UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC and MOTOROLA MOBILITY LLC
Petitioners

v.

MULTIFOLD INTERNATIONAL INCORPORATED PTE. LTD.,
Patent Owner

IPR2025-00061

Patent No. 9,792,007

DECLARATION OF DR. SANDEEP CHATTERJEE
IN SUPPORT OF PETITION FOR INTER PARTES REVIEW
OF U.S. PATENT NO. 9,792,007

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I, Sandeep Chatterjee, declare as follows:

I. INTRODUCTION

1. I have been retained as an independent expert consultant in this proceeding before the United States Patent and Trademark Office ("PTO") regarding U.S. Patent No. 9,792,007 ("the '007 patent") (EX1001).[1] I have been asked to consider whether prior art references disclose or suggest the features recited in claims 1-5, 9-10, 16-17, and 20 ("the challenged claims") of the '007 patent. My opinions are set forth below.

II. BACKGROUND AND QUALIFICATIONS

2. My qualifications are stated more fully in my curriculum vitae, which is attached as EX1003. Below is a summary of my education, work experience, and other qualifications.

3. I am the Chief Executive Officer of Experantis LLC ("Experantis"), a technology consulting company. Previously, I was the Co-founder, Executive Vice President and Chief Technology Officer of SourceTrace Systems, Inc., a

[1] In this Declaration, I refer to exhibits that I understand are to be attached to the petition for *Inter Partes* Review of the '007 patent.

technology and services company enabling the delivery of secure remote electronic services over landline and wireless telecommunications networks.

4. I received my Bachelor's degree in Electrical Engineering and Computer Science from the University of California, Berkeley in 1995. I received my Master's degree in Computer Science from the Massachusetts Institute of Technology (MIT) in 1997, and my Doctorate in Computer Science from MIT in 2001. I received a certificate of completion for an executive education program on global leadership from Harvard University in 2011.

5. My doctoral dissertation at MIT, entitled "Composable System Resources for Networked Systems," involving networked and distributed computer systems and architectures, was selected as one of the top inventions in the history of MIT's Laboratory for Computer Science. This invention is showcased in a time capsule at the Museum of Science in Boston, Massachusetts. Other recipients of this honor include Bill Gates, the founder of Microsoft, and Tim Berners-Lee, the inventor of the World Wide Web.

6. As part of applications of my doctoral research, I developed hardware and software systems for intelligent environments within homes and offices. Some of these devices included televisions, digital picture frames, refrigerators and

children's toys. The distributed computing system of these intelligent environments included distributed data storage and retrieval, as well as coordinated display of relevant data on one or more device screens. This system also supported both physical user interfaces (e.g., physical buttons) as well as graphical user interfaces (GUIs) that were displayed on device screens.

7. In 2011, I was named a Young Global Leader. This honor, bestowed each year by the World Economic Forum, recognizes and acknowledges the top leaders—all below the age of 40—from around the world for their professional accomplishments, commitment to society, and potential to contribute to shaping the future of the world. In 2016, I was appointed to the World Economic Forum's expert network as an expert in technology and innovation.

8. From 1997, I was the Entrepreneur-in-Residence at FidelityCAPITAL, the venture capital arm of Fidelity Investments. In 1999, I founded and served as President and Chief Technology Officer (CTO) of Satora Networks, which developed tools and technologies for building appliances and services for the Internet using wireless and other technologies to extend it beyond the desktop.

9. In 2001, I joined Bluestone Software's Mobile Middleware Labs as a Senior Engineer developing applications and systems infrastructure for enterprise Java/J2EE, Web services, and enterprise mobile solutions. After the completion of Hewlett-Packard's (HP) acquisition of Bluestone, I became a Senior Member of the Technical Staff at HP's Middleware Division. I was responsible for architecting and developing the company's next-generation Web services platform for enterprise as well as mobile environments, known as the Web Services Mediator.

10. I was part of the Expert Group that developed the JSR-00172 J2ME (Java 2 Platform, Micro Edition) Web Services Specification, the worldwide industry standard for mobile Web services. I am the co-author, with James Webber, of the book "Developing Enterprise Web Services: An Architect's Guide" (published by Prentice-Hall in 2004). This book has been adopted by over 100 universities and colleges around the world, and has been translated or reprinted in a number of countries around the world.

11. I have significant experience in developing complex computing systems. For example, through a contract between HP and the United States Agency for International Development (USAID), I architected and led the

development of one of the first mobile banking solutions. This system enabled customers to use their mobile phones and other wireless handsets to connect with the core banking systems of banks and other financial institutions, and perform transactions without having to travel to bank branches. This system supported many banking transactions, including deposits, withdrawals, loan applications, loan disbursements and loan repayments.

