to the '153 patent. Purcell, for example, notes that it was a “burdensome non-user friendly process” to “interact[ion] with the secondary application” when a primary application is also running. Ex. 1003, ¶264; Ex. 1007, ¶[0003]. Yook notes how there was a need to enables user to more effectively operates larger screens that can handle multiple applications at the same time. Ex. 1003, ¶264; Ex. 1004, ¶[0005]. Based on these presented problems, both Purcell and Yook developed systems and methods that permitted the simultaneous display of windows from two applications at the same time across multiple displays. Ex. 1003, ¶265; Ex. 1004, ¶[0006]; Ex. 1007, ¶[0004].

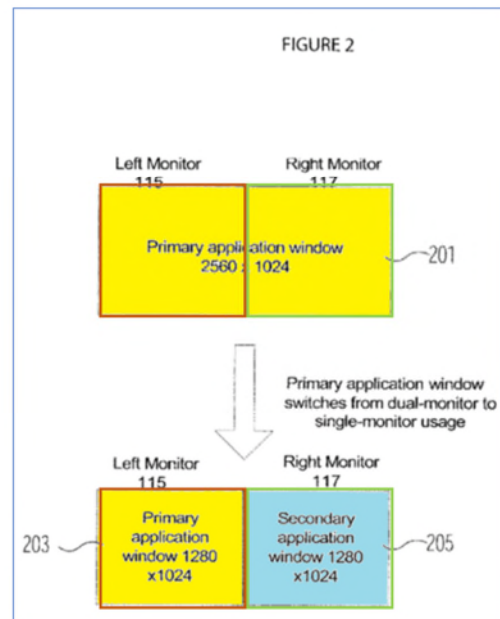
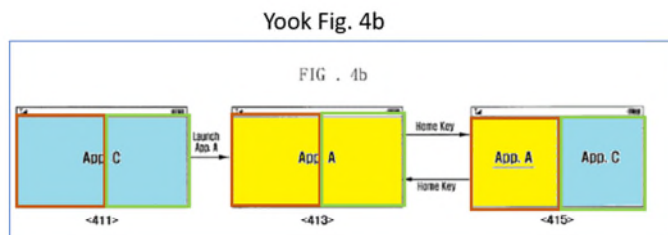
In other words, Yook and Purcell both developed similar systems and methods to accomplish the solutions to the same problem, including, as shown below the use of an input processor, split screen management program, and a control unit/display unit. Ex. 1003, ¶265.

Purcell Fig. 1



The manner in which Yook and Purcell implemented their split-screen methods on these systems was also similar as shown below. Ex. 1003, ¶266.

Purcell Fig. 2



Both Purcell and Yook allow a first application window to be displayed on both display portions and alternatively permit a second application window to be displayed on a second display while the first application window is displayed the first display. Ex. 1003, ¶267. *See, e.g.*, Ex. 1004, Fig. 4b; Ex. 1007, Fig. 2. Subsequently, and as explained above, both references can reverse the split screen and revert back to the first application window displayed on both displays. Ex. 1003, ¶267. Based on these teachings a POSITA would have looked to combine Purcell with Yook at least because they are similar hardware and software systems that are directed to solving the same alleged problem in the prior art. *Id.* Moreover, a POSITA would have understood that the teachings of Purcell with respect to split-screen display would have been readily applicable to Yook because the resizing of application windows to fit smaller displays was well-known in the art. *Id.*

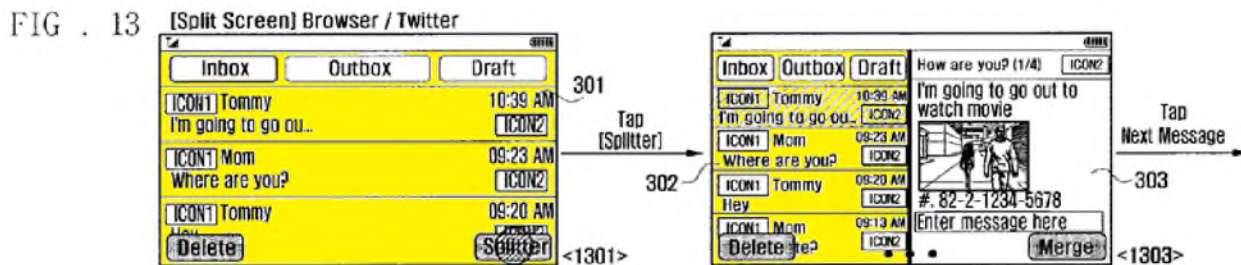
The Challenged Claims are anticipated by Purcell. Because Purcell anticipates the Challenged Claims, Purcell also renders those claims obvious. Ex. 1003, ¶262, 269. “[A] disclosure that anticipates under § 102 also renders the claim invalid under § 103, for ‘anticipation is the epitome of obviousness.’” *Realtime Data*, 912 F.3d at 1373.

