

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS INC.,

Petitioner,

v.

PANTECH CORPORATION

Patent Owner.

Case IPR2023-01268

U.S. Patent No. 9,575,631

PETITION FOR *INTER PARTES* REVIEW

TABLE OF CONTENTS

LIST OF EXHIBITS	iii
TABLE OF ABBREVIATIONS	vi
CHALLENGED CLAIMS.....	viii
I. INTRODUCTION	1
II. MANDATORY NOTICES (§42.8).....	5
A. Real Parties-In-Interest.....	5
B. Related Matters.....	5
C. Counsel and Service Information.....	5
III. PAYMENT OF FEES	6
IV. REQUIREMENTS FOR INTER PARTES REVIEW	6
A. Grounds for Standing (§42.104(a))	6
B. Identification of Challenge (§42.104(b))	7
1. Specific Art on Which the Challenge Is Based	7
C. Statutory Grounds on Which the Challenge Is Based.....	8
V. '631 PATENT AND PROSECUTION HISTORY	8
A. '631.....	8
B. Prosecution History	10
VI. THE BOARD SHOULD NOT EXERCISE ITS DISCRETION TO DENY INSTITUTION	10
A. §325(d)	10
B. §314(a).....	12
VII. LEVEL OF ORDINARY SKILL	13
VIII. CLAIM CONSTRUCTION	13

IX.	GROUND OF UNPATENTABILITY.....	14
A.	Ground 1: Paasonen (Claims 1-10).....	14
1.	Overview of Paasonen	14
2.	Claim Chart.....	17
B.	Ground 2: Paasonen in view of Nakano (Claims 1-10)	43
C.	Grounds 3/4: Paasonen in view of Aaltonen (Ground 3) and in further View of Nakano (Ground 4) (Claims 4, 7)	47
D.	Ground 5: Hotelling (Claims 1-4, 7).....	49
1.	Overview of Hotelling	49
2.	Hotelling’s Effective Priority Date	50
3.	Claim Chart.....	52
E.	Ground 6: Hotelling in view of Hellyar (Claims 1-4, 6-10)	72
1.	Overview of Hellyar.....	72
2.	Motivation to Modify Hotelling with Hellyar’s Teachings.....	73
3.	Claim Chart.....	75
F.	Ground 7: Hotelling in view of Hellyar and Tu (Claims 5-6)	85
X.	SECONDARY CONSIDERATIONS	89
XI.	CONCLUSION.....	89

LIST OF EXHIBITS

Exhibit ("Ex.")	Description
1001	U.S. Patent No. 9,575,631 ("631")
1002	File History of U.S. Patent No. 9,575,631 ("631FH")
1003	Declaration of Dr. Vijay Madiseti in support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,575,631
1004	(Reserved)
1005	U.S. Patent No. 9,785,329 ("Paasonen")
1006	U.S. Patent Publication No. 2004/0100479 ("Nakano")
1007	U.S. Patent Publication No. 2006/0020904 ("Aaltonen")
1008	U.S. Patent Publication No. 2005/0257169 ("Tu")
1009	U.S. Patent Publication No. 2006/0197753 ("Hotelling")
1010	U.S. Patent Provisional App. No. 60/658,777 ("Hotelling-Prov.")
1011	U.S. Patent Publication No. 2006/0026521 ("Hotelling-521")
1012	U.S. Patent Publication No. 2003/0117440 ("Hellyar")
1013	U.S. Patent Publication No. 2004/0166895 ("Koenck")
1014	U.S. Patent Publication No. 2004/0219901 ("Loke")
1015	U.S. Patent Publication No. 2002/0068558 ("Janik")
1016	U.S. Patent Publication No. 2005/0110768 ("Marriott")
1017	P.C.T. Patent App. Publication No. W.O. 2000/0065429 ("Törnqvist")
1018	U.S. Patent Publication No. 2003/0076306 ("Zadesky")

Exhibit ("Ex.")	Description
1019	U.S. Patent Publication No. 2003/0083106 ("Seo")
1020	European Patent App. Publication No. E.P. 1531607 ("Hon")
1021	U.S. Patent Publication No. 2004/0259542 ("Viitamaki")
1022	PCT Patent App. Publication No. WO2005/064441 and certified translation thereof ("Lee")
1023	U.S. Patent Publication No. 2002/0109678 ("Marmolin")
1024	U.S. Patent No. 5,715,417 ("Gardien")
1025	U.S. Patent Publication No. 2006/0101347 ("Runov")
1026	U.S. Patent Publication No. 2006/0211454 ("Park")
1027	Joint Claim Construction and Prehearing Statement, <i>Pantech Corp. et al. v. LG Electronics Inc. et al.</i> , Case 5:22-cv-00113-RWS-JBB (E.D. Tex.), Dkt. No. 118.
1028	Docket Navigator "Time to Trial" report for Judge Robert W. Schroeder
1029	(Reserved)
1030	File History of U.S. Patent App. No. 11/495,863 ("863-App. FH")
1031	Plaintiff's Patent Rule 3-1 and 3-2 Infringement Contentions, Appendix 9: Preliminary Infringement Contentions of U.S. Patent No. 9,575,631, <i>Pantech Corp. et al. v. LG Electronics Inc. et al.</i> , Case 5:22-cv-00113-RWS-JBB (E.D. Tex.) (February 15, 2023).
1032	Claim Construction Expert Report of Charles Mauro CHFP Concerning Certain Terms of U.S. Patent Nos. 7,283,839 And 9,575,631, <i>Pantech Corp. et al. v. LG Electronics Inc. et al.</i> , Case 5:22-cv-00113-RWS-JBB (E.D. Tex.) (June 23, 2023).
1033	Redline Comparing the Text of Hotelling-Prov. and Hotelling

U.S. Patent No. 9,575,631
Petition for *Inter Partes* Review - IPR2023-01268

Exhibit ("Ex.")	Description
1034	Third Amended Docket Control Order, <i>Pantech Corp. et al. v. LG Electronics Inc. et al.</i> , Case 5:22-cv-00113-RWS-JBB (E.D. Tex.), Dkt. No. 98.
1035	USCourts.gov "U.S. District Court – Judicial Caseload Profile" for Eastern District of Texas
1036-1039	(Reserved)
1040	Declaration of Jonathan Bradford

TABLE OF ABBREVIATIONS

Abbreviation	Description
'631	U.S. Patent No. 9,575,631 (Ex. 1001)
'631FH	File History of U.S. Patent No. 9,575,631 (Ex. 1002)
'863-App. FH	File History of U.S. Patent App. No. 11/495,863 (Ex. 1030)
Claims / Challenged Claims	Claims 1-10 of the '631
Aaltonen	U.S. Patent Publication No. 2006/0020904 (Ex. 1007)
Gardien	U.S. Patent No. 5,715,417 (Ex. 1024)
Hellyar	U.S. Patent Publication No. 2003/0117440 (Ex. 1012)
Hon	European Patent App. Publication No. 1531607 (Ex. 1020)
Hotelling	U.S. Patent Publication No. 2006/0197753 (Ex. 1009)
Hotelling-521	U.S. Patent Publication No. 2006/0026521 (Ex. 1011)
Hotelling-Prov.	U.S. Patent Application No. 60/658777 (Ex. 1010)
Janik	U.S. Patent Publication No. 2002/0068558 (Ex. 1015)
Koenck	U.S. Patent Publication No. 2004/0166895 (Ex. 1013)
Lee	PCT Patent App. Publication No. WO2005/064441 and certified translation thereof (Ex. 1022)
Loke	U.S. Patent Publication No. 2004/0219901 (Ex. 1014)
Marmolin	U.S. Patent Publication No. 2002/0109678 (Ex. 1023)
Marriott	U.S. Patent Publication No. 2005/0110768 (Ex. 1016)
Nakano	U.S. Patent Publication No. 2004/0100479 (Ex. 1006)

Abbreviation	Description
Paasonen	U.S. Patent No. 9,785,329 (Ex. 1005)
Park	U.S. Patent Publication No. 2006/0211454 (Ex. 1026)
Runov	U.S. Patent Publication No. 2006/0101347 (Ex. 1025)
Seo	U.S. Patent Publication No. 2003/0083106 (Ex. 1019)
Törnqvist	P.C.T. Patent App. Publication No. W.O. 2000/0065429 (Ex. 1017)
Tu	U.S. Patent Publication No. 2005/0257169 (Ex. 1008)
Viitamaki	U.S. Patent Publication No. 2004/0259542 (Ex. 1021)
Zadesky	U.S. Patent Publication No. 2003/0076306 (Ex. 1018)
Petitioner	LG Electronics Inc.
PO	Patent Owners; Pantech Corporation and Pantech Wireless, LLC
POSITA	Person of Ordinary Skill in the Art
PTAB	Patent Trial and Appeal Board
USPTO	United States Patent and Trademark Office

CHALLENGED CLAIMS

[1.pre] A method for controlling a predetermined function of a second work process during a first work process in a multitasking mobile terminal that performs the first work process and the second work process, the method comprising:

[1.a] displaying one icon in a designated portion of a display, wherein the displayed icon corresponds to the first work process;

[1.b] if the displayed icon corresponding to the first work process is selected, displaying a screen of the first work process in the display;

[1.c] in response to a first command for sequentially displaying icons, performing sequential display of icons such that an icon corresponding to the second work process is displayed, wherein the icon corresponding to the second work process is displayed in the designated portion of the display;

[1.d] in response to a second command for changing to the second work process, replacing the screen of the first work process with a screen of the second work process;

[1.e] controlling the multitasking of the second work process and the first work process;

[1.f] in response to a third command for activating a control menu for controlling a predetermined function of the first work process, activating the

control menu for controlling the predetermined function of the first work process; and

[1.g] in response to a fourth command for controlling the predetermined function of the first work process through the activated control menu, controlling the predetermined function of the first work process through the activated control menu.

[2.pre] The method of claim 1, wherein the controlling the predetermined function of the first work process comprises:

[2.a] generating a control signal for controlling the predetermined function of the first work process in response to the fourth command; and

[2.b] controlling the predetermined function of the first work process in response to the generated control signal.

[3] The method of claim 1, further comprising: in response to a fifth command for deactivating the activated control menu, deactivating the activated control menu.

[4] The method of claim 1, wherein the first work process is an MP3 play process.

[5] The method of claim 1, wherein an item of the first work process is displayed relatively brighter or clearer than the screen of the first work process.

[6] The method of claim 1, wherein an item of the second work process is displayed relatively brighter or clearer than an item or a screen of a work process other than the second work process.

[7] The method of claim 3, wherein the third command and the fifth command are inputted through at least one of a predetermined key, a user's voice, and a motion of the mobile terminal.

[8] The method of claim 1, wherein, in response to a repetition of the first command, performing sequential display of icons such that a displayed icon disappears from a screen of the mobile terminal and an icon appears on the screen of the mobile terminal.

[9] The method of claim 1, wherein an icon to be displayed in the designated portion is replaced with an icon that is different from the icon corresponding to the second work process in response to the first command.

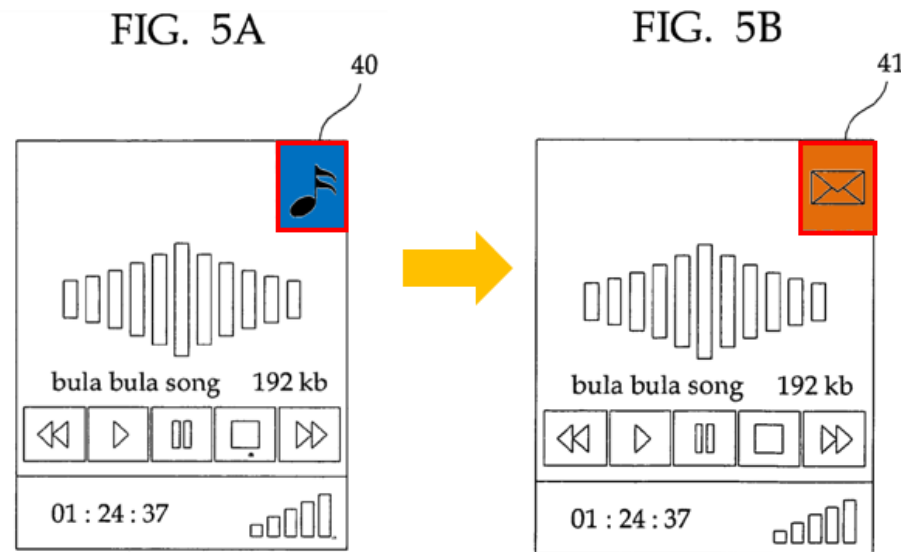
[10] The method of claim 1, wherein the displayed icon is displayed together with at least a part of a screen image of a work process in the display.

Pursuant to §§311-319 and §42.1, LG Electronics Inc. (“Petitioner”) petitions for *inter partes* review (“IPR”) of claims 1-10 (“Claims” or “Challenged Claims”) of U.S. Patent 9,575,631 (“’631”) (Ex. 1001), assigned to Pantech Corporation (“PO”).¹ There is a reasonable likelihood—and it is highly likely—that at least one Claim is unpatentable as explained herein. Petitioner requests review of the Claims, and judgment finding them unpatentable under §§102/103.

I. INTRODUCTION

The ’631 is directed to controlling “work processes in a multitasking mobile terminal.” ’631 Abstract, 1:23-25. As shown in Figs. 5A-5B, a command for “sequential display of icons” causes a new icon to be displayed in a designated portion of the display. See ’631, 4:28-37, 5:1-16.

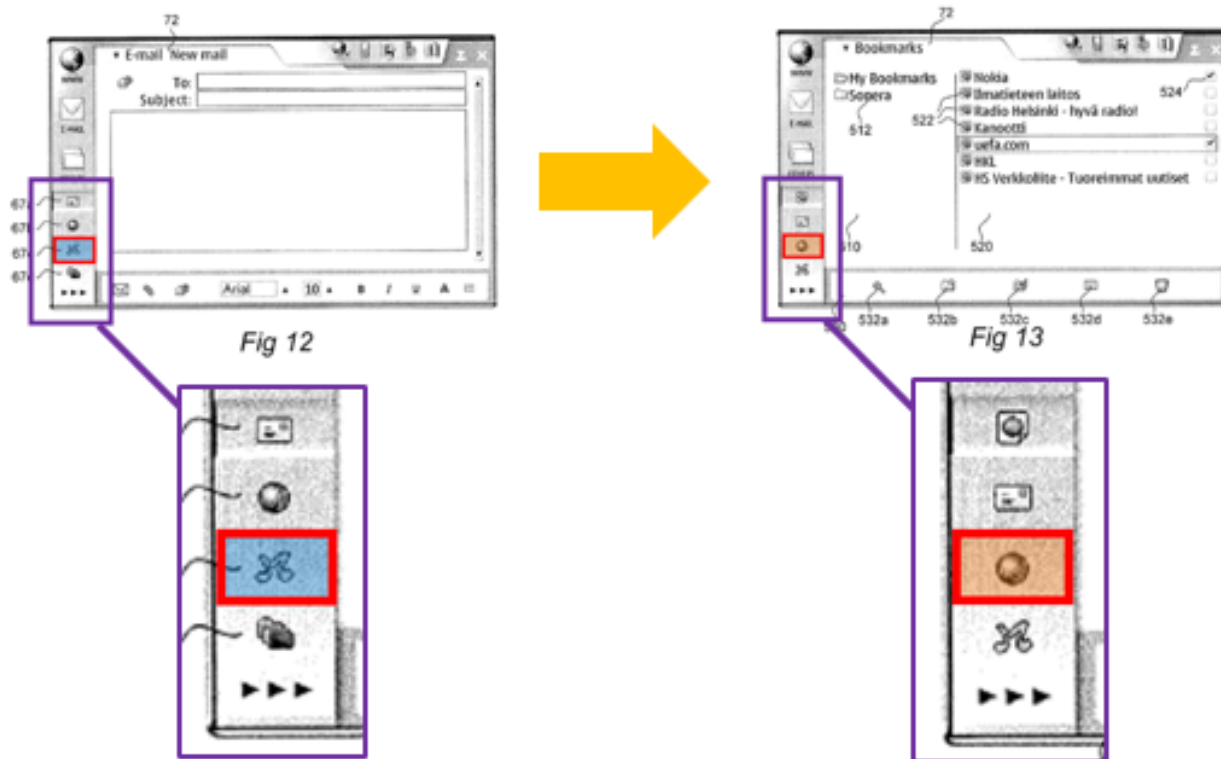
¹ Section cites are to 35 U.S.C. (pre-AIA) or 37 C.F.R. as context indicates. All emphasis/color annotations added unless noted. Citations herein are exemplary and not meant to be limiting.



Selecting an icon switches the screen to the corresponding work process, and users may activate a “control menu” for controlling work processes. Ex. 1003 (“Madisetti”), ¶38. During prosecution, the Claims were allowed because they recited “performing sequential display of icons” by first “displaying one icon in a designated portion” of the display and then displaying a different icon in that portion. Ex. 1002 (“’631FH”), 189-195.

But such methods were well-known. For example, **Paasonen (Ex. 1005)** discloses a mobile terminal that lists icons for “running applications” that, when selected, switches the screen to the corresponding application. Paasonen, 12:56-13:7, 14:22-37. The icons are sequentially presented based on how recently each application was opened, with the most recent application’s icon on top, and the others shifting down to adjust, such that, in a designated portion of the display, a

first icon is replaced with a second icon. See Paasonen 8:58-9:4, 9:5-10, 14:60-15:18; Figs. 12-13. Madisetti, ¶39.



As another example, **Hotelling (Ex. 1009)**, including its provisional (Ex. 1010, Hotelling-Prov.) that is incorporated by reference (Hotelling, [0001]), discloses a hand-held device that activates GUIs for different programs when corresponding icons are selected. Hotelling-Prov., 18-19:21. Users sequentially “flip[]” or “scroll[]” through GUIs to find a desired GUI. Hotelling-Prov., 18:19-33. **Hellyar** (Ex. 1012) further teaches that, when scrolling through application icons, the currently viewed icon replaces its predecessor icon in a designated portion

of the display. Hellyar [0013], [0024], [0045]; Fig. 3C. For example, in Fig. 3C below, scrolling right causes the orange icon to replace the blue icon. Modifying **Hotelling** with this teaching from **Hellyar** renders obvious that one icon replaces another icon in a designated portion of the display as a user sequentially displays different icons by flipping/scrolling through GUIs. Madisetti, ¶40.

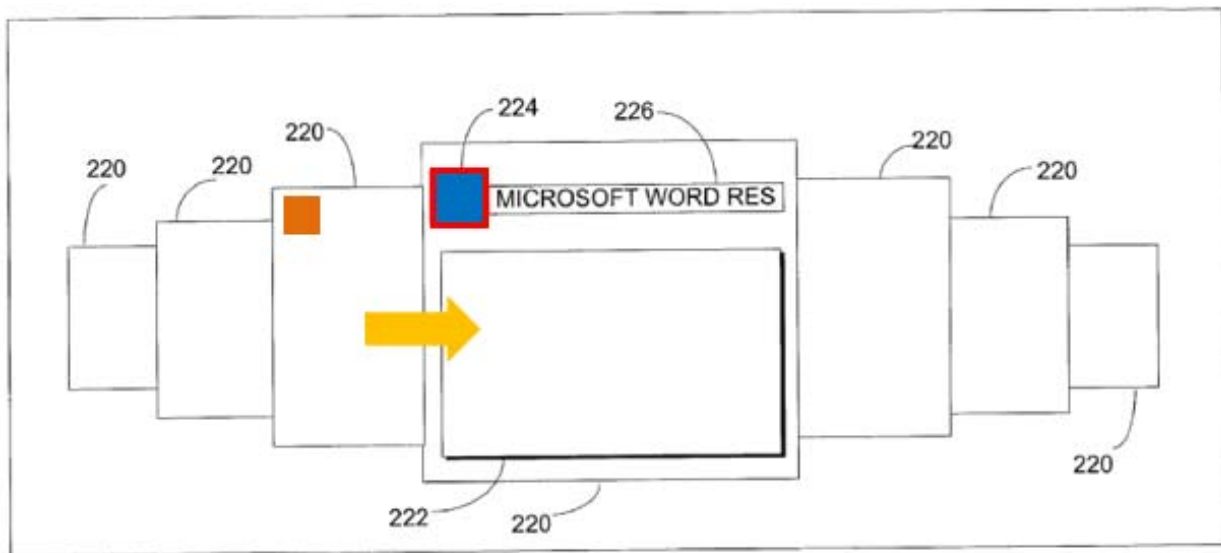


FIG. 3C.