12. Later, after SourceTrace Systems' acquisition of this technology, I led the expansion of this solution into multiple countries and into multiple industries. Banks and other financial services companies utilized this technology to make their tellers more efficient, to provide self-service ATMs within branches, and to provide remote access to banking services. Additionally, through our licensing agreement with Telefonica, one of the largest cellular and telecommunications companies in the world, this solution was deployed in various other industries, including logistics and asset management and customer relationship management. Bloomberg Television selected and featured this technology and the company I co-founded to commercialize this technology on Bloomberg TV's "Bloomberg Innovators" program.

13. I have been a retained expert witness for various disputes that involved significant technology issues, and I have been qualified as a technology expert by U.S. District and State Courts, including in California, Delaware, Florida and Texas in technology areas that are relevant to this case, including but not limited to: computer software systems, distributed computing systems, and mobile and wireless systems. I have previously testified through declaration or expert report, at deposition, and at trial in numerous intellectual property and commercial litigation matters, including for patent litigation, copyright and trade secret misappropriation litigation, and contract dispute cases. I have submitted more than one hundred and fifty expert declarations and expert reports, testified at deposition more than eighty times, and testified at trial or at hearings at least twelve times. I have been identified as one of the top 1000 patent professionals in the world, and I am listed in the IAM Patent 1000, which identifies the world's leading patent litigation and prosecution attorneys, as well as damages and technology expert witnesses.

14. Experantis is being compensated for my time on this matter at my standard hourly rate and reimbursed for any expenses that I incur related to my work in this matter. Neither Experantis nor I have any financial interest in the

outcome of this matter, and Experantis will be paid for my time regardless of the outcome of this matter.

III. MATERIALS REVIEWED

15. The opinions contained in this Declaration are based on the documents I reviewed, my professional judgment, as well as my education, experience, and knowledge regarding systems and processes in the field of user interface technologies.

16. In forming my opinions expressed in this Declaration, I reviewed the following materials, and any other materials I refer to in this Declaration:

EX1001	U.S. Patent No. 9,972,007 ("the '007 patent")
EX1004	Prosecution History of U.S. Patent App. No. 14/523,069
EX1005	U.S. Patent Application Publication No. 2002/0191029 ("Gillespie")
EX1006	U.S. Patent No. 8,418,079 ("Nicholas")
EX1008	Microsoft Office Word 2007 For Dummies, 2007 Wiley Publishing, Inc. (excerpts)
EX1009	Microsoft Office Excel 2007 For Dummies, 2007 Wiley Publishing, Inc. (excerpts)
EX1010	U.S. Patent Application Publication No. 2007/0024645 ("Purcell")
EX1011	U.S. Patent Application Publication No. 2010/0248788 ("Yook")

EX1012	U.S. Patent Application Publication No. 2012/0198514 ("McCune")
EX1013	U.S. Patent No. 8,265,705 ("Lee")
EX1014	U.S. Patent No. 9,692,881 ("Jyonoshita")
EX1015	U.S. Patent No. 7,356,677 ("Rafizadeh")
EX1016	U.S. Patent No. 6,912,664 ("Ranganathan")
EX1019	An Introduction to Graphical User Interfaces with Java Swing, Paul Fisher, Addison Wesley, 2005 (excerpt)
EX1020	Nokia 9000 Communicator (https://www.mobilephonemuseum.com/phone-detail/nokia-9000-communicator)

17. My opinions contained in this declaration are based on the materials I reviewed and my knowledge and professional judgment. My opinions have also been guided by my appreciation of how a person of ordinary skill in the art would have understood the state of the art, the prior art, and the claims and the specification of the '007 patent at the time of the alleged invention, which I discuss below.

18. I have been asked to consider that the time of the alleged invention of the '007 patent was around mid-late 2010, including and up to October 1, 2010, which corresponds to the filing date of the earliest applications associated with the '007 patent. (*See* EX1001, Cover, pages 1-2 (Related U.S. application Data.)

19. Based on my review of the materials I refer to in this Declaration, and my experience and expertise, it is my opinion that certain references disclose and/or suggest all the features recited in the challenged claims of the ’007 patent, as I discuss in detail below.