Dependent claim 3 requires that the second application is a multi-display application. Purcell notes that its system is flexible and its processor would be able to accomplish having either application be displayed full screen. Ex. 1003, ¶270.

Moreover, a POSITA would be well aware that the Windows operating system used in Purcell would have the capability to have any window displayed on a single monitor or across both monitors. *Id.* This would render claim 3 obvious. In addition, many references, including Yook, describe multiple multi-display applications and a POSITA would understand that this teaching from Yook could be readily applied to the system in Purcell, thus rendering claim 3 obvious. *See supra* claim 3 for Yook in Section VIII.A.2; Ex. 1003, ¶270.

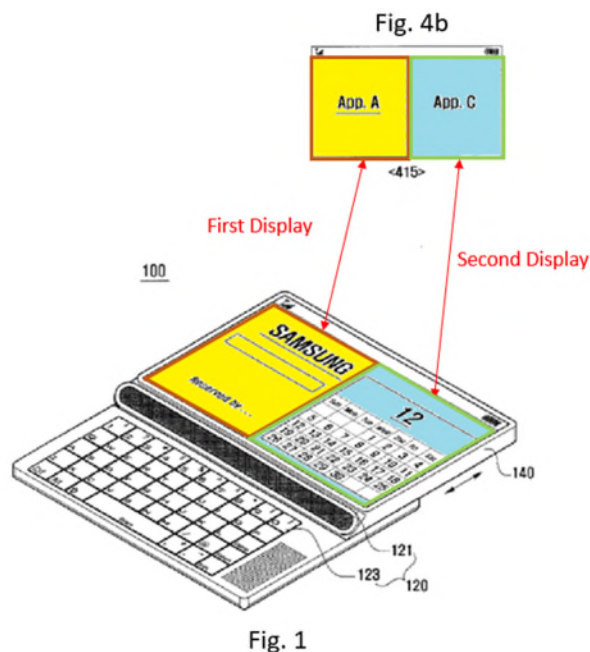
Dependent claims 4 and 18 are both directed to the minimized first window displaying only a portion of the content displayed on the window of the multi-display application. Ex. 1003, ¶272. In other words, when a first window is minimized from its display across both the first and second display, it does not display the same amount of content when only displayed on the first display. *Id.* As described above for both Purcell and Yook, this element is disclosed and met by each reference. To the extent Patent Owner argues that Purcell's reduction in the amount of pixels used in a window after minimization does not meet this claim element, then a POSITA would have looked to Yook's express teaching and disclosure of a minimized application displaying less and different visual content when minimized. *Id.* In describing its screen minimizing technique, Yook notes that "[t]he output routine can include any of a subroutine ***for reformatting the functional view area*** related to the user function according to the corresponding divided screen area, and a

subroutine for ***adjusting the functional view area related to the input signal according to the corresponding divided screen area.*** Ex. 1003, ¶273; Ex. 1004, ¶[0035]. Yook further describes how the original screen area is “resized” to fit the smaller split-screen display area. Ex. 1003, ¶274; Ex. 1004, ¶[0051]. Yook also discloses that a minimized window can be “one of a resized and a simplified version.” Ex. 1003, ¶275; Ex. 1004, ¶[0048]. Fig. 13 of Yook provides further examples of how an original window from a full screen display application (301) is displayed as a portion of its original content (302) when split-screen mode is entered. Ex. 1003, ¶276; Ex. 1004, Fig. 13.



Comparing 302 to 301 in Yook is not simply a reduction in the number of pixels as in Purcell, but a change to the display of content (e.g., reduction in button sizes). Ex. 1003, ¶277. Accordingly, a POSITA would recognize that when minimizing the first display window in Purcell, in addition to removing pixels from the display, the screen content can be reduced to a portion of its original content in order to fit on the display and not remove pixels. *Id.* Thus, claims 4 and 18 would have been obvious to a POSITA at the time of the alleged invention.