Claims 1-10 are disclosed and rendered obvious by these references and others as set forth in the Grounds herein. Madisetti, ¶41. Petitioner requests that the Board institute trial and find Claims 1-10 unpatentable.

II. MANDATORY NOTICES (§42.8)

A. Real Parties-In-Interest

Petitioner LG Electronics Inc., and LG Electronics U.S.A., Inc. are the real parties-in-interest. No other parties had access to or control over the present Petition, and no other party funded or participated in preparation of the present Petition.

B. Related Matters

The '631 is the subject of the following ongoing litigation:

Pantech Corporation et al. v. LG Electronics Inc. et al., No. 5:22-cv-00113-RWS-JBB (E.D. Tex.) (“Texas Case”).

C. Counsel and Service Information

James L. Davis, Jr. (Reg. No. 57,325) (Lead)

ROPES & GRAY LLP

1900 University Avenue, 6th Floor

East Palo Alto, CA 94303-2284

Phone: 650-617-4000

Fax: 617-235-9492

james.l.davis@ropesgray.com

LGE-Pantech-Ropes-IPR-Service@ropesgray.com

Daniel W. Richards (Reg. No. 69,652) (Back-Up)

ROPES & GRAY LLP

1900 University Avenue, 6th Floor

East Palo Alto, CA 94303-2284

Phone: 650-617-4000

Fax: 617-235-9492

daniel.richards@ropesgray.com

Abed R. Balbaky (Reg. No. 76,154) (Back-Up)

ROPES & GRAY LLP

1211 Avenue of the Americas

New York, NY 10036

Phone: 212-841-5797

Fax: 212-596-9090

abed.balbaky@ropesgray.com

Customer No. 28120

Mailing address for all PTAB correspondence:

ROPES & GRAY LLP, IPRM—Floor 43

Prudential Tower, 800 Boylston Street,

Boston, MA 02199-3600

Petitioner consents to electronic service of documents to the email addresses of the counsel identified above.

III. PAYMENT OF FEES

The undersigned authorizes the Office to charge the fee required by §42.15(a) and any additional fees that might be due to Deposit Account No. 18-1945, under Order No. 104537-0034-655.

IV. REQUIREMENTS FOR INTER PARTES REVIEW

A. Grounds for Standing (§42.104(a))

Petitioner certifies the '631 is available for IPR. Petitioner and any real-party-in-interest are not barred or estopped from requesting IPR challenging the Claims on the grounds identified herein.

B. Identification of Challenge (§42.104(b))

Petitioner requests IPR of the Claims, and that the Board cancel the same as unpatentable.

1. Specific Art on Which the Challenge Is Based

Petitioner relies on the following prior art:

Reference	Ex.	Priority	Issued/Published	Prior Art Under
Paasonen (US9,785,329)	1005	5/23/2005	10/10/2017	§102(e)
Nakano (US2004/0100479)	1006	5/9/2003	5/27/2004	§102(b)
Aaltonen (US2006/0020904)	1007	7/11/2005	1/26/2006	§102(e)
Tu (US2005/0257169)	1008	6/22/2004	11/17/2005	§102(e)
Hotelling (US2006/0197753)	1009	3/4/2005	9/07/2006	§102(e)
Hotelling-521 (US2006/0026521)	1011	7/30/2004	02/02/2006	§102(e)
Hellyar (US2003/0117440)	1012	12/21/2001	6/26/2003	§102(e)

Hotelling incorporates **Hotelling-Prov.** (App. 60/658777). **Hotelling** [0001]. **Hotelling** and **Hotelling-Prov.** each incorporate **Hotelling-521** (the publication of App. 10/903,964). **Hotelling** [0002]; **Hotelling-Prov.** 1:16-18. To the extent it is argued **Hotelling-521** is not part of **Hotelling**, Petitioner alternatively contends, for **Hotelling**-based grounds, that it would have been obvious to modify **Hotelling** with **Hotelling-521**'s teachings in light of the incorporation. Madisetti, ¶¶57-59.

C. Statutory Grounds on Which the Challenge Is Based

Petitioner respectfully requests cancellation of the Claims on the following grounds (Madisetti, ¶¶60–61):

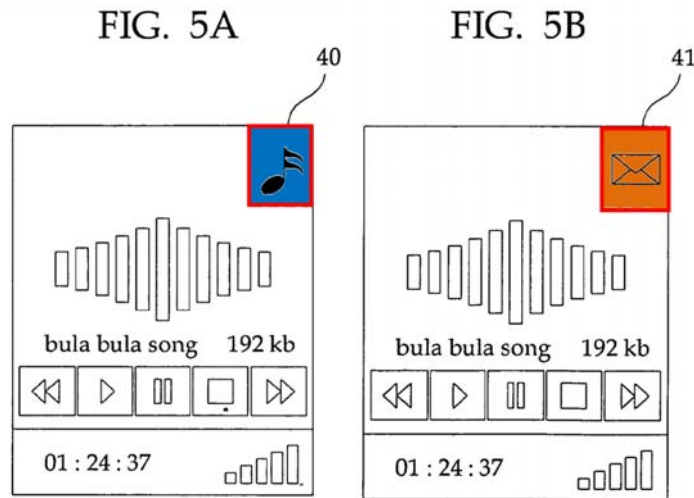
Ground	Basis	Claims	Prior Art
1	§102/§103	1-10	Paasonen
2	§103		Paasonen in view of Nakano
3		4, 7	Paasonen in view of Aaltonen
4			Paasonen in view of Aaltonen and Nakano
5	§102/§103	1-4, 7	Hotelling
6	§103	1-4, 6-10	Hotelling in view of Hellyar
7		5, 6	Hotelling in view of Hellyar and Tu

Petitioner provides the information required under §§42.104(b)(4)-(5) in §IX.

V. '631 PATENT AND PROSECUTION HISTORY

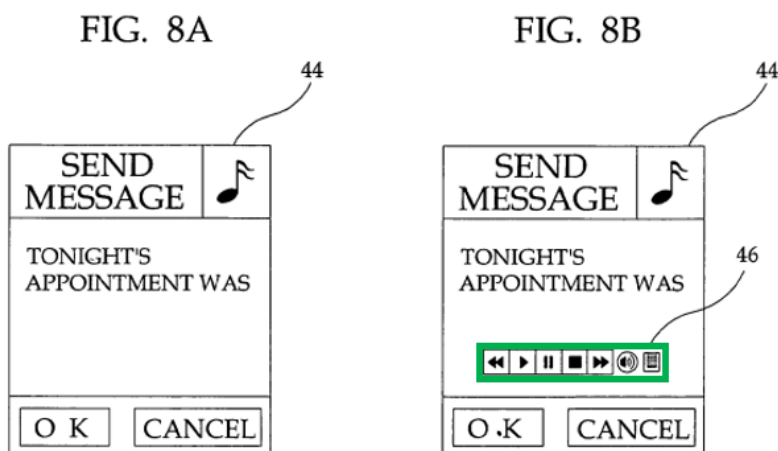
A. '631

Claims 1-10 recite methods for controlling functions of a multitasking mobile terminal. '631, 2:59-67, 3:1-25. As shown in Figs. 5A-5B, a **designated portion** of a display shows icons for a “**first**” (e.g., “MP3 play”) or “**second**” (e.g., “SMS message”) work process. '631, 4:23-24, 4:31-33. Selecting an icon displays a screen for that process. '631, 2:59-67, 4:1-27, 4:34-45.



'631, 3:35-36. A command to "sequentially display[] icons" causes the next icon to be "displayed in turn"—e.g., the "SMS" icon replaces the "MP3" icon. '631, 5:1-16. Selecting the "SMS" icon opens "an SMS message creation process." '631, 2:63-67, 4:38-45. Madisetti, ¶42.

Figs. 8A-8B show a **control menu** that controls, e.g., music playback. '631, 3:7-12, 5:47-48, 6:21-25. Madisetti, ¶43.



B. Prosecution History

In response to prior art rejections (e.g., '631FH, 104–26), following an Examiner interview, Applicant amended claim 1 as follows:

displaying ~~[[an]]one icon-corresponding to the first work process~~ in a designated portion of a display, wherein the displayed icon corresponds to the first work process and is displayed together with at least a part of a screen image of the first work process in the display;

if the displayed icon corresponding to the first work process is selected, displaying a screen of the first work process;

in response to a first command for ~~selecting the second work-process~~ sequentially displaying icons, performing sequential display, wherein the icon ... is displayed in ~~[[a]]the~~ designated portion....

'631FH, 164–74. Following additional interviews, an Examiner's amendment struck the highlighted language above and added “in the display” after “displaying a screen of the first work process”—yielding elements [1.a]-[1.c]. '631FH, 183–96. The NOA cited [1.a]-[1.c] as the “primary reason for allowance.” *Id.* Madisetti, ¶¶44–45.

VI. THE BOARD SHOULD NOT EXERCISE ITS DISCRETION TO DENY INSTITUTION

A. §325(d)

Under the two-part *Advanced Bionics* framework, the Board should not exercise discretion.

The grounds raised by this Petition are not the same or substantially the same as the art and arguments raised during prosecution. Paasonen, Hotelling, Nakano, Aaltonen, and Tu were not considered during prosecution. While **Hellyar** was cited during prosecution of the priority 863-App as rendering obvious “sequentially displaying one or more icons,” Applicant’s response addressed 863-App claim elements that are not recited in the Claims.² See 863-App. FH, 323–34, 340–46. Regardless, this Petition’s Grounds identify reference combinations, including **Paasonen** and **Hotelling**, that are not substantially the same as any considered references. See §IX; *Sony v. MZ Audio Scis., LLC*, IPR2022-01544, Pap. 12, *7 (§325(d) discretion improper where “Examiner did not consider the specific combination of references asserted”).

Even if the same or substantially the same art or arguments were considered, the Examiner materially erred by not rejecting the Claims for the reasons discussed in §IX. The Examiner agreed that Hellyar discloses sequential display of icons. 863-App FH, 323–34, 340–46. The Examiner otherwise “did not expressly consider” any art with substantially the same teachings as the art in this Petition, rendering it “impossible ... to determine the consideration the Examiner gave” to such references, and demonstrating that “the Office erred in a manner

² Other 863-App prosecution is immaterial to this Petition.

material to patentability.” *Ecobee Techs. v. Causam Enterprises, Inc.*, IPR2022-01339, Pap. 20, *20-21 (declining to exercise §325(d) discretion).

B. §314(a)

The co-pending litigation also does not warrant exercising discretion under §314(a) based on the *Fintiv* factors.

1: Following institution, Petitioner intends to seek a stay of the Texas Case pending the outcome of this IPR.

2: Though the Texas Case trial is currently set for 7/29/2024, based on median time to trial before the presiding judge over the last 5 years, trial is expected 26 months from the 9/2/2022 filing date, in late 11/2024 (median time to trial in the entire district varies between 19 and 24 months).³

3: The Texas Case is in its early stages; the court has not ruled on the initial motion to dismiss, and discovery has just begun.

4: This IPR challenges claims 5-7 and 10, which are unasserted in the Texas Case. Moreover, after the final written decision, the same grounds and arguments could not be presented in the Texas Case.

5: The Texas Case and PTAB parties are the same.

³ Exs. 1028, 1034-35.

6: The merits of this Petition are compelling as shown herein. Indeed, the concept of sequentially displaying icons in a designated portion of the display was well known in the field. *See* §§I, IX.

VII. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art (“POSITA”) in the relevant time period would have had a minimum of a bachelor’s degree in electrical or computer engineering or computer science, or a related field, and at least two years of professional experience with mobile terminal design. Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. While Pantech has proposed a different definition (Ex. 1032, ¶27), the Board need not resolve this dispute; under either definition, the prior art renders the Claims unpatentable. *Madisetti*, ¶¶46–52.

VIII. CLAIM CONSTRUCTION

Claim terms subject to IPR are construed using *Phillips*. §42.100(b). Only terms necessary to resolve the controversy need to be construed. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). PO and Petitioner have proposed constructions in the Texas Case (see Ex. 1027), but the Board need not construe these terms because the prior art discloses or renders obvious embodiments within the indisputable scope of the claims under the parties’ and any reasonable interpretations. *See* §IX; *Madisetti*, ¶¶54–56. Unless otherwise

noted below, all claim terms should be given their plain meaning. Madisetti, ¶53.⁴ The prior art discloses the preambles regardless of whether they are limiting. See §IX; Madisetti, ¶56.

IX. GROUNDS OF UNPATENTABILITY

This Petition is supported by the Declaration of Dr. Madisetti, which describes the prior art's scope and content at the time of the '631. The prior art renders the Claims unpatentable based on the below Grounds. Madisetti, ¶¶1–37.

A. Ground 1: Paasonen (Claims 1-10)

1. Overview of Paasonen

Paasonen discloses a mobile terminal that accepts user commands to “switch” between “running applications.” Paasonen 14:22-29, 15:19-33. Figure 12 shows an embodiment:

⁴ Pantech's Expert also states that disputed Claim terms should be given their plain meaning. Ex. 1032 ¶¶46, 57, 62, 75.

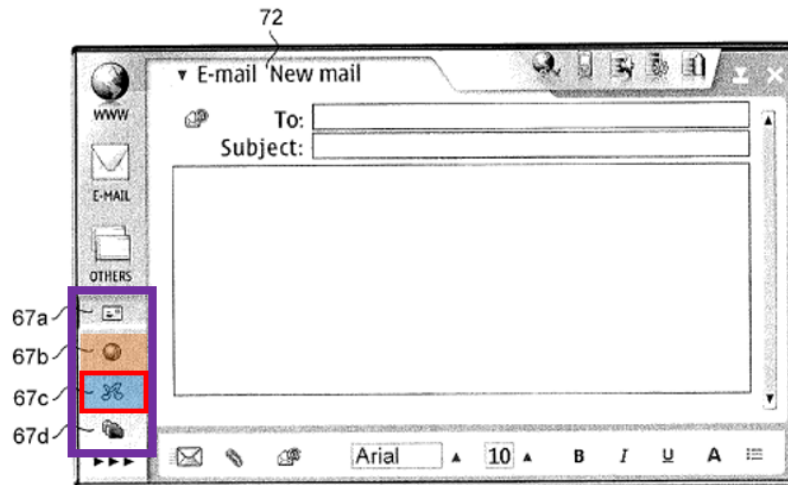


Fig 12

An “**application switcher panel**” shows icons representing “launched applications” including, e.g., “**browser**” and “**music player**” applications. Paasonen 11:48-65, 14:22-29. The “vertical order” of the icons is from most- to least-recently launched. Paasonen 14:60-15:18, Fig. 12. For example, the **browser** and **music player** are the second and third most recently opened applications. *Id.* “Tapping” an icon “switch[es]” the active application and moves the tapped icon to the top, with the remaining icons “updated accordingly,” for example by replacing the **music** icon with another icon in the same designated portion of the screen. Paasonen 14:22-48, 14:60-15:18. Madisetti, ¶62.

Paasonen’s same display includes a “home” screen presenting “downscaled” “**application views**,” the user “configure[s]” these views by selecting different applications to display—not only rendering obvious but disclosing a user including home screen views for other applications:

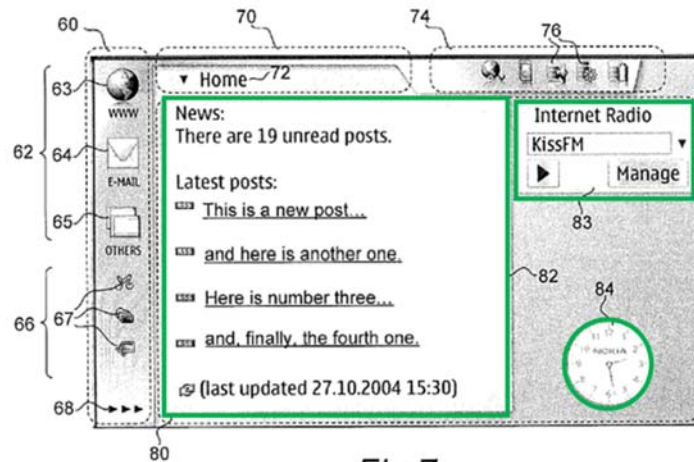


Fig 7

Paasonen 15:61-16:40, Fig. 7.⁵ Selecting the top-left icons 63-65 opens “**task-oriented menu[s]**” for different applications:

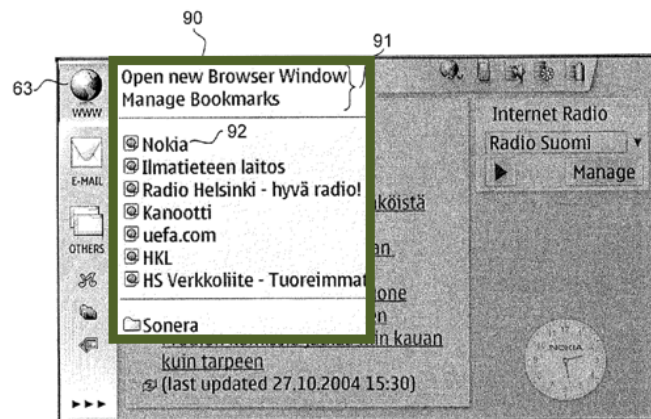


Fig 8

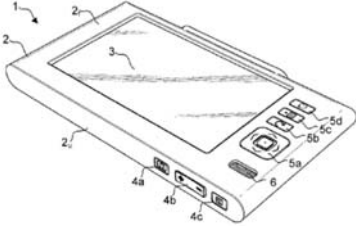
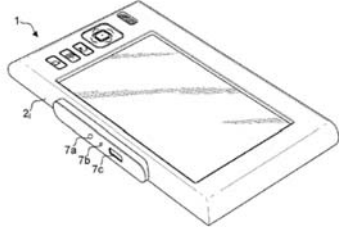
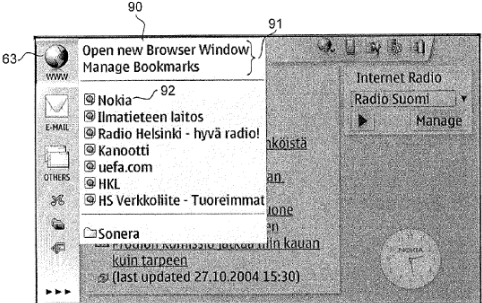
⁵ To the extent it is argued Paasonen teaches multiple separate embodiments, combining these embodiments would have been obvious. *See Bos. Sci. Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009) (*combining embodiments not “inventive[]”*).

Paasonen 13:16-52, 14:14-17, Fig. 8. Selecting a task “automatically launch[es]/switch[es] to” the application and invokes the “appropriate functionality.” Paasonen 13:53-14:13. Menus, including the “task-oriented menu” are brighter than the rest of the screen—as shown in Figs. 8, 10-11. Paasonen, 13:4-7, 13:16-14:13. Madisetti, ¶63.

2. Claim Chart

In addition to §IX.A.1, the following identifies example disclosures followed by bulleted excerpts that each disclose and/or render obvious the Claims.

'631 Claim	Paasonen
[1.pre] A method for controlling a predetermined function of a second work process during a first work process in a multitasking mobile terminal that performs the first work process and the second work process, the method comprising:	Paasonen discloses a method for controlling a predetermined function of a second work process during a first work process (<i>e.g.</i>, “access[ing]” a “functionality of a[n]...application,” while running another application) in a multitasking mobile terminal that performs the first work process and the second work process (<i>e.g.</i>, “mobile terminal” runs “a currently active application” (<i>e.g.</i>, “browser”) and another application (<i>e.g.</i>, “audio” or “music player”)). <u>E.g., Paasonen:</u> Paasonen discloses a “mobile terminal” that controls a “functionality” of, <i>e.g.</i>, an active “browser” application (second work process) while, <i>e.g.</i>, a simultaneously “running” “audio[/music] player” (first work process) plays music. Paasonen 9:20-32, 9:65-10:2, 11:48-65, 13:25-50, 14:22-37, 14:60-15:5. Madisetti ¶¶64–66.