IV. PERSON OF ORDINARY SKILL IN THE ART AND THE TIME OF THE ALLEGED INVENTION

20. I am familiar with the level of ordinary skill in the art regarding the ’007 patent as of the time of the alleged invention of the ’007 patent, which as I explained above, I have been asked to assume was around mid-late 2010, including and up to October 1, 2010. Considering the ’007 patent, the technology, the educational level and experience of workers in the field relating to the patent, and problems and solutions in that field, and drawing on my own experience, I believe a person of ordinary skill in the art at the time of the alleged invention would have had an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of work experience in the field of user interface technologies, including *e.g.*, graphical user interface technologies, or a related field. More education can supplement practical experience and vice versa.

21. My opinions in this Declaration regarding the ’007 patent and the prior art (including the state of the art) are from the perspective of a person of ordinary skill in the art as I defined above, during the relevant timeframe (e.g., the time of the alleged invention), which I discussed above as being around mid-late 2010, including and up to October 1, 2010.

V. TECHNICAL BACKGROUND

22. Below, I present a brief overview of certain aspects of systems and processes relating to user interface technologies known at the time of the alleged invention for the ’007 patent. The functionalities and concepts I describe below in this technical background section reflect the state of the art that a person of ordinary skill in the art would have had knowledge of and understood prior to and at the time of the alleged invention of the ’007 patent. I rely on, and incorporate as applicable (even if not expressly mentioned below in Section IX), the following disclosures and opinions to support my opinions in this Declaration, including those opinions relating to how the prior art discloses and/or suggests the challenged claims of the ‘007 and how and why a person of ordinary skill in the art would have been motivated to consider and combine the disclosures and suggestions from that prior art as I explain below in Section IX. The concepts

below would have been within the knowledge and mindset of a person of ordinary skill in the art at the time.

A. Multi-Display Mobile Devices

23. Multiple display portable computer devices were well known prior to 2010. For example, the Nokia 9000 Communicator was announced at the CeBIT exhibition in 1996. It was the first product in its Communicator range. Six further Communicator devices followed over the next 11 years. (EX1020.) As shown below, the Nokia 9000 portable device included an exterior screen and an interior screen for displaying information.

(EX1020.)

24. The 9000 Communicator had two interfaces. When closed it looked like an oversized conventional mobile phone with strong similarities to the Nokia 2110. However, when opened it revealed a full QWERTY keyboard and a large screen.

25. Nokia referred to "interfaces" to stress the point that these two functions were being provided by the same underlying hardware and that this device was not simply two devices enclosed within the same case. For example, the address book on the phone interface was the same as the contacts within the Communicator interface. Accordingly, a single application could display information on either of the two displays/screens.

26. Internally it had 8MB of memory of which 4 MB was used for its GEOS 3.0 operating system, 2 MB for programs and 2 MB for user data and it was powered by an Intel 24MHz 386 microprocessor. The GEOS 3.0 operating system had several breakthrough features including the ability to support third-party applications built using a software development kit (SDK).

27. In addition to the basic phone, address book (contacts) and SMS functions, the Nokia 9000 Communicator had a document handling and editing feature called Notes, a fully featured calendar and diary application, a clock

showing world time and an alarm, a calculator, Composer for creating your own ringtones and alerts, a currency converter and connection to a PC via an Infra-red port through which documents could be exchanged and software downloaded and installed.

28. Other disclosures confirm the common knowledge and understanding of technologies relating to computing systems (including portable computer systems) that provided multiple display and/or multiple application execution and display functionalities. For example, U.S. Patent Application Publication No. 2007/0024645 ("Purcell") (EX1010) discloses a computer system with multiple monitors for displaying applications. (EX1010, Abstract, FIGS. 1-3.) U.S. Patent No. 6,912,664 ("Ranganathan") (EX1016) discloses a portable computing device with multiple displays (EX1016, FIGS. 4A-5B, 2:45-4:21, 12:53-13:23, 14:44-17:19.) U.S. Patent No. 8,265,705 ("Lee") (EX1013) also discloses a mobile computer that includes a plurality of touchscreens and various graphical user interfaces. (EX1013, Abstract, FIGS. 3(a)-4(b), 6(a)-15(b), 1:13-59, 7:3-12:46.) U.S. Patent No. 9,692,881 ("Jyonoshita") (EX1014) likewise describes a portable computer device that includes multiple displays for displaying information related to applications executed by the device, including indications regarding active

applications. (EX1014, Abstract, FIGS. 4(a)-6(a), 8(a)-19(b), 7:60-10:44, 11:31-20:57.) U.S. Patent Application Publication No. 2002/0191029 ("Gillespie") (EX1005) describes a notebook computer that includes a main display and a second touchscreen that displayed information relating applications.