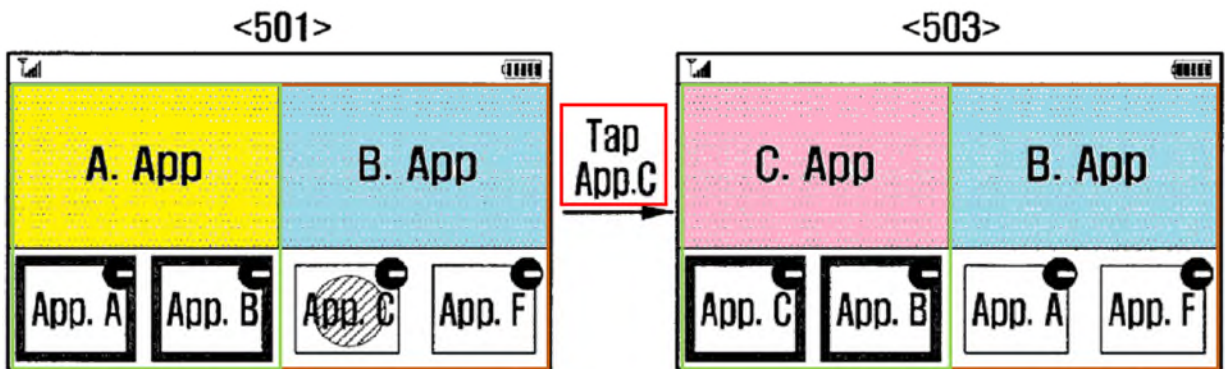
Dependent claim 10 requires that the two displays are on one physical screen and part of one logical display. Purcell's exemplary embodiment utilizes two monitors servicing one processor as described above. Ex. 1003, ¶279. Purcell, however, notes that its system "is usable wherever multiple concurrent applications employing corresponding multiple image windows are to be displayed on a user interface employing one or more display monitors." *Id.*; Ex. 1007, ¶[0021]. Purcell also notes that its processor is dividing the screen related to "logical monitors," which indicates to a POSITA that the processor would perform the same screen division regardless of whether there are two physical monitors or one because it acts in terms of "logical" screen division. *Id.*; Ex. 1007, ¶[0008]. As shown in annotated Figs. 1 and 4b below, Yook discloses two logical displays, each of which is a portion of a screen that is used to display an image to a user. Ex. 1003, ¶280.



Ex. 1004, Figs. 1, 4b (annotated). To the extent Purcell does not expressly disclose or teach how a single screen can be used for two logical displays, a POSITA would find this readily disclosed in Yook and also find that Yook's teachings of how to use two logical displays applies readily to the system in Purcell. Ex. 1003, ¶281. As noted above, the manner in which Purcell and Yook implement their split-screen systems is similar and the manner in which screen division is performed is similar. *Id.* Accordingly, the combination of Purcell and Yook renders claim 10 obvious.

Dependent claim 20 requires receiving second input to open a third application and displaying the third window on the second display. While not explicitly disclosed in any of Purcell's examples, Purcell's system would be capable of this type of operation and this is expressly disclosed in Yook. Ex. 1003, ¶¶283, 284. Yook explains that in Fig. 5a below, a first window of a first application 'A' is displayed on the second display (orange) and a second window of a second application 'B' is displayed on the first display (green). When an input "Tap App.C" is received, a third window for a third application 'C' is then displayed on the second display. Ex. 1003, ¶283; Ex. 1004, ¶¶[0059]-[0061].

FIG . 5a



This teaching would have applied equally to Purcell's system, which was running Windows operating system and had the capability to open multiple different windows. Ex. 1003, ¶ 284; Ex. 1008. A POSITA would have easily been able to apply Yook's teachings of opening a third window on the first display in Purcell's Windows-based system because that functionality existed. Ex. 1003, ¶285. Thus, claim 20 would have been obvious to a POSITA at the time of the alleged invention.

I. Secondary Considerations of Non-Obviousness

Petitioners are unaware of any applicable secondary considerations of non-obviousness. None were identified or asserted during prosecution. *See generally* Ex. 1004. Regardless, even if such considerations existed, none would overcome the strong *prima facie* showing of obviousness.

IX. Conclusion

Petitioners are likely to prevail in showing that at least one of the Challenged Claims is unpatentable and requests that IPR be instituted and that the Challenged

Petition for *Inter Partes* Review of
U.S. Patent No. 9,058,153

Claims be canceled.

Respectfully submitted,

Dated: October 18, 2024

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Counsel for Petitioner Motorola
Designated Lead Counsel for Petitioners

Petition for *Inter Partes* Review of
U.S. Patent No. 9,058,153

CERTIFICATE OF WORD COUNT

The undersigned certifies that the foregoing PETITION FOR *INTER PARTES* REVIEW complies with the type volume limitation in 37 C.F.R. § 42.24(a)(1)(i). According to the utilized word-processing system's word count, the petition—excluding the caption, table of contents, table of exhibits, mandatory notices, certificate of word count, and certificate of service—contains 13,905 words.

Dated: October 18, 2024

/ Christopher J. Higgins /

Counsel for Petitioner Motorola

Petition for *Inter Partes* Review of
U.S. Patent No. 9,058,153

CERTIFICATE OF SERVICE

The undersigned hereby confirms that the foregoing PETITION FOR IPR and associated documents and exhibits were caused to be served on October 18, 2024 via overnight courier upon the following counsel of record for Patent Owner:

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