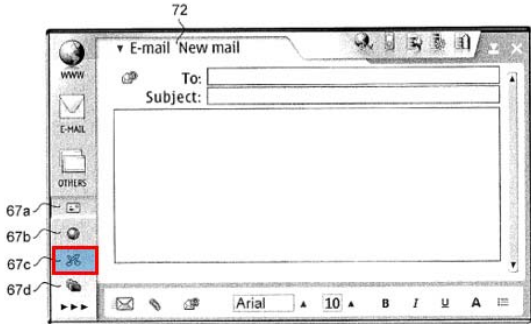
'631 Claim	Paasonen
	Figs. 2-3, 8:  Fig 2  Fig 3  Fig 8 9:20-32 (“[A] pocket computer ... having a home application adapted for <i>simultaneous provision on said display of a number of limited application views...</i>, wherein <i>each such limited application view enables the user to access a limited part of the nominal functionality of a respective utility application...</i>”); 9:65-10:2 (“<i>In one embodiment, the pocket computer is a mobile terminal accessory particularly designed for electronic browsing and messaging.</i>”);

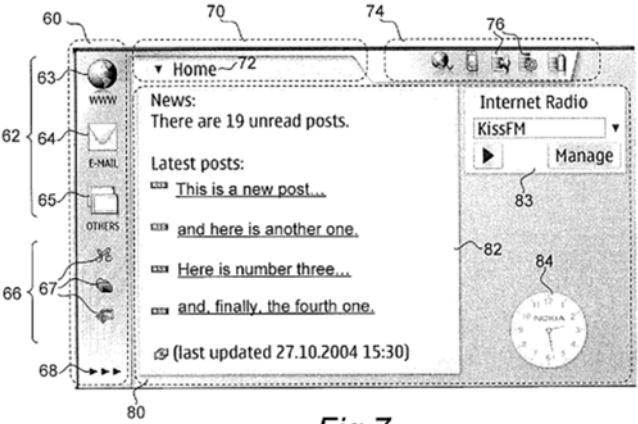
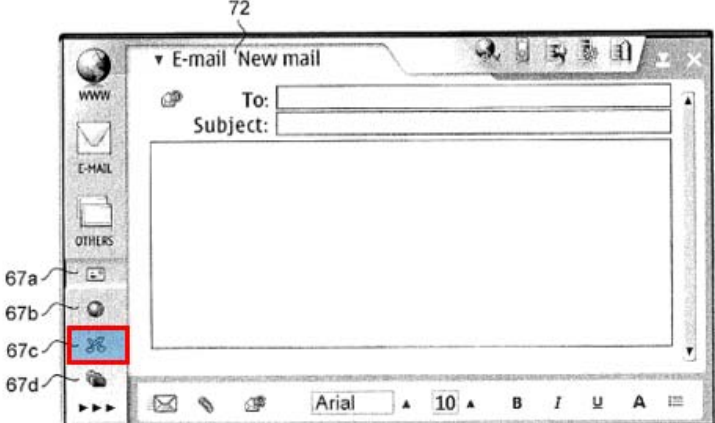
'631 Claim	Paasonen
	• 11:48-65 (“...[E]xamples of applications are an Internet/WWW/WAP browser application,..., a messaging application (email, SMS, MMS),..., a music player application, a media streaming application, and a control panel...”); • 13:16-52 (“...The upper portion 62 contains icons 63-65 which when selected will open a task-oriented, context-specific menu 90 to the right of the selected icon (see FIG. 8, FIG. 11). The context-specific menu 90 will contain a plurality of task-oriented menu items 91.... The topmost icon 63 is used for accessing tasks related to information browsing.... More particularly, the user 9 may choose between opening a new browser window (FIG. 9), or managing bookmarks. Selecting of any of these menu items 91 will cause launching of the associated application (a browser application as seen in FIG. 9 or a bookmark manager as seen in FIGS. 13-14), or switching to such application ... and also invocation of the appropriate functionality therein.... The second icon 64 is used for accessing tasks related to electronic messaging, as is seen in FIGS. 11 and 12....”) • 14:22-37 (“The lower portion 66 of the task navigator 60 ...represents an application switcher panel with respective icons 67 for each of a plurality of launched applications, i.e. running applications that are executed by the controller 50. Among such running applications, one will be active in the sense that it has control over the application area 80 on the display 3. The user 9 may conveniently use the application switcher panel 66 for switching to a desired application by tapping with the stylus 9c on the corresponding icon 67...”) • 14:60-15:5 (“[T]he vertical order of the application switcher icons ... represents a historical order in which the four most recently used applications have been active.

'631 Claim	Paasonen
	When a <i>switch is done from a currently active application to another one, the order of the icons will be updated accordingly</i>.... In FIG. 11, <i>the web browser application is active</i> and is thus represented by the topmost icon 67a. The second <i>icon 67b represents an audio player application that was active before the web browser application was launched</i>, whereas the third and fourth icons 67c and 67d ... were active before that.”) • <i>See also</i> 1:13-30, 3:58-63, 4:22-25, 15:19-33.
[1.a] displaying one icon in a designated portion of a display, wherein the displayed icon corresponds to the first work process;	Paasonen discloses displaying one icon in a designated portion of a display, wherein the displayed icon corresponds to the first work process (<i>e.g.</i>, displaying “icon” corresponding to “audio player” in “third position” of “application switcher panel”). <u>E.g., Paasonen:</u> Paasonen discloses an “application switcher panel” showing the “audio player” icon in the “third position” (which is the designated portion). Paasonen Fig. 12, 14:22-29; 14:38-48, 14:60-15:5, 15:6-18. Madisetti, ¶¶67–69.⁶

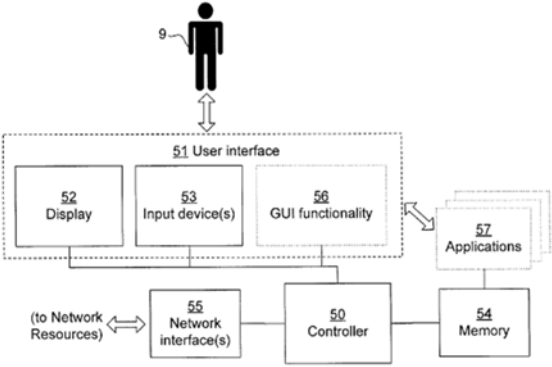
⁶ Pantech’s expert also confirmed these features were “well understood.” Ex. 1032

¶52.

'631 Claim	Paasonen
	• Fig. 12  Fig 12 • 14:22-37 (see [1.pre]); • 14:38-48 (“<i>[F]our different running applications will be represented by respective icons 67 in the application switcher panel 66.... [T]he icon for the most recently active application will be shown at the topmost position...</i>”); • 15:6-18 (“<i>[W]hen the user 9 invokes the messaging application by selecting the menu item 93 in the afore-described task-oriented menu 90, the messaging application becomes active and its icon takes the topmost position 67a, as seen in FIG. 12. At the same time, the existing icons 67a-c of FIG. 11 are shifted one vertical position downwards, so that the web browser icon (formerly at 67a) takes the second position at 67b, the audio player icon moves to the third position 67c, and the file manager icon goes to the lowermost position 67d....</i>”); • See also Figs. 7-9, 13, 8:58-9:4, 14:49-59, 14:60-15:5, 15:19-33.
[1.b] if the displayed icon corresponding to the first work process is	Paasonen discloses if the displayed icon corresponding to the first work process is selected (e.g., if “the corresponding icon” for the “audio player” is “tapp[ed]”), displaying a screen of the first work process in the

'631 Claim	Paasonen
selected, displaying a screen of the first work process in the display;	display (e.g., “switching to” the “audio player” in “application area 80”). <u>E.g., Paasonen:</u> See [1.a]. Paasonen further discloses a user “switch[es] to” the “audio player” by “tapping” on its “corresponding icon,” causing the audio player to be displayed in “application area 80.” Paasonen 12:56-13:7, 14:22-37, 14:60-15:5. Madisetti, ¶¶70–72. • Figs. 7, 12:  <i>Fig 7</i>  <i>Fig 12</i>

'631 Claim	Paasonen
	• 12:56-13:7 (“With reference to FIG. 7,.... The <i>application area 80 is used by a currently active application</i>”); • 14:22-37, 14:60-15:5 (see [1.pre]); • <i>See also</i> Figs 8-13, 11:48-65, 14:49-59, 15:19-33.
[1.c] in response to a first command for sequentially displaying icons, performing sequential display of icons such that an icon corresponding to the second work process is displayed, wherein the icon corresponding to the second work process is displayed in the designated portion of the display;	Paasonen discloses in response to a first command for sequentially displaying icons (<i>e.g.</i>, command to launch a different application, such as a “bookmark manager”), performing sequential display of icons such that an icon corresponding to the second work process is displayed (<i>e.g.</i>, “order of the icons” is “updated accordingly” when switching “from a currently active application to another one” by “shifting” icons “one vertical position downwards”), wherein the icon corresponding to the second work process is displayed in the designated portion of the display (<i>e.g.</i>, the “web browser icon” is displayed in “third position 67c” of “application switcher panel 66” in Fig. 13). <u>E.g., Paasonen:</u> <i>See</i> [1.a]. Paasonen also discloses that application switcher panel sequentially shows icons from most- to least-recently opened such that “launching” a new application “shift[s] the positions of existing icons.” Paasonen 9:5-10, 13:16-52; 14:60-15:18, Figs. 12-13. For example, a command opening the “bookmark manager” while the “web browser” (second work process) is in the second position is a command for

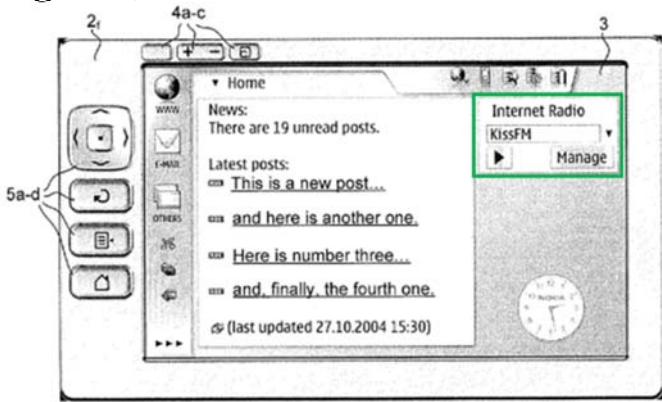
'631 Claim	Paasonen
	sequential display that moves the “web browser” icon to the third position. <i>Id.</i> Madisetti, ¶¶73–75.⁷ • Figs. 5, 12-13:  <i>Fig 5</i>

⁷ Indeed, the Applicant amended the 863-App’s claims to recite “sequentially displaying icons comprises displaying the icons in order of the work process performed,” and the Examiner stated that generating and displaying icons “in a sequential order” according to “activation order” is sequentially displaying icons. Ex. 1030, 182–91, 214–23, 373–89; Madisetti, ¶¶76. Pantech’s Expert also confirmed “sequentially displaying icons” was “well understood.” Ex. 1032 ¶45.

'631 Claim	Paasonen
	Fig 12 Fig 13 • 9:5-16 (“The graphical user interface may be further adapted, <i>upon launching of a new application</i>, to <i>insert an icon associated with said new application at said first position in the application switcher panel while shifting the positions of existing icons in the application switcher panel by one position backwards</i>. In one embodiment, <i>only a predetermined maximum number of positions for icons may be allowed</i> in said application switcher panel wherein, for <i>an icon that has been shifted out from the application switcher panel</i>, the application associated therewith may be activated through ... a menu on said display.”); • 13:16-52 (see [1.pre]);

'631 Claim	Paasonen
	• 14:38-48, 15:6-15:18 (see [1.a]); • 14:60-15:5 (see [1.b]); • <i>See also</i> Figs. 6, 7-9, 8:58-9:4, 11:22-31, 14:22-29.
[1.d] in response to a second command for changing to the second work process, replacing the screen of the first work process with a screen of the second work process;	Paasonen discloses in response to a second command for changing to the second work process (<i>e.g.</i>, command for “switching to a desired application,” “web browser”), replacing the screen of the first work process with a screen of the second work process (<i>e.g.</i>, changing “active” application in “application area 80” of the “display” to “web browser”). <u>E.g., Paasonen:</u> <i>See</i> [1.b]. Paasonen further discloses the user “switching to” the “web browser” by selecting its “corresponding icon” in the second position, causing the browser to be the “active” application and replace the audio player in the “application area.” Paasonen 12:56-13:7, 14:22-37. Madisetti, ¶¶77–79. • Fig. 9  Fig 9 • 12:56-13:7, 14:60-15:5 (<i>See</i> [1.b]); • 14:22-37 (<i>see</i> [1.pre]);

'631 Claim	Paasonen
	• <i>See also</i> Figs. 5-8, 11-12; 11:22-31, 11:48-65, 14:49-59, 15:6-18, 15:19-33.
[1.e] controlling the multitasking of the second work process and the first work process;	Paasonen discloses controlling the multitasking of the second work process and the first work process (<i>e.g.</i>, “switch” between “running applications” including the first and second work processes (<i>see</i> [1.pre])). <u>E.g., Paasonen:</u> <i>See</i> [1.pre], [1.b], [1.d]. Paasonen further discloses “switch[ing]” between multiple “running applications,” including the “web browser” and “audio player,” to control operations within each application. Paasonen 14:22-29, 14:60-15:5. Madisetti, ¶¶80–82. • 14:22-29 (<i>see</i> [1.pre]); • 14:60-15:5 (<i>see</i> [1.b]); • <i>See also</i> 3:58-63, 4:22-25, 9:20-32, 13:16-52, 15:19-33.
[1.f] in response to a third command for activating a control menu for controlling a predetermined function of the first work process, activating the control menu for controlling the predetermined function of the first work process; and	Paasonen discloses in response to a third command for activating a control menu for controlling a predetermined function of the first work process (<i>e.g.</i>, invoking “the home application” to view “application views”; activating “menu 90” for “audio player”), activating the control menu for controlling the predetermined function of the first work process (<i>e.g.</i>, “application view” “provide[s] access” to a “limited part” of the “functionality nominally provided by such ... application”; preset “menu” of “other tasks”). <u>E.g., Paasonen:</u> <i>See</i> [1.pre], [1.b]. Paasonen discloses this element two ways. First, as explained in §IX.A.1, Paasonen’s “home application” contains “limited application view[s]” for different

'631 Claim	Paasonen
	applications. Paasonen, 9:20-32, 15:61-16:40, Figs. 6-7. Each “view” is a control menu for accessing “a limited part of” the application’s controls—e.g., Fig. 6 shows a play button to control a radio play function. <i>Id.</i> Because these views are user-configurable, this application view discloses and renders obvious a first work process music player application view control panel. Paasonen, 11:48-65, 15:61-16:40; Madisetti, ¶¶83–86. Second, selecting Paasonen’s “third icon 65” opens a “menu 90” containing “task-oriented menu items” for “applications” other than the browser or email—e.g., the media/audio player. Paasonen, 13:16-52, 14:14-17; Figs. 8, 11; see §IX.A.1. Opening the “menu 90” therefore discloses (and renders obvious) activating first work process radio/music player menu that controls predetermined player functions. Paasonen, 14:14-17, 15:61-16:40, Fig. 6; Madisetti, ¶87.⁸ • Figs. 6-8, 11:  <i>Fig 6</i>

⁸ Pantech’s Expert confirmed “control menus” and “predetermined functions” were “well understood.” Ex. 1032 ¶¶60, 73.

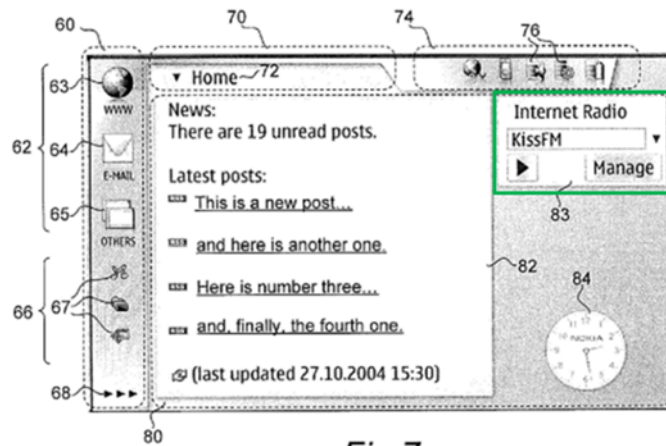


Fig 7

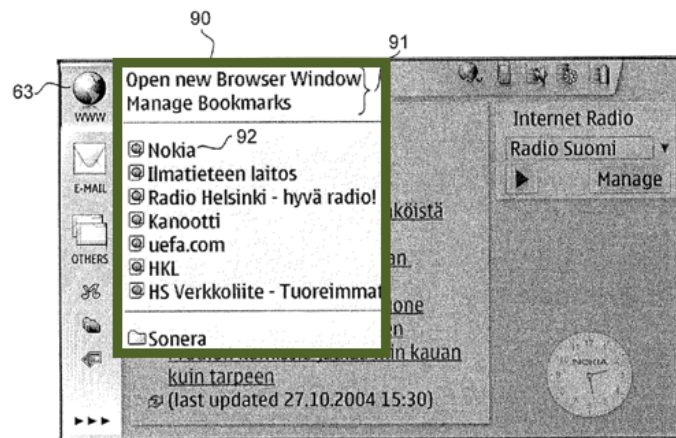


Fig 8

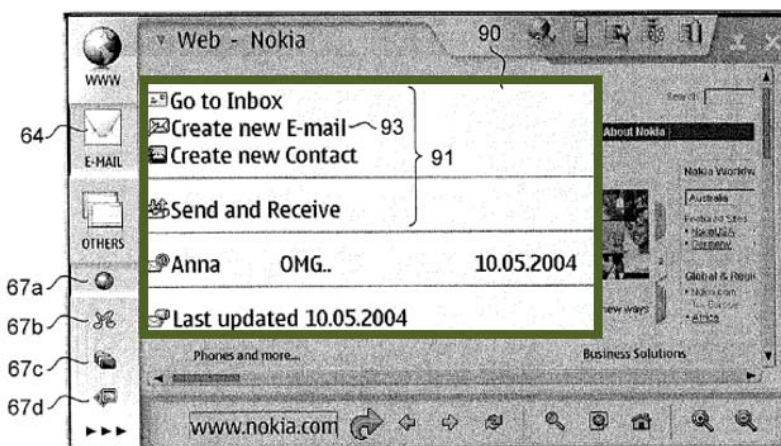
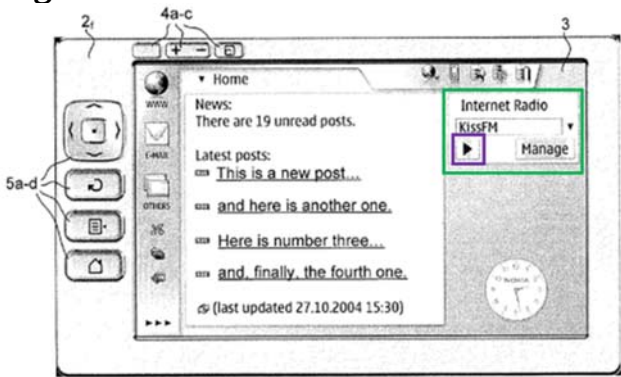
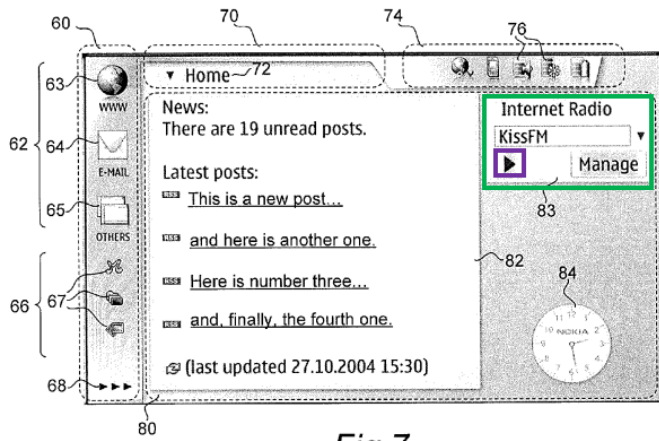