B. Graphics Interface Technology (GUI)

29. It was well known to those of ordinary skill that modern operating systems such as Microsoft's Windows, Apple's MacOS, and the different Unix-based versions such as Linux or Solaris use a graphical interface to communicate with the user. The communication consists of information displayed by programs and actions and commands issued by the user. (EX1019, 12.)

30. Programs with graphical user interfaces (GUIs) were known to be event driven. This means that the program reacts to actions of the user; these actions are called events. Examples of events are pressing a key, moving the mouse, pressing a button and selecting a menu item. (*Id.*, 14.)

31. After a program with a GUI has started and the GUI has been displayed on the screen, the program is now controlled by events. A person of ordinary skill in the art would have known to configure the program to react only to a few types of event, not all. Such a skilled person would have programmed the

interface to specify those events to which the program has to react and, of course, what the reaction should be. For example, in Java, this was typically done by implementing so-called listeners which wait for specific kinds of events to occur. It was known that once a listener was programmed for a specific type of event, the runtime system will automatically inform the listener when such an event occurs. The listener then would perform the desired action. Events were known to be typically processed in the order of their occurrence. (*Id.*)

32. There are many types of events known at the time in Java that were associated with the different event sources, such as buttons, menus or the mouse. Events were known to contain information on what has happened, e.g. what triggered the event (a button, a menu) and where it occurred (the coordinates of the mouse). This information is then exploited by the listener. (*Id.*)

33. A person of ordinary skill in the art would have understood that in Swing, some relevant methods include, *e.g.*,:

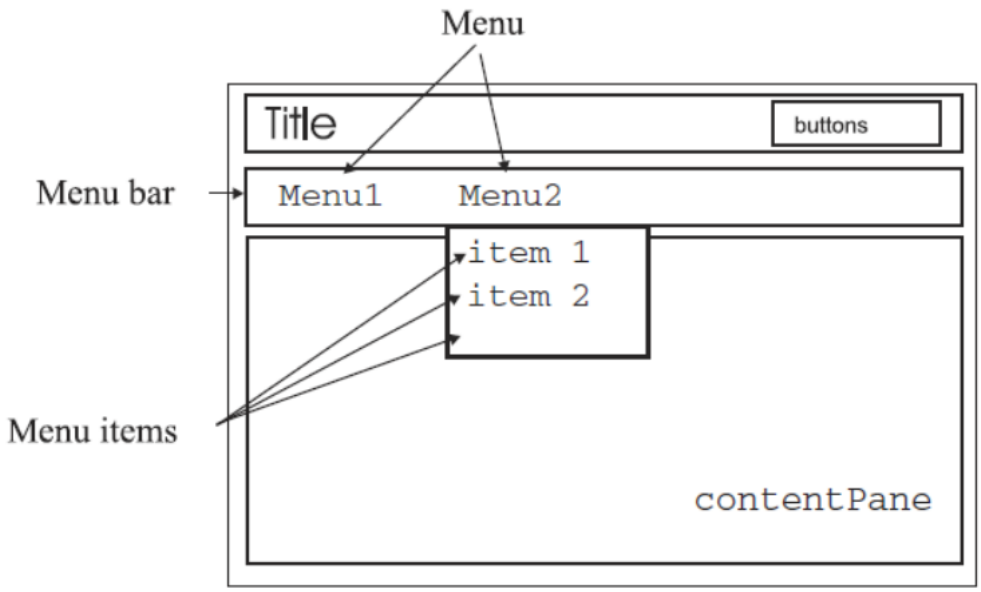
- JFrame() is the default constructor. It generates an untitled frame. Generate here means that the information for drawing the frame is provided. The frame is, however, not shown on the screen. This is done by calling the method setVisible, which is further explained below.

- setVisible (boolean b) makes the frame appear on the screen if b = true. If a frame is visible then setVisible (false) makes it disappear but does not destroy the information for drawing it. So, calling setVisible (true) on this frame another time will make it visible again; we do not have to use the constructor a second time.
- setTitle(String title) sets the title appearing in the title bar to title.
- setSize(int width, int height) sets the width of the frame to width and the height to height. These are outer measures in screen pixels.
- setLocation(int horizontal, int vertical) moves the frame, so that its upper left corner is at position (horizontal,vertical). (*Id.*, 21-22.)

C. Menus

34. Menus were most often used as subcomponents of frames (windows). (EX1019, 20, 86.) They were known to be hierarchically organized. In one example, the topmost component was known as the menu bar. This is a rectangular area located below the title bar of a frame and above the content pane. The intermediate components are the menus. A menu appears as text in the menu bar. Was known at the time, when one clicks on such a text the actual menu will roll out. It contains the menu items, which are lowest in the hierarchy. The figure

below illustrates an exemplary structure involving a menu consistent with that known in the art at the time. The menu items are the components that trigger actions. They can be considered as a special kind of button. In fact, like buttons, one may use an action listener to monitor them. (*Id.*, 86-87.)



(*Id.*, 87.)

35. As mentioned above, menu items were known to behave much like buttons. If a menu item has a listener assigned to it and is clicked, the runtime system generates an object of type ActionEvent. This contains information on the type of event, e.g. which menu item was clicked. The runtime system calls method actionPerformed of the listener. (*Id.*, 90.)

36. A person of ordinary skill in the art would have been aware at the time that menu functionalities were versatile in their use with computer system user interfaces. For example, it was known at the time that the Microsoft software, such as Windows Operating System (OS), and applications, such as Word, Excel, PowerPoint, provided menu functionalities that offered options that a user could select to perform desired tasks. One such known menu features prevalent at the time in such software was the right-click menu functionality, which is discussed by Nicholas (EX1006).

37. Nicholas describes a system and method of managing applications using cursor—based graphical user interface functionalities rooted in conventional user-invoked input features. (EX1006, Abstract.) Namely, Nicholas discusses well-known features of interface controls where a user can selectively invoke the display of menus with input options, which were traditionally contextual in nature. (*Id.*, 1:13-28.) Among those conventional features, Nicholas describes the "commonly used" "right-click menu" features, typically provided by Microsoft Windows software known at the time. (*Id.*, 1:21-33.) As explained, right-click menus were known in the "prior art" to appear when "invoked within Microsoft Word, Microsoft PowerPoint and Microsoft Excel." (*Id.*, FIGS. 1C-1E, 1:33-36.)

Shown below, right-click invoked menus provided options for a user to select, from which the display and computer system would receive and provide certain functionalities. (*Id.*, 1:33-44, FIG. 3, 4:54-5:5.) Nicholas also expands on the conventional right-click features to provide enhanced functionalities that allow a right-click invoked menu to provide options beyond those associated with an underlying application. Namely, Nicholas describes innovations where a right-click menu may enable a user to manage a computing environment and multiple applications, including launching new applications, provide log-in and authentication features, and receive event and message notifications. (EX1006, 1:42-2:47, FIGS. 4-5, 5:6-6:8.)

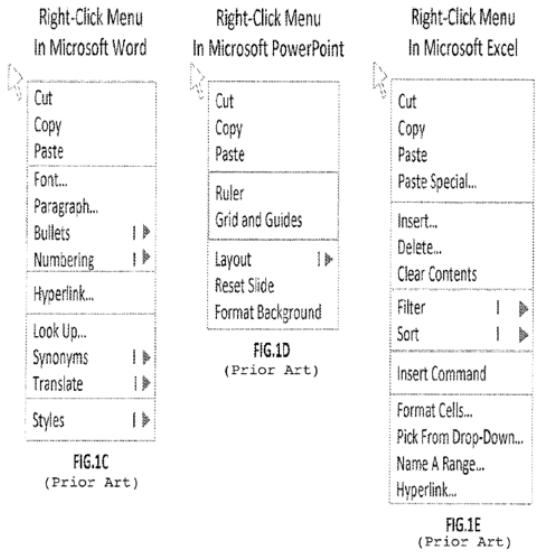


FIG.1C
(Prior Art)

FIG.1D
(Prior Art)

FIG.1E
(Prior Art)

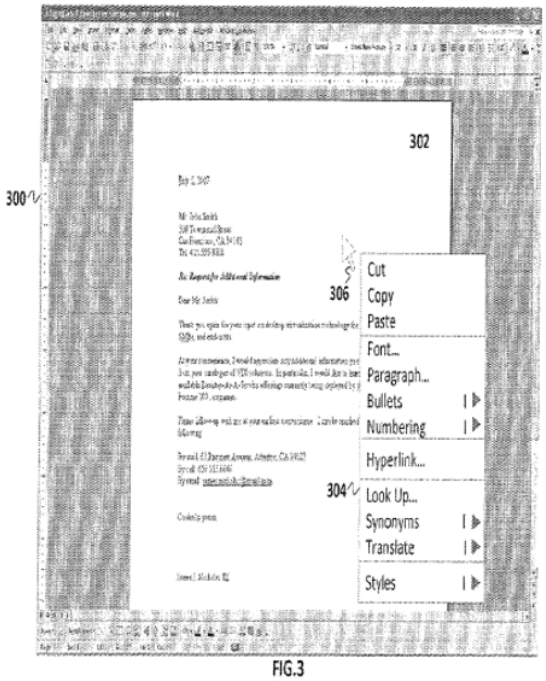


FIG.3
(Prior Art)

(EX1006, FIGS. 1C-1E, 3.)