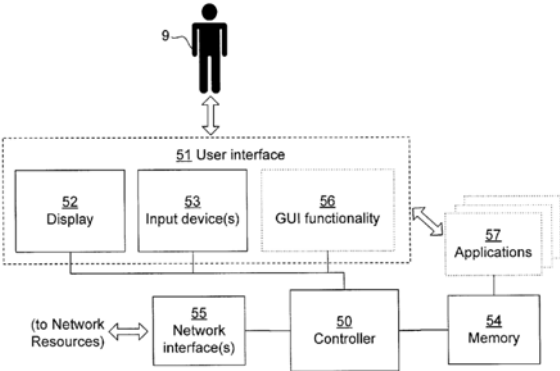
Fig 11

'631 Claim	Paasonen
	• 9:20-32, 11:48-65, 13:16-52 (see [1.pre]); • 14:14-17 (“<i>Selection of the third icon 65 will cause presentation of a menu 90 with links to other tasks ... among the applications 57 that are not related to information browsing or electronic messaging.</i>”); • 14:60-15:5 (see [1.b]); • 15:61-16:40 (“<i>[R]eturn to the home application by pressing the home key 5d.... Another way of invoking the home application is through the application switcher menu button 68...</i> As seen in FIG. 7,... <i>the home application contains three application views 82, 83 and 84 on the display 3. Each application view is a downscaled version of the application view of another application 57. Thus, among all the functionality nominally provided by such another application 57, the application view in the home application will only provide access to limited parts thereof...</i> The <i>application view 83 represents an Internet radio application and gives a limited view of its functionality...</i> The <i>interaction between such a limited application view 82, 83, 84 and the actual application...</i> is readily realized by a skilled person. ... <i>[T]he user may configure which application views to include....</i>”); • See also Fig. 5, 9:20-32, 11:22-31, 11:48-65, 14:60-15:5, 16:34-36.
[1.g] in response to a fourth command for controlling the predetermined function of the	Paasonen discloses in response to a fourth command for controlling the predetermined function of the first work process through the activated control menu (e.g., pressing play in “limited application view”; selecting play task in “menu 90”), controlling the predetermined function of the first work process through the activated control menu

'631 Claim	Paasonen
first work process through the activated control menu, controlling the predetermined function of the first work process through the activated control menu.	(e.g., to access “limited parts” of the “audio player” functionality by playing music). <u>E.g., Paasonen:</u> See [1.f]. As discussed for [1.f], pressing a play button, either through the “application view” on the home application or the “menu 90” causes the audio player/radio to play. Paasonen 14:14-17, 15:61-16:40; Figs. 6-7. Madiseti, ¶¶88–90. • Figs. 6-7  Fig 6  Fig 7 • 14:60-15:5 (see [1.b]);

'631 Claim	Paasonen
	• 14:14-17, 15:61-16:40 (<i>see</i> [1.f]); • <i>See also</i> Fig. 5, 9:20-32, 9:65-10:2, 11:21-31.
2. The method of claim 1, wherein the controlling the predetermined function of the first work process comprises: generating a control signal for controlling the predetermined function of the first work process in response to the fourth command; and controlling the predetermined function of the first work process in response to the generated control signal.	<i>See</i> [1]. Paasonen further discloses that the controlling the predetermined function of the first work process comprises: generating a control signal for controlling the predetermined function of the first work process in response to the fourth command (<i>e.g.</i>, <i>see</i> [1.f]-[1.g]; “controller” uses “drivers” and generates control signal for controlling “audio player”); and controlling the predetermined function of the first work process in response to the generated control signal (<i>e.g.</i>, “controller” controls “audio player” application in response to control signal). <u><i>E.g., Paasonen:</i></u> <i>See</i> [1.pre], [1.f]-[1.g]. As discussed for [1.f]-[1.g], Paasonen discloses controlling an audio player. Paasonen also discloses a controller controlling “the overall operation” of the device, including by controlling device “drivers.” Paasonen 11:32-47. This not only renders obvious but affirmatively discloses that the controller issues control signals to control the audio player including, <i>e.g.</i>, by using “drivers” and application software to access the user interface to play audio. Paasonen Fig. 5, 11:32-47. Madisetti, ¶¶91–93.⁹

⁹ Controllers sending signals to control device functions was well-understood. *See* Koenck (Ex. 1013), [0104]; Loke (Ex. 1014), [0072]. Indeed, such signals are similar to the ’631’s “control signals.” *E.g.*, ’631, 1:46-51, 2:26-28; Madisetti, ¶93.

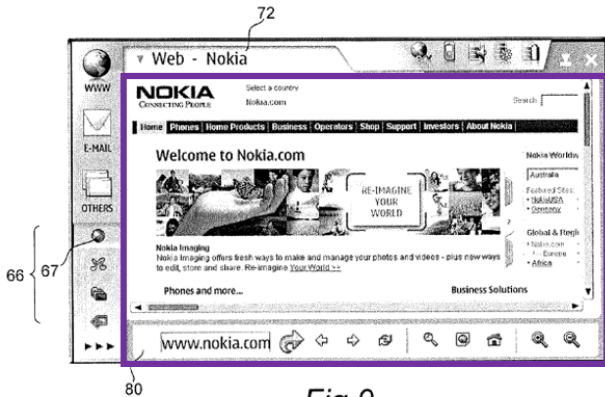
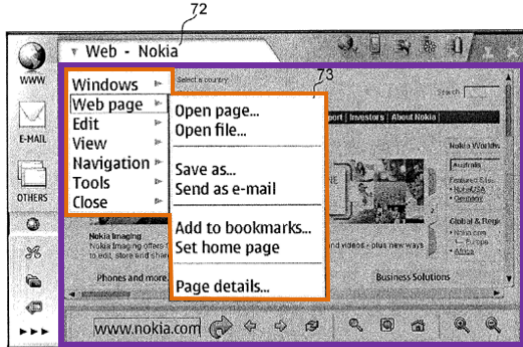
'631 Claim	Paasonen
	Fig. 5  <i>Fig 5</i> 11:32-47 (“[I]n FIG. 5, the pocket computer 1 also <i>has a controller 50 with associated memory 54. The controller is responsible for the overall operation of the pocket computer 1 and may be implemented by any commercially available CPU ... The software may include a real-time operating system, drivers e.g. for the user interface 51, as well as various applications 57.</i>”). See also 9:20-32, 11:22-31, 16:30-33.
3. The method of claim 1, further comprising: in response to a fifth command for deactivating the activated control menu, deactivating the activated control menu.	See [1]. Paasonen further discloses in response to a fifth command for deactivating the activated control menu (e.g., a command for “opening a new browser window;” “switching” to a new application), deactivating the activated control menu (see [1.f]; navigating away from the home application or to another application deactivates the “limited application view” or “menu 90”). <u>E.g., Paasonen:</u> See [1.f]-[1.g]. Paasonen further discloses issuing commands to open a new browser window or switch applications, which moves away from the home application or closes “menu 90.” Paasonen,

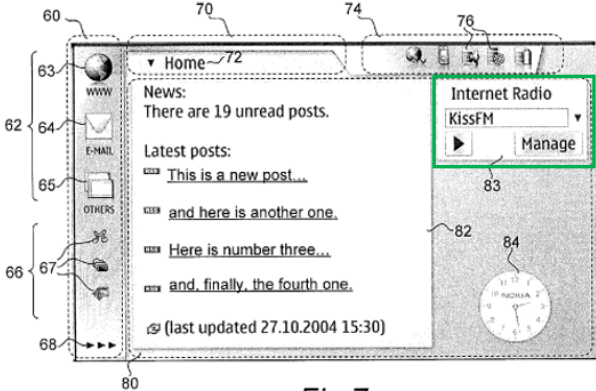
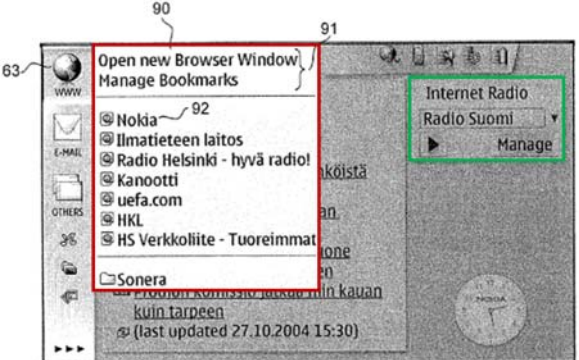
'631 Claim	Paasonen
	13:38-45; 14:30-37. This not only renders obvious but affirmatively discloses that such commands are for deactivating the control menu by hiding the displayed menu.¹⁰ <i>See id.</i> Madisetti ¶¶94–96. • Figs. 8-9 Fig 8 Fig 9 • 13:38-45, 14:30-37 (see [1.pre]); • See also Fig. 7; 11:4-11, 15:19-33, 15:61-16:40.
4. The method of claim 1, wherein the first work process is an	See [1].

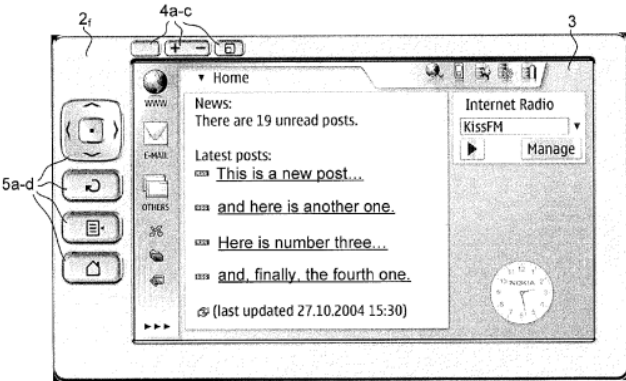
¹⁰ The '631 itself teaches that switching back to another application deactivates a menu. '631, 5:64-6:2; Madisetti, ¶¶96.

'631 Claim	Paasonen
MP3 play process.	Paasonen further discloses that the first work process is an MP3 play process (see [1.a]; first work process is a “music” or “audio player”). <u>E.g., Paasonen:</u> See [1.a]. Paasonen further discloses a first work process music/audio player application. Paasonen 11:48-65, 14:60-15:5. This renders obvious and affirmatively discloses an MP3 player because it was well-understood to a POSITA that music players conventionally played MP3 files. Madisetti, ¶¶97–99.¹¹ • 11:48-65 (see [1.pre]); • 14:60-15:5 (see [1.b]); • See also 16:24-29.
5. The method of claim 1, wherein an item of the first work process is displayed relatively brighter or clearer than the screen of the first work process.	See [1]. Paasonen further discloses that an item of the first work process is displayed relatively brighter or clearer than the screen of the first work process (e.g., “application menu 73 of the currently active application” is brighter and clearer than “application area 80”) <u>E.g., Paasonen:</u> See [1.a]-[1.b]. Paasonen teaches that “application menu...of the currently active application” (e.g., the media player first work process)

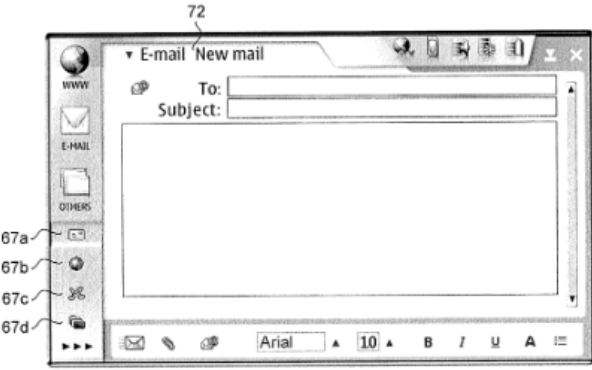
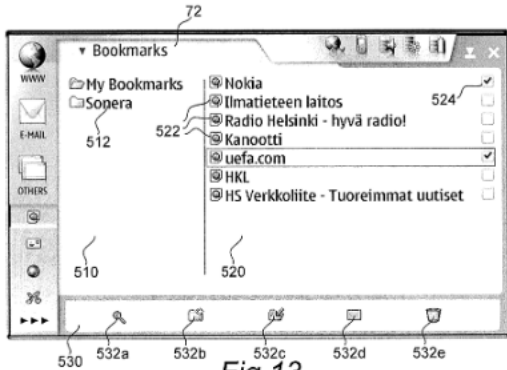
¹¹ See Janik (Ex. 1015), [0147]; Marriott (Ex. 1016), [0071]; '631, Figs. 1, 3, 1:38-51, 2:6-28; Madisetti, ¶¶99.

'631 Claim	Paasonen
	is displayed brighter than the active application in “application area.” Paasonen 12:56-13:7, Figs. 9-10. Madisetti, ¶¶100–102. Figs. 9-10  <i>Fig 9</i>  <i>Fig 10</i> 12:56-13:7 (See [1.b])
6. The method of claim 1, wherein an item of the second work process is displayed relatively brighter or clearer than an item or a screen of a work process	See [1]. Paasonen further discloses that an item of the second work process is displayed relatively brighter or clearer than an item or a screen of a work process other than the second work process (e.g., “context-specific menu 90” for a browser is displayed brighter than an “application view” for a radio application). <u>E.g., Paasonen:</u>

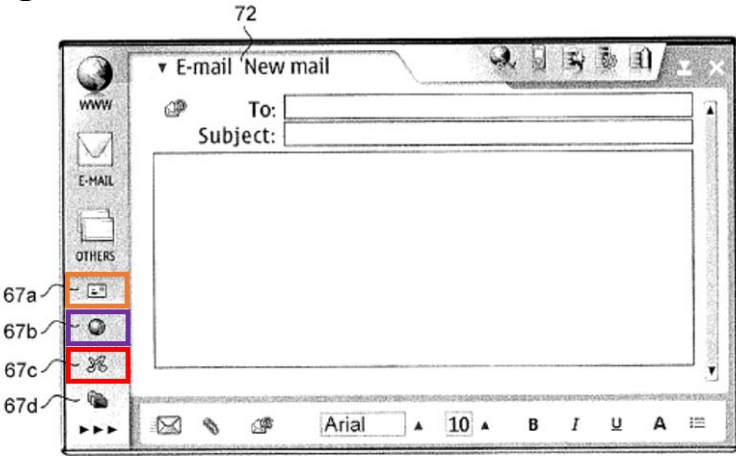
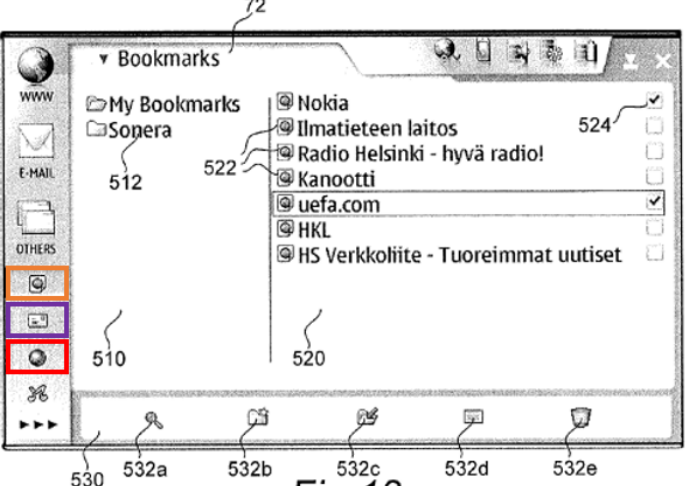
'631 Claim	Paasonen
other than the second work process.	See [1.pre], [1.a], [1.b]. Paasonen further discloses a “menu 90” for a browser (second work process), is displayed brighter than the “application views,” including, e.g., the media player. Paasonen Figs. 7-8; 13:16-52, 16:24-29. Madisetti, ¶¶103–105. • Figs. 7-8  Figure 7 shows a mobile device screen with a web browser interface. The browser displays a news feed with the headline 'News: There are 19 unread posts.' and a list of latest posts. To the right of the browser is an 'Internet Radio' application showing 'KissFM' and a 'Manage' button. The interface includes a status bar at the top with various icons and a clock at the bottom right. Fig 7  Figure 8 shows the same mobile device screen as Figure 7, but with a menu (90) open over the browser. The menu lists options such as 'Open new Browser Window', 'Manage Bookmarks', and a list of bookmarks including 'Nokia', 'Ilmatieteen laitos', 'Radio Helsinki - hyvä radio!', 'Kanootti', 'uefa.com', 'HKL', 'HS Verkkoilite - Tuoreimmat', and 'Sonera'. The 'Internet Radio' application is still visible on the right. Fig 8 • 13:16-52 (See [1.pre]): • 15:61-16:40 (See [1.f]).
7. The method of claim 3, wherein the third command and the	See [3]. Paasonen further discloses that the third command and the fifth command are inputted through a predetermined

'631 Claim	Paasonen
fifth command are inputted through at least one of a predetermined key, a user's voice, and a motion of the mobile terminal.	key (e.g., third command inputted through “pressing” “home key 5d” or “center position” key; fifth command inputted using “navigation,” “center position,” or “cancel” key). <u>E.g., Paasonen:</u> See [1.f], [3]. Paasonen further discloses that the device has “navigation,” “cancel,” and “home” keys. Paasonen, 11:2-11, 13:16-52, 15:61-16:40, Fig. 6. The third command is inputted using either (1) the “home” key to return to the home screen with application views (see [1.f]); or (2) the “center position” key to “command selection” of a menu item (e.g., a play button in “menu 90”). <i>Id.</i> The fifth command is inputted by hitting “cancel” to exit a menu, or using the “center position” key to select a different application. Paasonen, 11:2-11, 13:16-52. Madisetti, ¶¶106–108. • Fig. 6  <i>Fig 6</i> • 11:2-11 (“[A] plurality of hardware keys 5a-d are provided.... [K]ey 5a is a five-way navigation key, i.e. a key which is depressible at four different peripheral positions to command navigation in respective orthogonal directions..., as well as depressible at a center position to

'631 Claim	Paasonen
	<i>command selection among information shown on the display 3. Key 5b is a cancel key, key 5c is a menu or options key, and key 5d is a home key.”)</i> • 13:16-52 (see [1.pre]); • 15:61-16:40 (See [1.f]); • <i>See also</i> 11:12-16, 11:12-31, 12:45-55, 14:30-37.
8. The method of claim 1, wherein, in response to a repetition of the first command, performing sequential display of icons such that a displayed icon disappears from a screen of the mobile terminal and an icon appears on the screen of the mobile terminal.	See [1]. Paasonen further discloses in response to a repetition of the first command (see [1.c]; e.g., reopening “bookmark manager,” after four other applications opened), performing sequential display of icons such that a displayed icon disappears from a screen of the mobile terminal and an icon appears on the screen of the mobile terminal (see [1.c]; icon for “new application” is “insert[ed]”; oldest icon is “shifted out”). <u>E.g., Paasonen:</u> See [1.a], [1.c]. Paasonen further discloses the “application switcher” shows “a maximum of four” icons for “running applications”; re-opening the bookmark manager (repeating the first command) after opening four other applications such that the bookmark manager icon is not currently shown, “insert[s]” the bookmark manager icon into the first position 67a; the oldest icon is “shifted out from the application switcher panel” and disappears. Paasonen, 9:5-16, 14:38-48. Madisetti, ¶¶108–111.

'631 Claim	Paasonen
	• Figs. 12-13:  <i>Fig 12</i>  <i>Fig 13</i> • 9:5-16 (See [1.c]); • 13:16-52 (See [1.pre]); • 14:38-48 (See [1.a]); • See also Figs. 7-9, 11, 14:60-15:18.
9. The method of claim 1, wherein an icon to be displayed in the designated portion is replaced with an icon that is	See [1]. Paasonen discloses wherein an icon to be displayed in the designated portion (see [1.c]; the icon for the second work process is displayed in the “second position” (67b) prior to “shift[ing]” icons downward) is replaced with an icon that is different from the icon corresponding to the second work process in response to the first command (see [1.c];

'631 Claim	Paasonen
different from the icon corresponding to the second work process in response to the first command.	shifting downwards causes a different icon to replace the icon in “second position” (67b)). <u>E.g., Paasonen:</u> See [1.c]. This element requires that, in response to the first command, the icon to be displayed in the designated portion (e.g., the icon for the second work process) is replaced, in its prior location, with an icon for a different process. Madisetti, ¶113. Paasonen further discloses that launching the “bookmark manager” causes the “browser” (second work process) icon to move from the “second position” to the “third position” (i.e., the designated portion); the “messaging” icon that was in the “first position” (different from the “browser” icon) replaces the “browser” icon in the “second position”: The diagram illustrates the movement of icons between two vertical lists. On the left, there are four icons labeled 67a, 67b, 67c, and 67d. 67a is a messaging icon, 67b is a browser icon, 67c is a messaging icon, and 67d is a browser icon. On the right, the icons are rearranged. 67a remains a messaging icon, 67b is now a messaging icon, and 67c is now a browser icon. Arrows indicate the movement: one arrow points from the browser icon at 67b to the browser icon at 67c, and another arrow points from the messaging icon at 67c to the messaging icon at 67b. Paasonen, Figs. 12-13, 9:5-16, 15:6-18. Madisetti, ¶¶112–114.

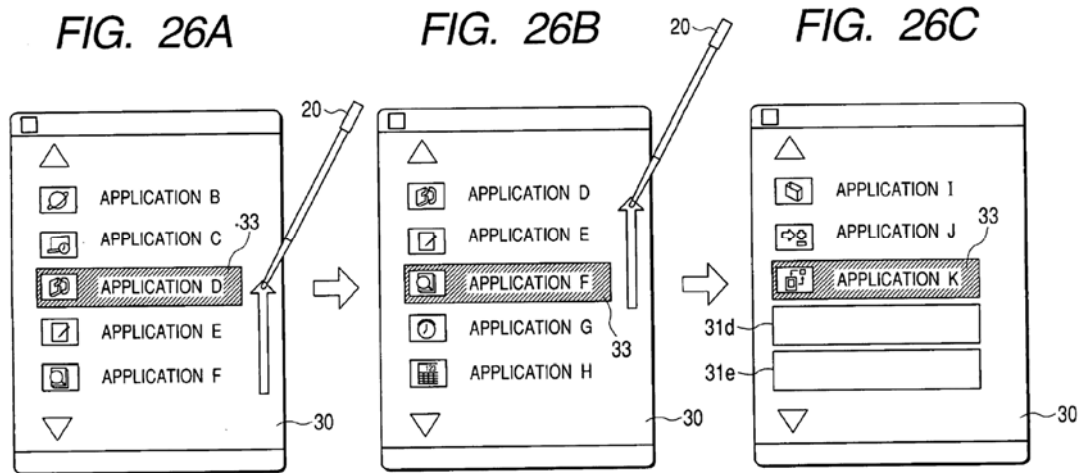
'631 Claim	Paasonen
	• Figs. 12-13  <i>Fig 12</i>  <i>Fig 13</i> • 9:5-16 (see [1.c]); • 13:16-52 (See [1.pre]); • 15:6-18 (See [1.a]); • See also 14:60-15:5.
10. The method of claim 1, wherein the displayed icon is displayed	See [1]. Paasonen further discloses that the displayed icon (see [1.a], [1.c]) is displayed together with at least a part of a screen image of a work process in the display (e.g.,

'631 Claim	Paasonen
together with at least a part of a screen image of a work process in the display.	“application switcher panel” is displayed with a “web browser”). <u>E.g., Paasonen:</u> See [1.a], [1.c]. Paasonen displays icons in the “application switcher panel,” including the “audio player” icon and browser icon, while the “application area” shows, e.g., a “browser.” Paasonen, Fig. 9; 12:56-13:7; 14:22-29, 15:6-18. Madisetti, ¶¶115–117. • Fig. 9 <i>Fig 9</i> • 12:56-13:7 (See [1.b]); • 14:22-29 (See [1.pre]); • 15:6-18 (See [1.a]).

B. Ground 2: Paasonen in view of Nakano (Claims 1-10)

As explained in §IX.A for [1.c]/[8]-[9], **Paasonen** discloses sequentially displaying icons in the designated portion. To the extent additional disclosure is required, modifying **Paasonen** with **Nakano** renders obvious those elements.

Nakano discloses a sequential application list with icons. Figs. 26A-26C, [0005], [0016], [0046], [0288], [0301], [0303]. A user “scroll[s]” through this list—a menu of application icons—causing them to be sequentially displayed. *Id.* Figs. 26A-26C show that repeated scroll commands cause the top icons to disappear as new bottom icons appear, such that a new icon replaces the icon that formerly occupied each relevant portion of the display. *Id.* Madisetti, ¶118.



Paasonen and **Nakano** are in the same field as the '631—which includes mobile interfaces—and are reasonably pertinent to the problems purportedly addressed by the '631—*e.g.*, providing interfaces for multi-tasking mobile terminals. See '631, 2:32-51; Paasonen 1:6-9, 3:41-4:25; Nakano [0001], [0006], [0014]-[0015]. Madisetti, ¶119.

Paasonen discloses sequentially displaying the four most-recently active applications in the application switcher panel. Paasonen 14:22-29. **Nakano's** teachings permit a user to browse additional applications, including applications not

initially displayed, without obscuring the main application area. Madisetti, ¶120. A POSITA would have been motivated to modify **Paasonen**'s application switcher panel with **Nakano**'s scrolling teachings in order to more easily access recently-active applications by scrolling through more than four icons without the need for navigating menus. Nakano, [0015]-[0016]. Doing so addresses the difficulty of “arrang[ing] a large number of menu items” and advantageously “enhance[s] the operability” of the device. Nakano [0015]; Madisetti, ¶120. Ground 1 mapped the “designated portion” to the third icon among the application switcher icons, and **Nakano** also teaches displaying a fixed number of application icons at a time. Nakano Figs. 26A-26C. Thus, it would have been straightforward to modify **Paasonen**'s switcher panel with **Nakano**'s scrolling teachings easily scroll through all currently-running applications. Nakano [0046]. Indeed, **Nakano** recognizes that its teachings are applicable to “other electronic devices” with “menu displays.” Nakano [0148]. Madisetti, ¶120.

A POSITA would have reasonably expected success in modifying **Paasonen**'s application switcher with **Nakano**'s scrolling teachings, as scrolling was a well understood technique for navigating items on a virtual display. *See* Tu, [0031]; Törnqvist (Ex. 1017), 3:24-26; Zadesky (Ex. 1018), [0005]. Madisetti, ¶121.

Modifying **Paasonen** with these teachings thus further renders obvious [1.c], [8], and [9]. **For [1.c], Nakano further discloses in response to a first command**

for sequentially displaying icons, performing sequential display of icons (e.g., scrolling through application icons in response to a “scroll operation instruction”). Nakano, Figs. 26A-26C, [0005], [0016], [0046], [0288], [0301], [0303]. For example, each user scroll command sequentially displays icons in the application switcher panel. *Id.* Madisetti, ¶¶122–124.

For [8], Nakano discloses in response to a repetition of the first command (e.g., additional “scrolling” command), **performing sequential display of icons such that a displayed icon disappears from a screen of the mobile terminal and an icon appears on the screen of the mobile terminal** (e.g., “scroll[ing] through the menu display entities” causes some icons to disappear as others appear in Fig. 26B). Nakano, Figs. 26A-26B, [0157], [0184], [0229], [0292]. Each scrolling command causes the top icon to disappear, and a new bottom icon to appear. *Id.* Madisetti, ¶¶125–127.

For [9], Nakano discloses wherein an icon to be displayed in the designated portion is replaced with an icon that is different from the icon corresponding to the second work process in response to the first command (e.g., “scroll[ing] through the menu display entities” causes different application icons to be displayed in each “menu display area”). Nakano, Figs. 25, 26A-26B, [0292]-[0293], [0297]-[0298]. For example, in Fig. 26A, when Application E replaces D, application F replaces E. *Id.* Madisetti, ¶¶128–130.

Accordingly, modifying **Paasonen** with **Nakano**'s scrolling teachings further renders obvious Claims 1-10. Madisetti, ¶¶118–130.

C. Grounds 3/4: Paasonen in view of Aaltonen (Ground 3) and in further View of Nakano (Ground 4) (Claims 4, 7)

As explained in §§IX.A-IX.B, **Paasonen** (and **Nakano**) discloses and/or renders obvious MP3 playback (claim 4) and using a key, a user's voice, or motion to input commands (claim 7). To the extent further disclosure of these elements is required, modifying **Paasonen** (and **Nakano**) with **Aaltonen**'s teachings further renders obvious these claims. Madisetti, ¶¶131–134.

For [4], in addition to **Paasonen**'s music player teachings, **Aaltonen** further discloses music players play MP3 music. Aaltonen, Fig. 22G, [0053], [0050], [0054], [0060], [0121], [158]; Madisetti, ¶¶135–137. For [7], in addition to **Paasonen**'s teachings of using keys to input commands, **Aaltonen** discloses that commands are inputted through a user's voice (*e.g.*, “voice command ability”). Aaltonen [0053]. Madisetti, ¶¶138–140.

Like **Paasonen**, **Aaltonen** is in the same field as the '631 and reasonably pertinent to the '631's purported problems. See §IX.B; Aaltonen [0003], [0007]. Madisetti, ¶132.

Paasonen teaches a “music player,” but is silent on the music file format. Paasonen 11:48-65. A POSITA would have been motivated to modify **Paasonen**'s

music player with **Aaltonen**'s MP3 playback teachings to enable MP3 playback. Aaltonen [0121]; Madisetti, ¶133. A POSITA would have had a reasonable expectation of success in modifying **Paasonen** with **Aaltonen**'s MP3 teachings because MP3s were a well-known music file format and MP3-compatible music players were conventional in the art. Madisetti, ¶133; *see also* Seo (Ex. 1019), [0005]; Marriott, [0071].

A POSITA also would have been motivated to modify **Paasonen**'s user input teachings with **Aaltonen**'s teachings of "voice" inputs for issuing commands, including activating and deactivating control menus or the commands addressed in [7] of §IX.B, because using such features was merely using a known feature for its intended purpose, and using voice commands advantageously allows the device to, e.g., operate hands free. Aaltonen [0121]. Madisetti, ¶134. Indeed, using voice commands on mobile devices was well-understood. *E.g.*, Hon (Ex. 1020), [0004]; Viitamaki (Ex. 1021), [0087]. A POSITA therefore would have reasonably expected success when modifying **Paasonen**'s application controls with **Aaltonen**'s voice command teachings. Madisetti, ¶134.

Accordingly, Claims 4 and 7 are further obvious based on Grounds 1-2, in further view of **Aaltonen**'s MP3 and voice command teachings. Madisetti, ¶¶131–140.

D. Ground 5: Hotelling (Claims 1-4, 7)

1. Overview of Hotelling

Hotelling discloses a “hand-held” device that “simultaneously” implements, *e.g.*, “Music Player” and “Cell Phone” functions. Hotelling-Prov. 7:19-34, 20:9-21.

Figure 18 shows an example menu for selecting such functions.

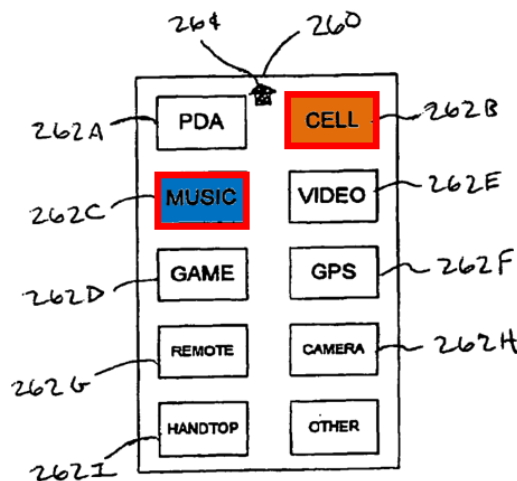
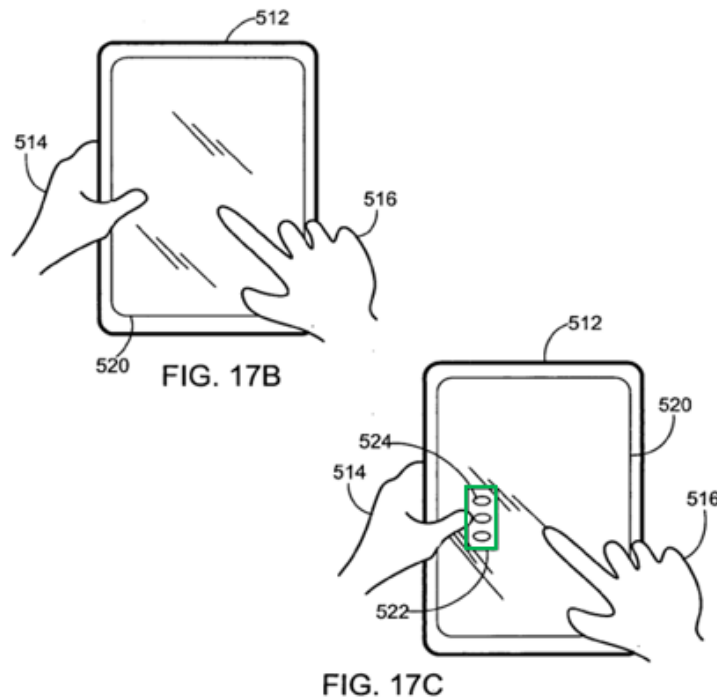


FIG. 18

The user launches, *e.g.*, “**music player**” or “**cell phone**” functionalities, by selecting icons in **designated locations** on a “main menu GUI.” Hotelling-Prov., 18:19-29. Selecting an icon “activate[s]” the corresponding function and displays a “GUI” for that function. Hotelling-Prov. 18:10-29. The user returns to the main menu to select a new functionality, or “flip[s] (or scroll[s]) through the various GUIs until the desired GUI is found.” Hotelling-Prov., 18:19-19:3. When displaying GUIs, the user issues a command to display a second GUI in a “split screen” mode. Hotelling-Prov. 20:9-21. Madisetti, ¶¶141–142.

In addition to control menus built into GUIs, **Hotelling** discloses touching the screen activates contextual “floating controls.” Hotelling-521 Figs. 6A, 17A-17E, [0070], [0086]-[0087], [0111]-[0114]. Hotelling-521 Figs. 17B-C show an example:



Floating controls include “menus,” a “volume knob,” and/or “play[/]pause” “buttons” for controlling—e.g., “music” applications. *Id.* Madisetti, ¶143.

2. Hotelling’s Effective Priority Date

Hotelling is prior art as of the 3/5/2005 filing date of the **Hotelling-Prov.** because the **Hotelling-Prov.** provides written description support for: 1) at least claim 1 of **Hotelling**, and 2) the subject matter in **Hotelling** that anticipates or renders obvious the Claims (as shown in §§IX.D-F). See *Dynamic Drinkware, LLC*

v. Nat'l Graphics, Inc., 800 F.3d 1375, 1381 (Fed. Cir. 2015); *Ex parte Mann*, 2016 WL 7487271, at *3 n.5, *6 (P.T.A.B. Dec. 21, 2016). Madisetti, ¶144.

Hotelling and **Hoteling-Prov.** have substantially identical disclosure and both incorporate **Hotelling-521**. Citations to **Hotelling-Prov.** should be understood to also cite and rely upon the corresponding **Hotelling** disclosures identified below. Madisetti, ¶¶145, 148–149.

Hotelling-Prov. Disclosure	Corresponding Hotelling Disclosure
Figs. 1-28	Figs. 1-28
7:25-33	[0041]
8:29-9:2	[0046]
9:12-23	[0048]
15:1-15	[0070]
16:8-16	[0073]
16:28-31	[0076]
16:32-17:5	[0077]
18:19-29	[0085]
18:31-19:7	[0086]
19:9-16	[0087]
19:18-25	[0088]
19:27-30	[0089]
20:9-21	[0092]
20:25-21:2	[0093]
22:6-20	[0097]
33:5-12	[0127]
34:15-23	[0133]

Hotelling-Prov. Disclosure	Corresponding Hotelling Disclosure
47:31-48:10	[0170]
48:5-9	[0173]
48:12-26	[0171]
48:28-49:3	[0172]
49:11-15	[0174]

As set forth below, **Hotelling-Prov.** supports at least claim 1 of **Hotelling**.

Madisetti, ¶¶146–147, 149.

Hotelling	Hotelling-Prov.—<i>e.g.</i>:
[1.pre] A hand-held electronic device, comprising:	4:8-12, 23:6-9, Figs. 2-3.
[1.a] a multi-touch input surface; and	23:6-9, 24:1-3.
[1.b] a processing unit operatively connected to said multi-touch input surface,	23:6-9, 24:1-3, 47:2-48:5, 48:28-49:3, Fig. 28.
[1.d] said processing unit capable of receiving a plurality of concurrent touch inputs from a user via said multi-touch input surface and discriminating a user requested action from the touch inputs; and	20:9-21, Figs. 27A-27E.
[1.e] a display device operatively coupled to the processing unit and configured to present a user interface.	18:10-17, 49:5-9.

3. Claim Chart

In addition to §§IX.D.1–2, the following identifies example disclosures followed by bulleted excerpts that each disclose and/or render obvious the Claims.

As discussed in §IV.B.1, **Hotelling**, **Hotelling-Prov.**, and **Hotelling-521** form a single disclosure, and citations to **Hotelling-Prov.** include the corresponding **Hotelling** disclosures. Madiseti, ¶150.

'631 Claim	Hotelling
[1.pre] A method for controlling a predetermined function of a second work process during a first work process in a multitasking mobile terminal that performs the first work process and the second work process, the method comprising:	Hotelling discloses a method for controlling a predetermined function of a second work process during a first work process in a multitasking mobile terminal that performs the first work process and the second work process (e.g., method for controlling “Cell Phone” function while “simultaneously” running “Music Player” in a “cell phone”). <u>E.g., Hotelling:</u> Hotelling discloses a “multi-functional” hand-held device with, e.g., “Cell Phone” and “Music Player” functionalities with their own GUIs. Hotelling-Prov. 7:25-29. The device operates both functionalities “simultaneously,” with “software for both” activated and “both GUIs” visible. Hotelling-Prov. 20:9-21. Madiseti, ¶¶151–153. • Hotelling-Prov. Figs. 2, 10-11, 18 FIG. 2 FIG. 10

'631 Claim	Hotelling
	FIG. 11 FIG. 18 Hotelling-Prov. 7:25-29 (“...<i>The multi-functional device may, for example, include at least two or more of the following device functionalities: PDA, Cell Phone, Music Player,...or remote control.</i>”); Hotelling-Prov. 18:19-29 (“Fig. 18 is ... a main menu GUI 260.... As shown, the <i>GUI 260 includes icons/buttons 262 for launching each of the various device functionalities</i>. In this particular example, the main menu page 260 includes ... <i>a cell phone button 262B, a music player button 262C, ...and a handtop button 262I. The various buttons 262 are virtual buttons. When the button is pressed, the main page for the selected icon as shown in Figs. 9-17 is brought into view on the display. As an example, in order to select another device, the user simply selects a soft home button 264 located in the GUI of each device in order to load the main menu page 260, and thereafter selects the desired device in the main menu page 260.</i>”); Hotelling-Prov. 20:9-21 (“C. OPERATING AT LEAST TWO FUNCTIONALITIES SIMULTANEOUSLY In one embodiment, <i>the device instead of activating one device, may also activate two devices (or more).</i>”).