38. Similar right-click menu features are described in publications discussing features in the Word 2007 and Excel 2007 applications available prior to 2010. (EX1008; EX1009.)

VI. OVERVIEW OF THE '007 PATENT

39. The specification of the '007 patent confirms the known use of touch screen displays in "handheld computing devices, such as cellular phones, tablets, and E-Readers" to "deliver display information to the user but also to receive inputs from user interface commands." (EX1001, 1:24-28.) The patent purports that "dual use of the touch screen" may obfuscate the display and cause visual clutter, especially for a single display touch screen device. (*Id.*, 1:28-51.)

40. The '007 patent purports to address a need for a multi-display device by describing various embodiments relating to a multi-display device. (*Id.*, 1:55-2:27.) For example, the Abstract of the '007 patent describes embodiments relating to a "multi-screen device" where a first image is displayed on a first display of a first screen that is currently in focus. (*Id.*, Abstract.) In response a tap gesture, an application is launched, which displays a second image on a second

display of a second screen, and focus is then changed from the first image on the first display to the second image on the second display. (*Id.*)

41. The '007 patent describes embodiments in connection with Figures 1-9 relating to a multi-screen device. (*Id.*, 5:65-7:19.) The patent explains the "exemplary systems and methods of this disclosure have been described in relation to FIGS. 1-10."[2] (*Id.*, 30:15-16.) Also, that "the components of the system can be combined in to one or more devices, such as a phone, computer, PDA, electronic book reader, gaming device, or collocated on a particular node of a distributed network, such as an analog and/or digital telecommunications network, a packet-switch network, or a circuit-switched network." (*Id.*, 30:32-38; *see also id.*, 39-67, 3:38-47 (device can include one or more physical screens and can attach to external devices).)

42. The '007 patent describes the multi-screen device where each screen can include "different operative areas," such as a display area (110, 114), a gesture capture area (120, 124), and a configurable area (112, 116). (*Id.*, 11:5-36.) (*See*

[2] I understand this to be a typographical error as the '007 patent only presents Figures 1-9.

also e.g., *id.*, FIGS. 1A-1J, 2, 1:14-44, 7:40-8:24, 10:60-11:36.) For example, the patent states that "FIGS. 1A-1J illustrate a device 100 in accordance with embodiments of the present disclosure" and that "[t]he device 100 is a multi-screen device that includes a primary screen 104 and a secondary screen 108, both of which are touch sensitive." (*Id.*, 7:40-46.) Figures 1B and 2 below show how the primary screen 104 includes a display 110 and secondary screen 108 includes a display 114. (*Id.*,7:50-54.)