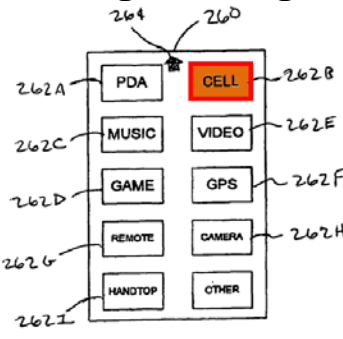
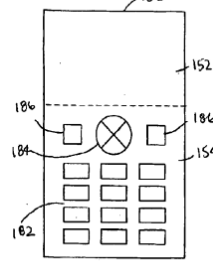
'631 Claim	Hotelling
	In cases such as these, <i>the software for both devices is activated and the display operates in a split screen mode where the screen is parsed into different sections, each section including the device GUI</i>. By way of example, in a landscape mode, <i>a first device GUI may be presented on the left side of the display screen and a second device GUI may be presented on the right side.... In one implementation, when the user simultaneously touches two device icons, the device activates both device functionalities and brings both GUIs into view on the screen.</i>”); • <i>See also</i> Hotelling-Prov. 9:12-23, 16:28-31, 16:32-17:5, 20:25-30.
[1.a] displaying one icon in a designated portion of a display, wherein the displayed icon corresponds to the first work process;	Hotelling discloses displaying one icon in a designated portion of a display (e.g., set location on main menu), wherein the displayed icon corresponds to the first work process (e.g., “icon[]/button[]” for a “music player;” Fig. 18). <u>E.g., Hotelling:</u> Hotelling discloses a “music play[]” “icon[]/button[]” in a designated location 262C in the “main menu”; the location is designated because the main menu designates that location to display an icon. Hotelling-Prov. 18:19-29. Madisetti, ¶¶154–156. • Hotelling-Prov. Fig. 18 FIG. 18

'631 Claim	Hotelling
	• Hotelling-Prov. 18:19-29 (See [1.pre]); • Hotelling-Prov. 18:31-19:7 (“<i>The selection may also come in a more active form including flipping (or scrolling) through the various GUIs until the desired GUI is found...</i>”). • See also Hotelling-Prov. 20:25-30.
[1.b] if the displayed icon corresponding to the first work process is selected, displaying a screen of the first work process in the display;	Hotelling discloses, if the displayed icon corresponding to the first work process is selected (see [1.a]; “music player button” is “pressed”), displaying a screen of the first work process in the display (e.g., “the main page for the selected icon...is brought into view”). <u>E.g., Hotelling:</u> Hotelling discloses that when the “music player button” is pressed, the “GUI ... used in a Music Player mode” “is brought into view.” Hotelling-Prov. 16:32-17:5, 18:19-29, Fig. 11. Madisetti, ¶¶157–159. • Hotelling-Prov. Fig. 11 The diagram shows a rectangular GUI labeled 190. A horizontal dashed line divides the rectangle into two parts. The upper part is labeled 152. The lower part contains a circular element labeled 192, which is surrounded by a larger circular area labeled 154. A small arrow labeled 194 points to the bottom-left corner of the rectangle. Below the diagram is the label 'FIG. 11'. • Hotelling-Prov. 16:32-17:5 (“<i>Fig. 11 is a diagram of a GUI 190 that is used in a Music Player mode. As shown, the GUI 190 is divided into a standard region 152 and a control region 154...</i>”); • Hotelling-Prov. 18:19-29 (See [1.pre]);
[1.c] in response to a first	Under Pantech’s interpretation, Hotelling discloses in response to a first command for sequentially displaying

'631 Claim	Hotelling
command for sequentially displaying icons, performing sequential display of icons such that an icon corresponding to the second work process is displayed, wherein the icon corresponding to the second work process is displayed in the designated portion of the display;	icons, performing sequential display of icons (e.g., selecting a “home button” causes “device” to “load the main menu page”) such that an icon corresponding to the second work process is displayed, wherein the icon corresponding to the second work process is displayed in the designated portion of the display (e.g., “cell phone” icon corresponding to “cell phone” application is displayed in its designated location 262B on the “main menu”). <u>E.g., Hotelling:</u> See [1.a]. Pantech has taken the position that a “swipe up” or “press home button” command to display a screen with an icon in a designated location is sequentially displaying icons.¹² Ex.1031, 9-10, 12. Madisetti, ¶162.¹³ Under Pantech’s interpretation, as discussed in [1.a], Hotelling’s command to “select[] a soft home button” discloses a command for sequentially displaying icons, by causing a menu of icons to be displayed, including “a cell phone button” for the second work process in a designated location 262B. Hotelling-Prov. 18:19-29, Fig. 18. Madisetti, ¶¶160–162.

¹² Petitioner disagrees with Pantech’s interpretation.

¹³ Pantech also contends that these features meet the claim under the doctrine of equivalents; for similar reasons, under Pantech’s theory, Hotelling’s teachings at least render obvious this element.

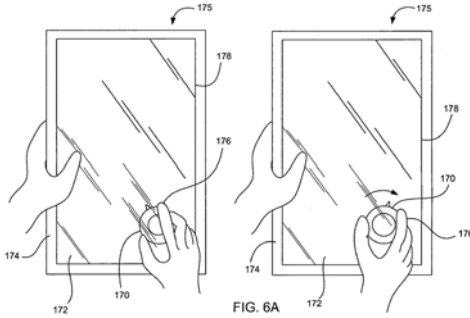
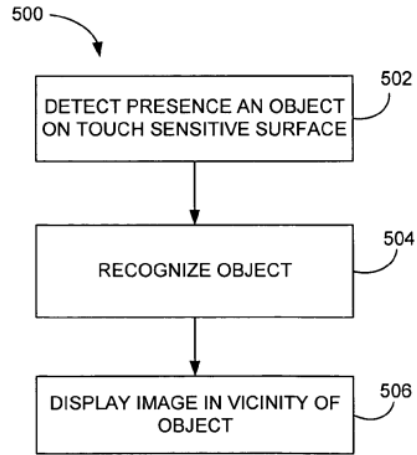
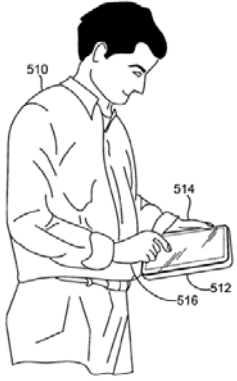
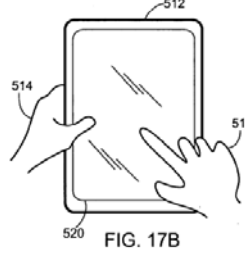
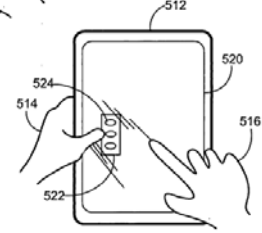
'631 Claim	Hotelling
	- Hotelling-Prov. Fig. 18  FIG. 18 - Hotelling-Prov. 18:19-29 (See [1.pre]).
[1.d] in response to a second command for changing to the second work process, replacing the screen of the first work process with a screen of the second work process;	Hotelling discloses in response to a second command for changing to the second work process, replacing the screen of the first work process with a screen of the second work process (e.g., “When the [cell phone] button is pressed, the main page for the selected icon...is brought into view”). <u>E.g., Hotelling:</u> See [1.b] Hotelling discloses that when the “cell phone button” is pressed, the “GUI ... used in a Cell Phone mode” “is brought into view.” Hotelling-Prov. 16:28-31, 18:19-29, Fig. 10. Madisetti, ¶¶163–165. - Hotelling-Prov. Fig. 10  FIG. 10 - Hotelling-Prov. 16:28-31 (“Fig. 10 is a diagram of a GUI 180 that is used in a Cell Phone mode. As

'631 Claim	Hotelling
	<i>shown, the GUI 180 is divided into a standard region 152 and a control region 154...</i>"); • Hotelling-Prov. 18:19-29 (See [1.pre]); • See also Hotelling-Prov. 18:31-19:7.
[1.e] controlling the multitasking of the second work process and the first work process;	Hotelling discloses controlling the multitasking of the second work process and the first work process (<i>e.g.</i>, different functionalities, including “Cell Phone” and “Music Player” functionalities, are operated “simultaneously”). <u>E.g., Hotelling:</u> See [1.pre]. Hotelling further discloses operating “Cell Phone” and “Music Player” functionalities “simultaneously” (<i>e.g.</i>, playing music while showing the cell phone number pad). Hotelling-Prov. 7:25-29; 20:9-21. Madisetti, ¶¶166–168. • Hotelling-Prov. 7:25-29, 20:9-21 (See [1.pre]); • See also Hotelling-Prov. 18:19-29.
[1.f] in response to a third command for activating a control menu for controlling a predetermined function of the first work process, activating the control menu for controlling the predetermined function of the	Hotelling discloses in response to a third command for activating a control menu for controlling a predetermined function of the first work process (<i>e.g.</i>, simultaneously touching “music player” and “Cell Phone” to display “split screen mode”; activate “floating controls” with “music player” “play, pause” buttons; “invoke the virtual control knob” to control “volume” of a “currently playing” “song”), activating the control menu for controlling the predetermined function of the first work process (<i>e.g.</i>, “music player” in “split screen mode” includes playback controls; “floating controls” include “play, pause” “control buttons”; knob controls “volume” function for a “currently playing” “song”). <u>E.g., Hotelling:</u>

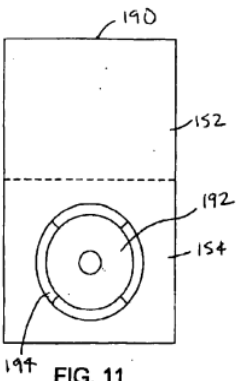
'631 Claim	Hotelling
first work process; and	Hotelling discloses this element three ways. First, Hotelling discloses touching the “music player” and “Cell Phone” buttons simultaneously to enter a “split screen” mode with a “music player” GUI that includes “play/pause” buttons to control music player functionality, and is therefore a control menu. Hotelling-Prov. 8:29-9:2; 15:1-15; 16:32-17:5, 20:9-21.¹⁴ Accessing split-screen mode (e.g., from a main menu) is available in addition to flipping through GUIs. Hotelling-Prov. 18:31-19:7; 20:9-21. Madisetti, ¶¶169–171. Second, Hotelling-521 (which is incorporated by reference into Hotelling and Hotelling-Prov.) discloses touching the screen of the device to display “floating controls” with preset “music listening control buttons” including “play” and “pause” buttons for controlling the predetermined music player functions; these “floating controls” are a control menu. Hotelling-521 [0111]-[0113]. Madisetti, ¶172. Third, under Pantech’s interpretation, Hotelling-521 discloses using a gesture to “invoke [a] virtual control knob” to control “volume” for a “currently playing” “song,” which is a “volume” control menu. Hotelling-521, [0086]. Pantech has taken the position that pressing a button to display volume controls activates a control menu, and the ’631 describes a “volume control” as a function of a MP3 play process. Ex. 1031, 21; ’631, 2:40-44. Madisetti, ¶173.

¹⁴ To the extent the claimed “control menu” must be displayed with a screen of the second work process, this is further disclosed by **Hotelling**’s split-screen mode where the Music Player’s “control region” is displayed with the “cell phone” GUI. See Hotelling-Prov. 16:28-31; 16:32-17:5; 20:9-21; Madisetti, ¶171.

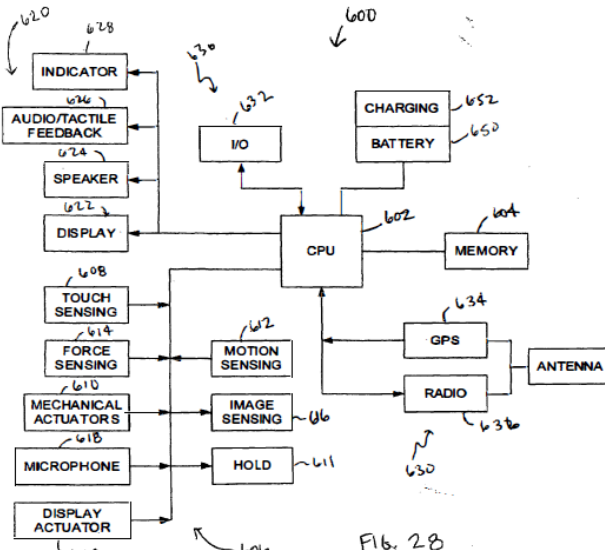
'631 Claim	Hotelling
	Hotelling-Prov. Figs. 11, 18 FIG. 11 is a schematic diagram of a device 190. It includes a top section 152, a bottom section 192, and a central circular region 154. A dashed line 194 is shown below the bottom section 192. FIG. 18 is a schematic diagram of a device 260. It includes a top section 264 and a bottom section 262. The bottom section 262 is divided into two columns of functions: PDA (262A), MUSIC (262C), GAME (262D), REMOTE (262E), HANDTOP (262F), and OTHER (262G) in the left column; and CELL (262B), VIDEO (262D), GPS (262E), CAMERA (262F), and OTHER (262G) in the right column. Hotelling-Prov. 8:29-9:2 (“...<i>Music players can be based on the MP3 or AAC format.... Music Players typically include a microprocessor, memory, display, audio jack, data port and playback controls. The playback controls typically include features such as menu, play/pause, next, previous, volume up, and volume down.</i>”); Hotelling-Prov. 15:1-15 (“...<i>The control region 154, on the other hand, virtually represents the physical controls that would normally be physically placed on a particular device...</i>”); Hotelling-Prov. 16:32-17:5 (See [1.b]), 18:31-19:7 (See [1.a]), 20:9-21 (See [1.pre]); Hotelling-Prov. 33:5-12 (“<i>In another embodiment, the hand-held device may include a navigation pad.... In the case of a music player for example, the directional keys may be assigned, play/pause, Next, Previous, and volume up and down...</i>”). See also Hotelling-Prov. 18:19-29;

'631 Claim	Hotelling
	Hotelling-521 Figs. 6A, 16, 17A-17C  FIG. 6A  FIG. 16  FIG. 17A  FIG. 17B  FIG. 17C Hotelling-521 [0086] (“[R]eferring to FIGS. 6A-6H, <i>a rotate gesture for controlling a virtual volume knob...</i> will be described. <i>In order to actuate the knob 170, the user places their fingers 176 on a multipoint</i>

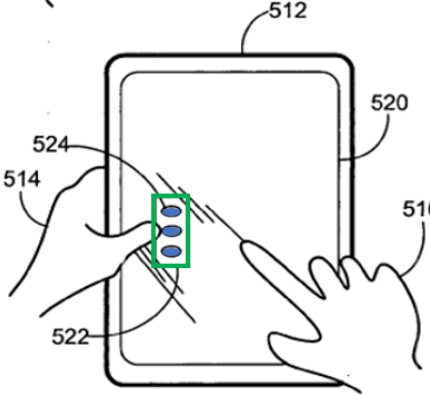
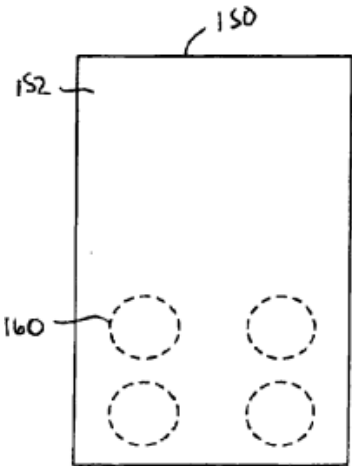
'631 Claim	Hotelling
	<i>touch screen 178. The virtual control knob may already be displayed, or the particular number, orientation or profile of the fingers at set down, or the movement of the fingers immediately thereafter, or some combination of these and other characteristics of the user's interaction may invoke the virtual control knob to be displayed.... For example, the same gesture may be interpreted alternatively as a volume know gesture if a song is currently playing on the computing device ...")</i> • Hotelling-521 [0093] (“As shown in FIG. 6G, <i>based on the rotation vector the speaker 192 of the tablet PC 175 increases (or decreases) its output in accordance with the amount of rotation of the fingers 176, i.e., increase the volume by 5% based on rotation of 5 degrees...</i>”) • Hotelling-521 [0111] (“FIG. 16 is a diagram of a GUI operational method 500.... <i>The GUI operational method 500 is configured for initiating floating controls in a GUI. The GUI operational method 500 generally begins at block 502 where the presence of an object such as a finger or thumb is detected...</i>”) • Hotelling-521 [0112] (“Following block 504, <i>the GUI operational method 500 proceeds to block 506 where an image in the vicinity of the object is generated...</i>”) • Hotelling-521 [0113] (“<i>[T]he image includes one or more control options that can be selected by the user.... For example, the control option box may include music listening control buttons as for example, play, pause, seek and menu.</i>”)

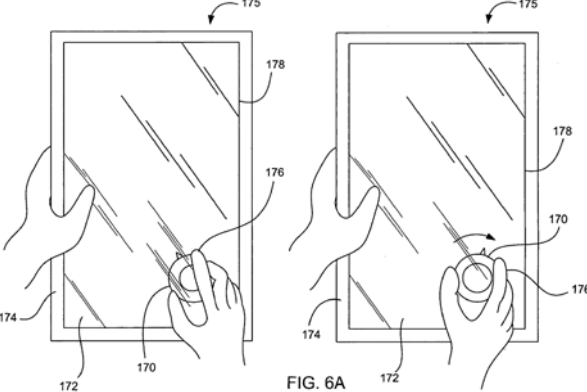
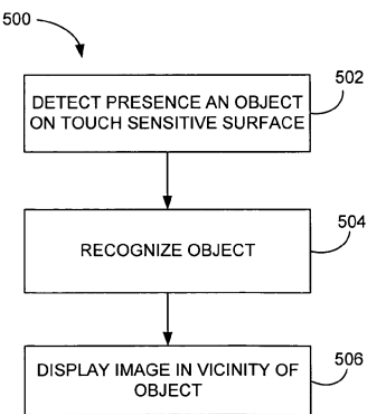
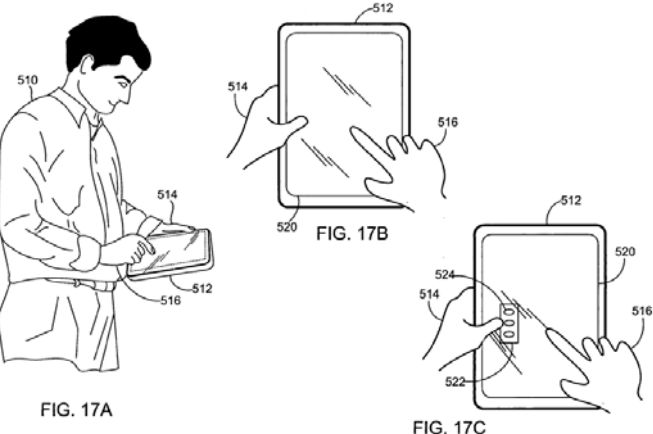
'631 Claim	Hotelling
	• See also Hotelling-521 Figs. 6B-6G; [0085], [0087]-[0092], [0094], [0114].
[1.g] in response to a fourth command for controlling the predetermined function of the first work process through the activated control menu, controlling the predetermined function of the first work process through the activated control menu.	Hotelling discloses in response to a fourth command for controlling the predetermined function of the first work process through the activated control menu, controlling the predetermined function of the first work process through the activated control menu (see [1.f], e.g., “Music Player” “play/pause” controls in “split screen” control a playback function; “floating controls” include “play” and “pause” buttons to control a playback function; “volume” “control knob” controls “volume” functions). <u>E.g., Hotelling:</u> See [1.f]. Hotelling further discloses that the split screen music player GUI has a “control region” with “play/pause” buttons to control music playback functions. Hotelling-Prov. 8:29-9:2, 16:32-17:5, 20:9-21. Similarly, the Hotelling-521 music player floating controls include play/pause buttons to play and pause music. Hotelling-521 [0113]. And with respect to the volume control, the Hotelling-521 virtual volume control knob controls the volume of music. Hotelling-521, [0093]. Madisetti, ¶¶174–176. • Hotelling-Prov. Fig. 11  FIG. 11

'631 Claim	Hotelling
	• Hotelling-Prov. 8:29-9:2, 15:1-15 (See [1.f]), 16:32-17:5 (See [1.b]), 20:9-21(See [1.pre]); • Hotelling-521 [0093], [0111], [0113] (see [1.f]). • See also Hotelling-521 [0090], [0114].
[2] The method of claim 1, wherein the controlling the predetermined function of the first work process comprises: generating a control signal for controlling the predetermined function of the first work process in response to the fourth command; and controlling the predetermined function of the first work process in response to the generated control signal.	See [1]. Hotelling further discloses controlling the predetermined function of the first work process comprises: generating a control signal for controlling the predetermined function of the first work process in response to the fourth command (e.g., see [1.f]-[1.g]; “controller” “interprets” a user “touch” as “input signals” for “Music Player” functions (see [1.g])); and controlling the predetermined function of the first work process in response to the generated control signal (e.g., see [1.f]-[1.g]; “controller” will control playback functions, including play, pause, and volume, in response to the “input signals”). <u>E.g., Hotelling:</u> See [1.pre], [1.f]-[1.g]. Hotelling further discloses a “controller” receives “input signals” from a touch screen to “carry out operations associated with the hand-held device.” Hotelling-Prov. 22:6-20, 47:31-48:10, Fig. 28. This not only renders obvious but affirmatively discloses that when a user interacts with the music player controls discussed in [1.f]-[1.g], the controller responds to the input signal, which is a control signal, by controlling the “Music Player” to, e.g., play, pause, or change the volume. Hotelling-Prov. 8:29-9:2, 22:6-20, 47:31-48:10. Madisetti, ¶177–179.

'631 Claim	Hotelling
	Hotelling-Prov. Fig. 28  Fig. 28 Hotelling-Prov. 8:29-9:2 (See [1.e]). Hotelling-Prov. 22:6-20 (“...<i>The touch screen generates input signals when an object such as a finger (or stylus) is moved across the surface of the touch screen, from an object holding a particular position on the touch screen and/or by a finger tapping on the touch screen.... In general, the touch screen recognizes the touch and position of the touch on the display and a controller of the hand-held electronic device interprets the touch and thereafter performs an action based on the touch event...</i>”); Hotelling-Prov. 47:31-48:10 (“Fig. 28 is a block diagram of an exemplary hand-held device 600.... <i>The hand-held device 600 typically includes a controller 602 (e.g., CPU) configured to execute instructions and to carry out operations associated with the hand-held device. For example,... the controller 602 may control the reception and manipulation of input and</i>

'631 Claim	Hotelling
	<i>output data between components of the hand-held device 600....”);</i> • <i>See also</i> Hotelling-Prov. 48:12-26, 48:28-49:3, 48:5-9, 49:11-15.
3. The method of claim 1, further comprising: in response to a fifth command for deactivating the activated control menu, deactivating the activated control menu.	See [1]. Hotelling further discloses in response to a fifth command for deactivating the activated control menu, deactivating the activated control menu (<i>e.g.</i>, controls “disappear” “when the thumb is moved away from the touch screen”; floating controls are “closed using conventional close icons or buttons”). <u>E.g., Hotelling:</u> <i>See [1.f]-[1.g].</i> First, Hotelling further discloses the split screen music player’s “control region” is closed by navigating away from the GUI—<i>e.g.</i>, by opening the main menu. <i>See</i> Hotelling-Prov 18:19-19:7, Fig. 18. Madisetti, ¶¶180–182. Second, Hotelling-521 further discloses that “buttons” for “floating control[s]” include “conventional close icons or buttons” for deactivating the control menu. Hotelling-521 Fig. 17C, [0065], [0113]-[0114]. Madisetti, ¶182. Third, while Hotelling-521 does not expressly state how to deactivate the “virtual control knob,” a POSITA would have found it obvious to apply Hotelling-521’s own teachings of, <i>e.g.</i>, “conventional close icons” or the gesture of moving a thumb “away from the touch screen” and allowing the controls to “time out and disappear.” Hotelling-521 [0085]-[0086], [0113]-[0114]; Madisetti, ¶182; <i>Bos. Sci. Scimed, Inc. v. Cordis Corp.</i>, 554 F.3d 982, 991 (Fed. Cir. 2009) (“Combining two embodiments disclosed adjacent to each

'631 Claim	Hotelling
	other in a prior art patent does not require a leap of inventiveness.”). • Hotelling-521 Fig. 17C:  FIG. 17C • Hotelling-Prov. Fig. 8  FIG. 8 • Hotelling-Prov. 16:8-16 (“[A]s shown in FIG. 8, <i>virtual controls 160 may be overlaid on top of the standard region 152 so that the standard region 152 can fully utilize the entire display 122. In fact, the virtual controls 160 may appear and disappear as needed....</i>”);

'631 Claim	Hotelling
	• Hotelling-Prov. 16:32-17:5 (See [1.b]), 18:19-29 (See [1.pre]), 18:31-19:7 (See [1.a]); • Hotelling-521 Figs. 6A, 16, 17A-17C  FIG. 6A  FIG. 16  FIG. 17A FIG. 17B FIG. 17C

'631 Claim	Hotelling
	• Hotelling-521 [0065] (“<i>When a user performs one or more gestures, the input device 70 relays gesture information to the processor 56....[T]he processor 56 interprets the gestures 85 and controls different components of the computer system 50, such as memory 58, a display 68 and I/O devices 80, based on the gestures 85...</i>”); • Hotelling-521 [0113] (See [1.f]); • Hotelling-521 [0114] (“FIGS. 17A-17E illustrate a floating control sequence... in FIG. 17C, the tablet PC 512 recognizes the thumb and displays a control box 522 adjacent the thumb. <i>The control box 522 includes various buttons 524, which can be selected by the user's thumb to initiate tasks in the tablet PC 512.... As shown in FIG. 17E, when the thumb is moved away from the touch screen 520, the control box 522 may time out and disappear. Alternatively, the control box may be closed using conventional close icons or buttons.</i>”). • See also Hotelling-521 [0111]-[0112].
4. The method of claim 1, wherein the first work process is an MP3 play process.	See [1]. Hotelling further discloses wherein the first work process is an MP3 play process (e.g., the first work process (see [1.a]) plays “music” based on an “MP3” format). <u>E.g., Hotelling:</u> See [1.pre]-[1.a]. As discussed in [1.pre]-[1.a], Hotelling discloses a “Music Player” plays “MP3” music. Hotelling Prov. 8:29-9:2, 18:19-29. Madisetti, ¶¶183–185.

'631 Claim	Hotelling
	• Hotelling-Prov. 8:29-9:2 (See [1.f]), 18:19-29 (See [1.pre]). • <i>See also</i> Hotelling-Prov. 16:32-17:5.
7. The method of claim 3, wherein the third command and the fifth command are inputted through at least one of a predetermined key, a user's voice, and a motion of the mobile terminal.	See [3]. Hotelling further discloses wherein the third command and the fifth command are inputted through at least one of a predetermined key, a user's voice, and a motion of the mobile terminal (see [1.f], [3]; e.g., third and fifth commands input by “shaking” or using “voice”). <u>E.g., Hotelling:</u> <i>See [1.f], [3].</i> Hotelling further discloses inputting commands using “a user's voice,” or by “shaking” the device. Hotelling-Prov., 19:14-16, 19:21-25, 19:21-30. This not only renders obvious, but affirmatively discloses inputting commands using voice or motion of the device to activate/deactivate control menus (see [1.f], [3]). Madisetti, ¶¶186–188. • Hotelling-Prov 19:9-16 (“<i>The command signal may also be generated by gestures initiated on the touch screen...</i> <i>The command signal may also be generated by 3D device gestures created when the entire hand-held device is moved spatially. By way of example, shaking the device may cause a new page to be displayed.</i>”); • Hotelling-Prov 19:21-30 (“<i>The command signal may also be generated by monitoring a user's voice (i.e., voice recognition)...</i>”). • <i>See also</i> Hotelling-Prov. 18:31-19:7, 19:18-25, 34:15-23.

E. Ground 6: Hotelling in view of Hellyar (Claims 1-4, 6-10)

1. Overview of Hellyar

To the extent additional disclosure of sequentially displaying icons beyond **Hotelling** (§IX.D.3) is required, **Hellyar** further discloses sequentially displaying icons. See Hellyar [0003], [0013], [0027]. Windows for open applications are presented as an “icon,” “text,” and “preview” of each application. Hellyar [0013], [0024]. The user then “navigate[s] through the icons” and “select[s] an application” for “full viewing.” Hellyar [0024]. Madisetti, ¶189.

Hellyar discloses several arrangements of navigation windows including the embodiments of Figs. 3B-3C, each of which separately renders obvious the claims. Fig. 3C illustrates an embodiment:

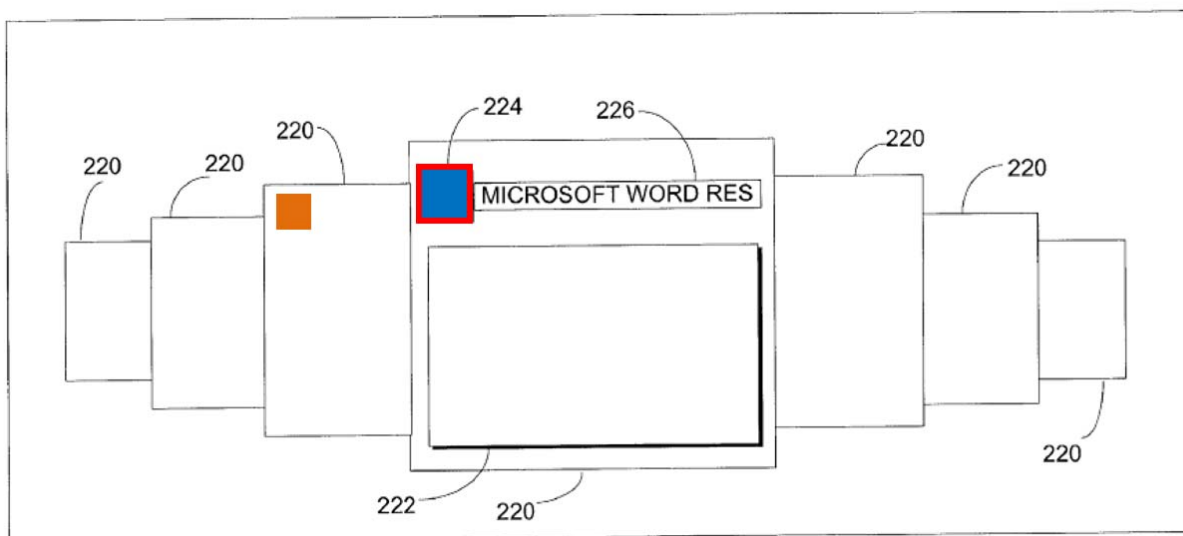


FIG. 3C.

In Fig. 3C (annotated), windows are “presented in a linear fashion,” with the “selected window” presented “in the center of the display on top.” Hellyar [0045]. Each window contains “a preview 222, an icon 224, and text 226.” Hellyar [0045]. An “**icon**” for the “selected window” is in **the top-left corner**; since each window includes icons, an “**icon**” is also shown for the “next window” in the hierarchy. *Id.* When the user enters a command to “cycle through the windows,” the windows shift from left to right—causing the “next window” to appear in the center, such that one icon replaces another in the same designated portion of the display. *Id.* Madisetti, ¶190.

2. Motivation to Modify Hotelling with Hellyar’s Teachings

Hotelling and **Hellyar** are in the same field as the ’631 and are reasonably pertinent to the ’631’s purported problems, *e.g.*, providing an interface for multi-tasking mobile terminals. See §IX.B; ’631, 2:32-51; Hotelling-Prov. 3:23-25; Hellyar [0003], [0013]. Madisetti, ¶191.

Hotelling broadly discloses “flipping (or scrolling) through the various GUIs” for different device functionalities. Hotelling-Prov, 18:31-19:3. **Hellyar** provides additional detailed teachings of including icons when flipping through GUIs to identify each GUI. See Hellyar [0013], [0024], [0044]-[0045]. A POSITA would have been motivated to modify **Hotelling** with **Hellyar’s** teachings of including

icons when cycling between app previews, yielding sequentially displaying icons while flipping through GUIs. Madisetti, ¶192.

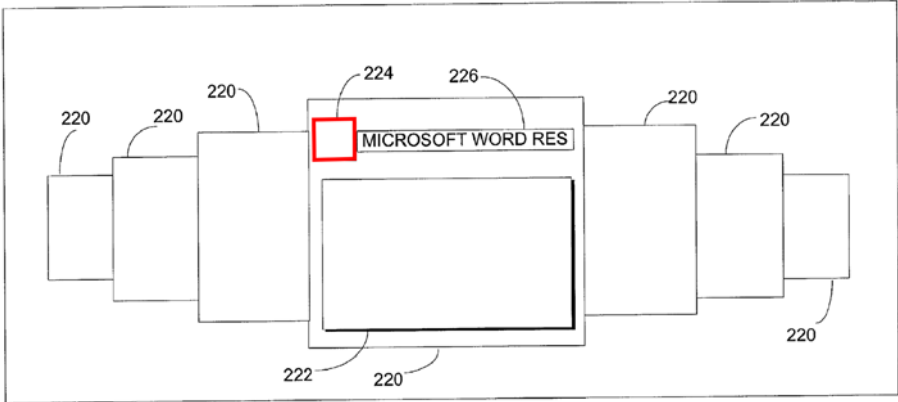
First, Hellyar’s teaches that including icons in preview windows advantageously provides additional information to the user, improving the user’s ability to more conveniently “navigate quickly through multiple applications.” Hellyar, [0011]-[0013]. Madisetti, ¶193.

Second, Hotelling broadly teaches “flipping (or scrolling) through” GUIs, but leaves it to a POSITA to implement the interface for flipping or scrolling. Hotelling-Prov. 18:31-19:3. **Hellyar** provides detailed teachings of how to arrange, display, and incrementally cycle through previews, such as GUIs, advantageously improving the accessibility of **Hotelling’s** flipping and scrolling teachings. Hellyar, [0024], [0044]-[0045]. Madisetti, ¶194.

A POSITA would have had a reasonable expectation of success in modifying **Hotelling** with **Hellyar’s** teachings because of the well-understood nature of these teachings. *E.g.*, Tu, [0032]; Lee (Ex. 1022), [0027]; Madisetti, ¶195. Indeed, **Hellyar** explicitly teaches practicing its invention using “hand-held devices.” Hellyar [0027].

3. Claim Chart

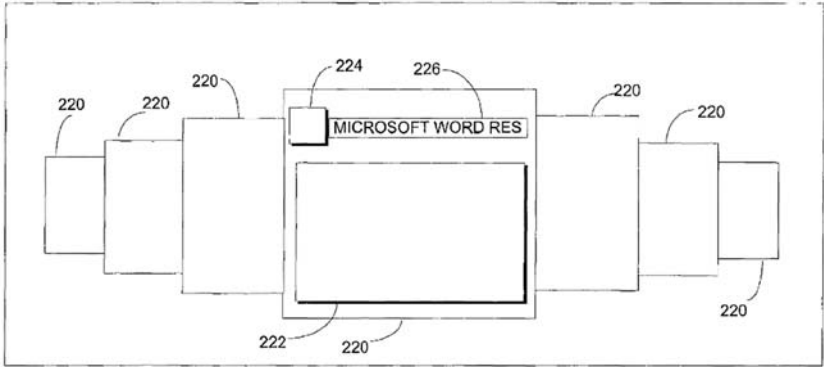
In addition to §§IX.E.1–2, the following identifies example disclosures followed by bulleted excerpts that each disclose and/or render obvious the Claims. These disclosures are in addition to **Hotelling’s** disclosures in §IX.D.3.

'631 Claim	Hotelling in view of Hellyar
[1.a] displaying one icon in a designated portion of a display, wherein the displayed icon corresponds to the first work process;	Hellyar discloses displaying one icon in a designated portion of a display (<i>e.g.</i>, “icon” within the corner of the “selected window ... in the center of the display”), wherein the displayed icon corresponds to the first work process (<i>e.g.</i>, “icon” represents an “open application[] window[]”). <u>E.g., Hellyar:</u> Hellyar discloses “navigating between applications” by cycling through windows containing “previews, icons, and text,” as shown in Fig. 3C:  FIG. 3C. Hellyar [0024], [0045]. The icon for the “selected window” is in a designated portion of the display—<i>e.g.</i>, the top-left corner of the central window. <i>Id.</i>; Madisetti, ¶¶196–198. As discussed in §IX.E.2, a POSITA would have been motivated to modify Hotelling’s teaching of flipping or scrolling through GUIs with Hellyar’s teaching of

'631 Claim	Hotelling in view of Hellyar
	presenting such GUIs with “icons,” yielding an icon displayed in a designated portion of the screen. Madisetti, ¶198. • [0024] (“...<i>Broadly, the invention monitors for user input indicative of a desire to navigate between open applications windows. If the input is received, a new window is displayed that contains an icon, text and a preview of the next window in the activation hierarchy.... The user can then navigate through the icons, viewing the preview for each icon selected. Upon receiving input indicative of a desire to select an application window for full viewing, the invention brings the selected icon's corresponding window to the foreground and the new window is no longer displayed....</i>”) • [0040] (“...<i>In a further embodiment, instead of the Alt+Tab keystroke, a user may indicate the icon he or she wants to select by using a pointing device, such as a mouse... As more fully described below, depending on the navigation display, the preview, icon and text for each open window may be arranged and displayed with the window selected in step 212 highlighted in some fashion...</i>”) • [0042] (“...<i>[T]he invention will display at least the icons associated with each open window as well as text and a preview of the next window in the activation hierarchy.... Successively pressing the Tab key with the Alt key depressed iterates through the activation hierarchy such that successive previews are highlighted...</i>”) • [0045] (“<i>In FIG. 3C, the windows 220 having previews 222, icons 224 and text 226 are again presented concurrently. Although not shown in FIG. 3C, it should be understood that each window 220 contains a preview 222, an icon 224 and text 226.</i>”)

'631 Claim	Hotelling in view of Hellyar
	<i>The previews, icons and text are presented in a linear fashion. The selected window is presented in the center of the display on top of the other windows and is larger than the other windows. A portion of the remaining windows as enumerated in step 208 are presented to the left and right of the selected window with the next window in the activation hierarchy immediately to the left of the selected window.... When the user presses the Tab button with the Alt key depressed to cycle through the windows, the windows shift so that the selected window is always in the center of the display.”)</i> • See also Fig. 3B, [0041], [0044].
[1.b] if the displayed icon corresponding to the first work process is selected, displaying a screen of the first work process in the display;	Hellyar discloses if the displayed icon corresponding to the first work process is selected (see [1.a]; “receiving input indicative of a desire to select an application”), displaying a screen of the first work process in the display (e.g., “the top-level window corresponding to the selected preview and icon are brought to the foreground”). <u>E.g., Hellyar:</u> See [1.a]. Hellyar further discloses that the application corresponding to the “selected icon[]” is “brought to the foreground” for “full viewing.” Hellyar, [0024], [0041]. Madisetti, ¶¶199–201. As discussed in §IX.E.2, a POSITA would have been motivated to modify Hotelling’s teaching of flipping or scrolling through GUIs, yielding preview screens that include an icon with each GUI. Madisetti, ¶201. • [0024], [0040] (See [1.a]); • [0041] (“...If the previews are showing and the Alt key has been released, the system proceeds to step

'631 Claim	Hotelling in view of Hellyar
	<i>218. At step 218, the top-level window corresponding to the selected preview and icon are brought to the foreground and the previews are dismissed.”)</i> • See also [0008], [0032], [0042].
[1.c] in response to a first command for sequentially displaying icons, performing sequential display of icons such that an icon corresponding to the second work process is displayed, wherein the icon corresponding to the second work process is displayed in the designated portion of the display;	Hellyar discloses in response to a first command for sequentially displaying icons, performing sequential display of icons such that an icon corresponding to the second work process is displayed (e.g., “[s]uccessively pressing the Tab key” to “iterate[] through” program “previews” such that “windows shift” in the display), wherein the icon corresponding to the second work process is displayed in the designated portion of the display (see [1.a]; icon is displayed the top-left corner of the “selected window” in the center). <u>E.g., Hellyar:</u> See [1.a]-[1.b]. Hellyar further discloses that pressing “Tab” will sequentially “cycle” through “successive” windows and their corresponding icons, such that a new icon replaces a previously-displayed icon in the same designated portion of the display. Hellyar, [0042], [0045], Fig. 3C. Madisetti, ¶¶202–204. As discussed in §IX.E.2, a POSITA would have been motivated to modify Hotelling with Hellyar, yielding a system in which Hotelling’s “cell phone” icon (corresponding to the second work process) is brought into view and replaces a previously displayed icon in response to a sequential display command. Hotelling-Prov. 18:19-19:3; Hellyar, [0042], [0045], Fig. 3C. Madisetti, ¶204.