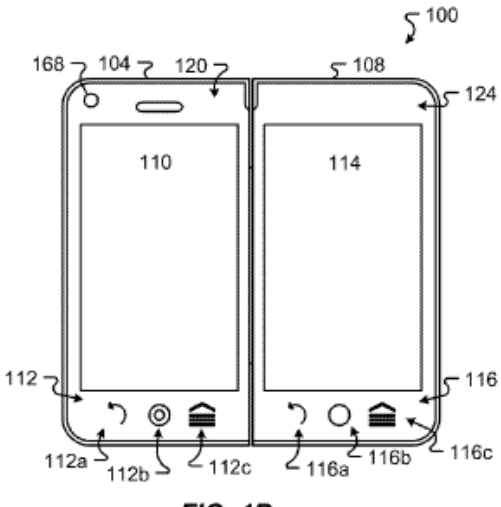


FIG. 1B

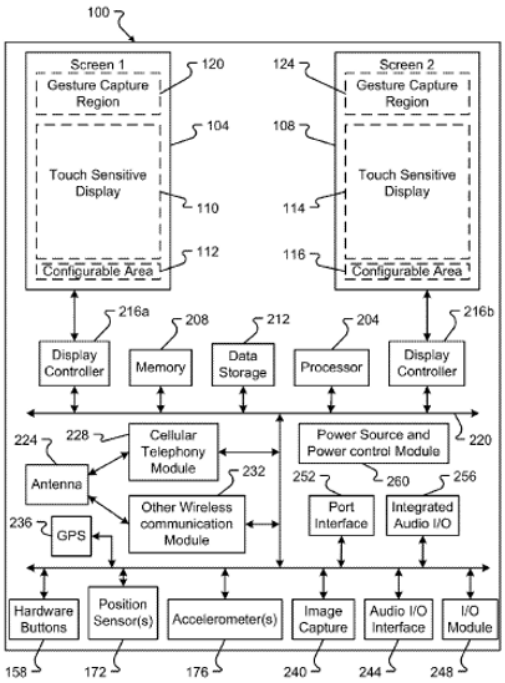


FIG. 2

43. The '007 patent also explains that,

> Primary screen 104 also includes a configurable area 112 that has been configured for specific inputs when the user touches portions of the configurable area 112. Secondary screen 108 also includes a configurable area 116 that has been configured for specific inputs.

(*Id.*, 7:56-60.) Also that,

> Areas 112*a* and 116*a* have been configured to receive a "back" input indicating that a user would like to view information previously displayed. Areas 112*b* and 116*b* have been configured to receive a "menu" input indicating that the user would like to view options from a menu. Areas 112*c* and 116*c* have been configured to receive a "home" input indicating that the user would like to view information associated with a "home" view. In other embodiments, areas 112*a-c* and 116*a-c* may be configured, in addition to the configurations described above, for other types of specific inputs including controlling features of device 100, some non-limiting examples including adjusting overall system power, adjusting the volume, adjusting the brightness, adjusting the vibration, selecting of displayed items (on either of screen 104 or 108), operating a camera, operating a microphone, and initiating/terminating of telephone calls. Also, in some embodiments, areas 112*a-c* and 116*a-*

> *c* may be configured for specific inputs depending upon the application running on device 100 and/or information displayed on touch sensitive displays 110 and/or 114;

(*Id.*, 7:60-8:14.)

44. In connection with Figures 7A-7C and 8A-8C (below), the ’007 patent describes features relating to how device 100 responds when a gesture is made and focus is on a screen and display area. (*Id.*, 26:16-29:3.)