'631 Claim	Hotelling in view of Hellyar
	Fig. 3C  FIG. 3C. • [0024], [0042], [0045] (See [1.a]); • See also Fig. 3B, [0032], [0038], [0040], [0044].
[1.d] in response to a second command for changing to the second work process, replacing the screen of the first work process with a screen of the second work process;	Hellyar discloses in response to a second command for changing to the second work process (e.g., “input indicative of a desire to select an application window for full viewing,”), replacing the screen of the first work process with a screen of the second work process (e.g., “bring[ing] the selected icon’s corresponding window to the foreground,” replacing the previous screen). <u>E.g., Hellyar:</u> See [1.a]-[1.c]. Hellyar further discloses that the user provides an “input indicative of a desire to select an application window for full viewing” to open the window for the application. Hellyar [0024], [0042], [0045]. Madisetti, ¶¶205–207. For the reasons discussed in §IX.E.2, a POSITA would have been motivated to modify Hotelling with these teachings, yielding a system in which a user picks Hotelling’s “cell phone” icon and GUI while scrolling through GUI previews, causing the “cell phone” application (second work process) to replace the currently-open application (i.e., Hotelling’s

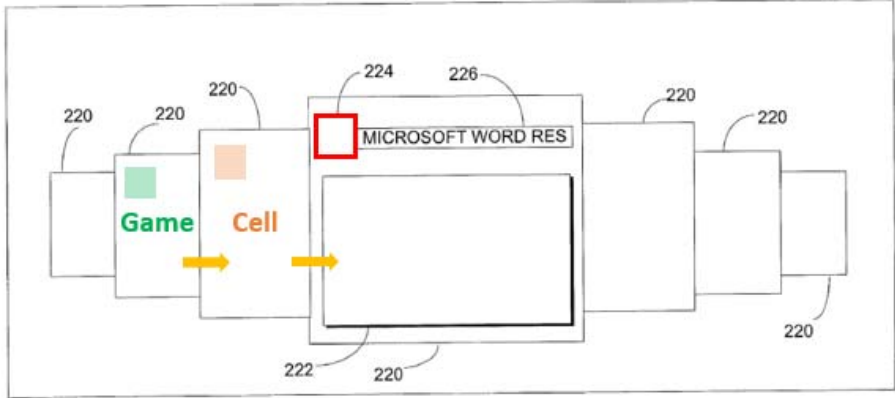
'631 Claim	Hotelling in view of Hellyar
	“music player” – first work process), rendering obvious this element. Hotelling-Prov. 18:19-19:3; Madisetti, ¶207. • [0024], [0040], [0042] (See [1.a]); • See also [0038], [0044]-[0045].
[6] The method of claim 1, wherein an item of the second work process is displayed relatively brighter or clearer than an item or a screen of a work process other than the second work process.	See [1]. Hellyar further discloses an item of the second work process is displayed relatively brighter or clearer than an item or screen of a work process other than the second work process (e.g., “the preview, icon and text” for the “selected” window is “highlighted”). <u>E.g., Hellyar:</u> See [1.pre]-[1.c]. Hellyar further discloses that when navigating between windows, the “selected” window is “highlighted.” Hellyar Fig. 2; [0040]. When an application’s window is selected, this not only renders obvious, but affirmatively discloses that it is displayed brighter or clearer than other windows—as this was a well-known method of highlighting items.¹⁵ Madisetti, ¶¶208–211. In addition to the reasons discussed in §IX.E.2, a POSITA would have been further motivated to modify Hotelling with Hellyar’s teachings of highlighting the “selected” window, yielding a system that displays the selected GUI window (e.g., a window for Hotelling’s cell phone—the second work process) relatively brighter or clearer than the non-selected GUIs (e.g., for Hotelling’s music player) to advantageously draw the user’s attention to the selected GUI. Hotelling-Prov. 18:31-19:7; Hellyar [0040]. Madisetti, ¶¶210–211.

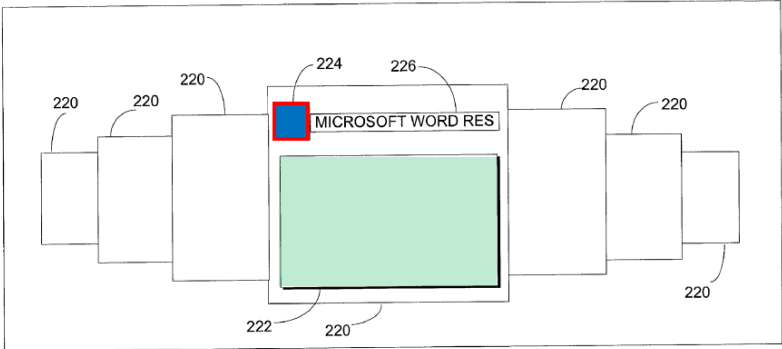
¹⁵ Marmolin (Ex. 1023), [0011]-[0012]; Tu, [0033], [0040]; Madisetti, ¶210.

'631 Claim	Hotelling in view of Hellyar
	• Figs. 2, 3C FIG. 2. FIG. 3C. • [0040] (<i>See</i> [1.a]) • <i>See also</i> [0010], [0042], [0045]
[8] The method of claim 1, wherein, in	<i>See</i> [1].

'631 Claim	Hotelling in view of Hellyar
response to a repetition of the first command, performing sequential display of icons such that a displayed icon disappears from a screen of the mobile terminal and an icon appears on the screen of the mobile terminal.	Hellyar further discloses in response to a repetition of the first command (see [1.c]; e.g., repeating the command to “iterate[] through” program “previews”), performing sequential display of icons such that a displayed icon disappears from a screen of the mobile terminal and an icon appears on the screen of the mobile terminal (see [1.c]; e.g., repeating the first command covers an “icon” as the next program is brought into view). <u>E.g., Hellyar:</u> See [1.a], [1.c]. Hellyar further discloses repeating a command to “iterate[]” through windows each containing “an icon.” Hellyar, [0042], [0045]. Icons are covered by—and disappear under—overlapping windows: e.g., icons on windows to the left and on the selected window are visible, while icons on windows to the right become covered and disappear as the windows shift right. See Hellyar [0045], Fig. 3C. Madisetti ¶¶212–214. FIG. 3C. As set forth in §IX.E.2, a POSITA would have been motivated modify Hotelling GUI switcher with Hellyar’s teachings of cycling through application previews with icons to, e.g., advantageously make the application switching

'631 Claim	Hotelling in view of Hellyar
	feature more accessible, rendering obvious this claim. Madisetti, ¶214. • [0042], [0045] (See [1.a]); • <i>See also</i> Fig. 3B; [0044].
[9] The method of claim 1, wherein an icon to be displayed in the designated portion is replaced with an icon that is different from the icon corresponding to the second work process in response to the first command.	<i>See</i> [1]. Hotelling in view of Hellyar renders obvious an icon to be displayed in the designated portion (see [1.a], [1.c]). Hellyar further discloses wherein an icon to be displayed in the designated portion is replaced with an icon that is different from the icon corresponding to the second work process in response to the first command (e.g., see [1.a], [1.c]; “icons” “shift” right in response to a user command to “iterate[]” through the windows, such that the icon that will be displayed in the center is replaced with another icon). <u>E.g., Hellyar:</u> As discussed in [1.a] and [1.c], Hellyar renders obvious displaying an icon in a designated portion—e.g., the top-left corner of the “selected window” in the center of the display. Hellyar [0045]. As shown in annotated Fig. 3C below, a command to “iterate[]” makes windows shift right, causing a first icon (e.g., for Hotelling’s cell phone) to be displayed in the designated portion. Hellyar [0042], [0045]. Simultaneously, a second icon (e.g., a game or another application) replaces the first icon. Hellyar [0045], Fig. 3C; Madisetti ¶¶215–217. As set forth in §IX.E.2, a POSITA would have been motivated modify Hotelling’s GUI switcher with Hellyar’s teachings of cycling through application previews with icons

'631 Claim	Hotelling in view of Hellyar
	to, e.g., make the application switching feature more accessible, rendering obvious this claim. Madisetti, ¶217.  FIG. 3C. • [0042], [0045] (See [1.a]); • <i>See also</i> Hellyar Fig. 3B, [0044].
[10] The method of claim 1, wherein the displayed icon is displayed together with at least a part of a screen image of a work process in the display.	<i>See</i> [1]; §IX.A.3, [10]. Hellyar further discloses the displayed icon is displayed together with at least a part of a screen image of a work process in the display (e.g., Figure 3C, “the windows 220” have “previews” and “icons” presented concurrently). <u>E.g., Hellyar:</u> <i>See</i> [1.a], [1.c]. Hellyar further teaches representing applications using “an icon” and a “preview representing a screen shot” of each open application. Hellyar [0013], [0045], [0050], Fig. 3C. This not only renders obvious, but affirmatively discloses, displaying a work process’s icon together with at least a part of a screen image of a work process—e.g., a preview “screen shot.” <i>See id.</i>; Madisetti, ¶¶218–220.

'631 Claim	Hotelling in view of Hellyar
	As set forth in §IX.E.2, a POSITA would have been motivated modify Hotelling GUI switcher with Hellyar's teachings of cycling through application previews with icons to, e.g., advantageously make the application switching feature more accessible, rendering obvious this claim. Madisetti, ¶220. • Fig 3C:  FIG. 3C. • [0013] (“...[W]hen the computer receives a signal from the user, <i>it extracts a preview representing a screen shot for each window open within the operating system. It then displays the preview, a description, and an icon for the next window in the activation hierarchy...</i>”) • Hellyar [0045] (See [1.a]); • <i>See also</i> [0050].

F. Ground 7: Hotelling in view of Hellyar and Tu (Claims 5-6)

In addition to **Hellyar's** teachings of highlighting a selected window, **Tu** provides additional teachings of [5]/[6]. **Tu** discloses that the item of the first work process is displayed relatively brighter or clearer than the screen of the first work

process (e.g., the “menu” is overlaid on a “dim[med]” background). Tu [0045]. **Tu** discloses a “foreground GUI menu screen” is “superimposed on top” while media (e.g., a music player) playing in the background is “dim[med]” to “contrast” the menu from the background. Tu, Figs. 3-4, [0033], [0042], [0045], [0049]-[0050]; Madisetti, ¶221.

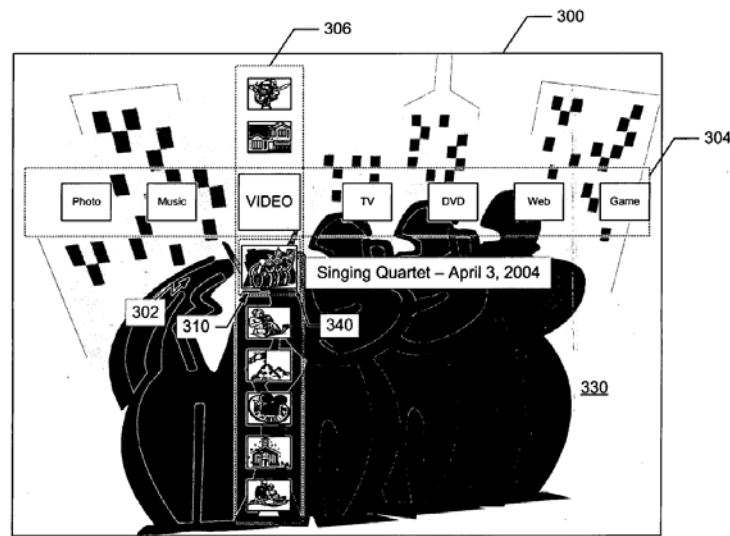


FIG. 4

Tu further discloses that, within the overlaid menu, items in the “**center area 308**” (i.e., the selected window that the user chose to interact with) are shown brighter and “flashing.” Tu, Fig. 3; [0033], [0039]-[0040]. Madisetti, ¶222.

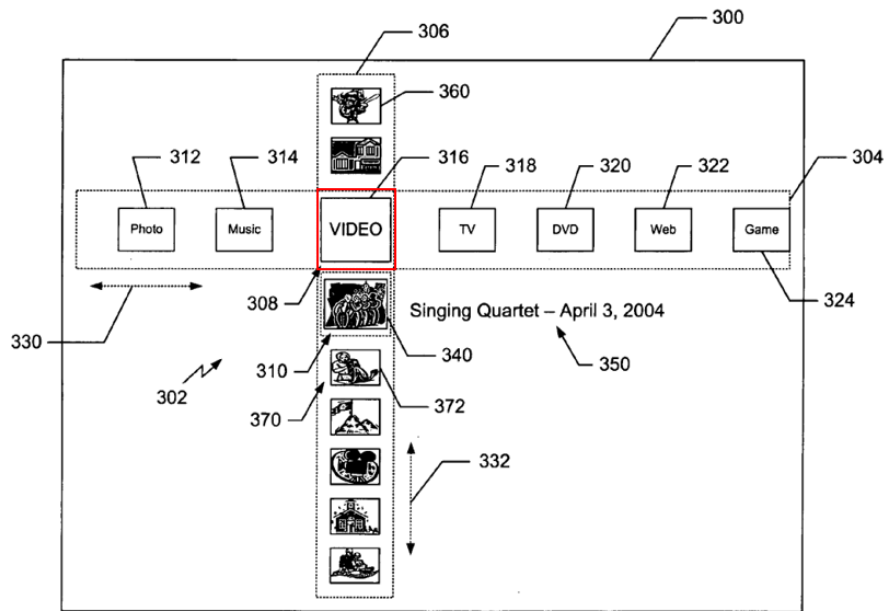


FIG. 3

Hotelling, Hellyar, and Tu are in the same field as the '631 and are reasonably pertinent to the '631's purported problems, *e.g.*, providing a display for a multi-tasking mobile terminal. See §IX.B; '631, 2:32-51; Hotelling-Prov. 3:23-25; Hellyar [0003], [0013]; Tu [0005]; Madisetti, ¶223.

A POSITA would have been motivated to modify **Hotelling's** (in view of **Hellyar**) GUI switcher with **Tu's** teachings of displaying a menu of icons with a bright central icon overlaid on a dimmed background. **Tu** teaches that traditional interfaces with menus and icons are difficult to use when media is playing. Tu, [0004]-[0008]. **Tu** teaches that its teachings of modifying the background and icons advantageously makes it “easy” to view the menu and the selected preview window, while permitting the user to still see the content displayed in the background. Tu

Figs 3-4, [0033], [0039]-[0040]; Hellyar Fig. 3, [0045]. See Tu [0033]; Madisetti, ¶224.

A POSITA would have had a reasonable expectation of success further modifying **Hotelling** in view of **Hellyar** with **Tu**'s teachings, yielding a system in which the GUI switcher menu with icons, as taught by **Hotelling** in view of **Hellyar**, is superimposed over a dimmed background, with the icon for the selected application brighter and/or flashing. Madisetti, ¶225. Overlaying images and visually distinguishing screen elements was well-known, and modifying **Hotelling** in view of **Hellyar** with **Tu**'s teachings is merely applying a known concept for its intended purpose. *E.g.*, Marmolin, [0011]-[0012]; Gardien (Ex. 1024), 6:14-22; Runoy (Ex. 1025), [0017]; Park (Ex. 1026), [0084]; Madisetti, ¶225.

Hotelling in view of **Hellyar** and **Tu** renders obvious [5]/[6]. **For [5], Tu discloses an item of the first work process is displayed relatively brighter or clearer than the screen of the first work process** (e.g., music in background is “dim[med]” while “music” menu item is showing). **Tu** teaches, when the GUI switcher is opened while music is playing, the music application is “dim[med]” in the background as the app switcher, including a GUI preview for the music app, is presented, rendering obvious this claim. Tu, Figs. 3-4, [0033], [0042], [0045], [0049]-[0050]; Madisetti, ¶¶226–228.

For [6]: As explained §IX.E.3, Hellyar discloses this limitation. In addition to **Hellyar’s** teachings that a selected preview window (e.g., for the second work process) is “highlighted” relative to other processes’ windows, **Tu** further discloses the selected application (e.g., center application in Hellyar Fig. 3C) is highlighted by being shown brighter and/or “flashing,” rendering obvious [6]. Tu, [0033], [0039]-[0040], Fig. 3; Madisetti, ¶¶229–231.

X. SECONDARY CONSIDERATIONS

There is no evidence in the prosecution history of the ’631 or any related application that any arguments regarding secondary considerations exist, let alone that any such evidence could overcome the strong showing of obviousness above or has a nexus to the Claims. *See generally* ’631FH. Indeed, as demonstrated by the prior art referenced herein, any purported solutions to problems or unexpected results in the ’631 were already well known. Madisetti ¶232. To the extent PO asserts the existence of any secondary considerations in its responses, Petitioner reserves the right to address any such evidence.

XI. CONCLUSION

Substantial, new, and noncumulative technical teachings have been presented for the ’631’s Claims, which are anticipated or rendered obvious for the reasons set forth above. Madisetti, ¶¶233–237. There is a reasonable likelihood that Petitioner

will prevail as to claims 1-10. *Inter partes* review of these Claims is accordingly requested.

Dated: August 11, 2023

Respectfully submitted,

/James L. Davis, Jr./

James L. Davis, Jr.

Reg. No. 57,325

Counsel for Petitioner

LG ELECTRONICS INC.

CERTIFICATE OF COMPLIANCE

Pursuant to 37 CFR §42.24(a) and (d), the undersigned hereby certifies that this Petition for Inter Partes Review complies with the type-volume limitation of 37 CFR §42.24(a)(i) because, exclusive of the exempted portions, it contains 13,987 words as counted by the word processing program used to prepare the paper.

Dated: August 11, 2023

/Abed R. Balbaky/

Abed R. Balbaky

Reg. No. 76,154

CERTIFICATE OF SERVICE

The undersigned certifies service pursuant to 37 C.F.R. §§42.6(e) and 42.105(b) on the Patent Owners by express mail of a copy of this Petition for *Inter Partes* Review and supporting materials at the correspondence address of record for the '631 patent:

146410 - Fidelis Law Group , PLLC
8300 Greensboro Dr Ste L1-101
McLean, VA 22102
UNITED STATES

Courtesy copies of the same documents were also served at the following email addresses of record for PANTECH CORPORATION and PANTECH WIRELESS, LLC's litigation counsel:

Of counsel:
James A. Fussell, III
Jamie B. Beaber
Saqib J. Siddiqui
Tiffany A. Miller
Baldine Paul*
Clark S. Bakewell
Seth W. Bruneel*
MAYER BROWN LLP
1999 K Street, N.W.
Washington D.C. 20006
(202) 263-3000
Pantech-LGE-Service@mayerbrown.com

Graham M. Buccigross*
MAYER BROWN LLP

Two Palo Alto Square, Suite 300
3000 El Camino Real
Palo Alto, CA 94306
(650) 331-2000
Pantech-LGE-Service@mayerbrown.com

Gregory J. Apgar*
MAYER BROWN LLP
1221 Avenue of the Americas
New York, NY 10020
(212) 506-2500
Pantech-LGE-Service@mayerbrown.com

Luiz Miranda*
MAYER BROWN LLP
71 S. Wacker Drive
Chicago, IL 60606
(312) 782-0600
Pantech-LGE-Service@mayerbrown.com

(* pro hac vice application to be filed)

Geoffrey Culbertson
Kelly Tidwell
PATTON TIDWELL & CULBERTSON, LLP
2800 Texas Blvd. (75503)
Post Office Box 5398
Texarkana, TX 75505-5398
(P) (903) 792-7080
(F) (903) 792-8233
gpc@texarkanalaw.com
kbt@texarkanalaw.com

Counsel for Plaintiffs Pantech Corporation and Pantech Wireless, LLC

Dated: August 11, 2023

By: /Jonathan Bradford/
Name: Jonathan Bradford
ROPES & GRAY LLP