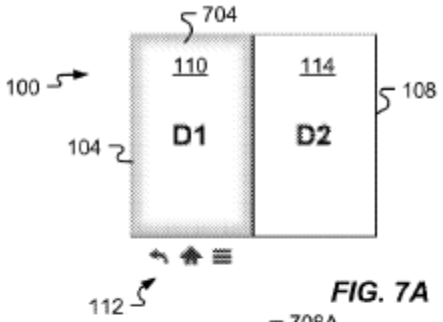


FIG. 7A

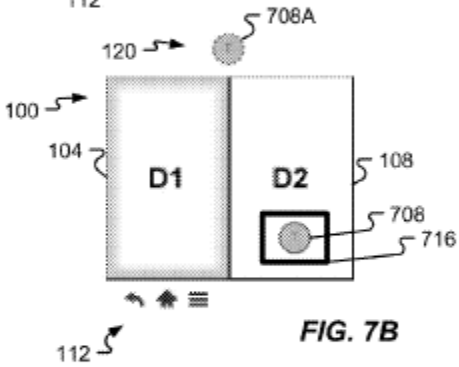


FIG. 7B

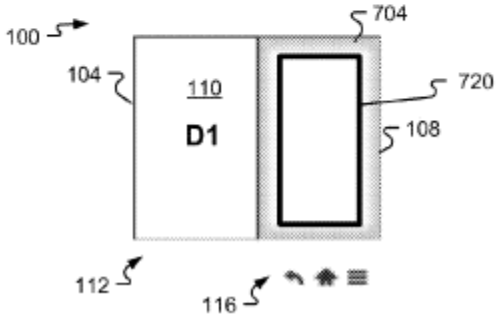


FIG. 7C

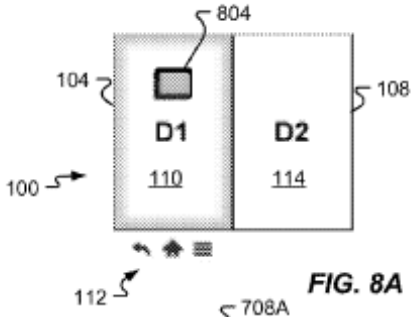


FIG. 8A

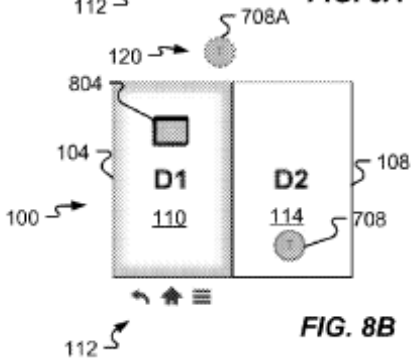


FIG. 8B

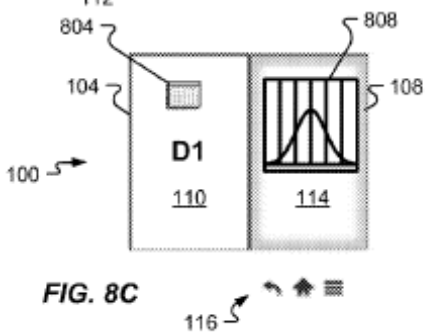


FIG. 8C

VII. OVERVIEW OF THE PRIOR ART

A. PURCELL (EX1010)

45. U.S. Patent Application Publication No. 2007/0024645 ("Purcell") published on February 1, 2007 from an application filed on May 19, 2006. (EX1010, Cover.) Purcell explains in the Abstract that,

> A screen sharing function enables a main executable application, which typically uses more than one monitor, to switch to single-monitor usage as necessary to allow a user to directly interact with other applications that the main executable application invokes. A system including multiple display monitors for displaying multiple user interface image windows associated with corresponding multiple executable applications employs an image format determination system. The image format determination system includes an input processor for receiving command data representing a command to initiate execution of a function of a second application and display of an associated second image window in response to user entry of a command via a first image window associated with a first application. An image format selection processor, in response to the received command data, automatically initiates reduction in size of the first image window to fit a screen of the multiple

> display monitors and to prevent mutual overlap of the reduced size first image window and the second image window. A display processor initiates generation of data representing the reduced size first image window and the second image window, for presentation on the multiple display monitors.

(EX1010, Abstract.)

B. NICHOLAS (EX1006)

46. U.S. Patent No. 8,418,079 ("Nicholas") issued on April 9, 2013, from an application filed September 1, 2009. (EX1006, Cover.) Nicholas explains in the Abstract that,

> A system and method of managing applications and event notifications using a cursor-based GUI, wherein the cursor-based GUI is located adjacent to the cursor and provides a user with the ability manage and monitor a plurality of dynamically updated applications, commands and event notifications via a persistent and centralized interface. Since the cursor-based GUI is persistent in nature, the plurality of applications, commands and event notifications can be accessed regardless of the user's computer environment. The user can manage user authentication requirements and other configuration information for the cursor-based GUI.

(EX1006, Abstract.) Nicholas also describes conventional GUI features including right-click menu features known to be provided in available software like that provided by Microsoft at the time. (EX1006, 1:13-47.)

C. GILLESPIE (EX1005)

47. U.S. Patent Application Publication No. 2002/0191029 ("Gillespie") was published December 19, 2002, from an application filed April 17, 2002. (EX1005, Cover.) Gillespie explains in the Abstract that,

> The present invention is a graphical user interface in a computing device having a processor running an operating system and a display. The graphical user interface comprises a touch screen and a driver coupling the touch screen to the operating system. The driver can display a plurality of icons on the touch screen, or a plurality of screen images having at least one icon, with each of the icons associated with operations on the display and/or the touch screen. Other embodiments include the touch screen having unactivated and activated states, as well as the presence of an application programming interface that enables an application to display at least one image on the touch screen.

(EX1005, Abstract.)

D. YOOK (EX1011)

48. U.S. Patent Application Publication No. 2010/0248788 ("Yook") was published September 30, 2010, from an application filed March 22, 2010. (EX1011, Cover.) Yook explains in the Abstract that,

> A method of supporting divided screen areas and a mobile terminal employing the same are disclosed. The method includes: generating input signals for one of sequentially and simultaneously activating a plurality of user functions; activating the user functions according to generated input signals; dividing a screen into divided screen areas that correspond to activated user functions; and outputting functional view areas associated with the activated user functions to the corresponding divided screen areas.

(EX1011, Abstract.)

VIII. CLAIM CONSTRUCTION

49. I understand that when considering the meaning of patent claims, one must consider the language of the claims, the specification, and the prosecution history of the patent. I also understand that claim terms are typically given their ordinary and customary meanings as would have been understood by a person of ordinary skill in the art at the time of the invention for the patent. For the '007

patent, as I explained above in Section IV, the relevant time that I have been asked to consider is around mid-late 2010, including and up to October 1, 2010. For purposes of my opinions in this declaration, I have been asked to consider the challenged claims under their plain and ordinary meanings as understood by a person of ordinary skill in the art at the time of the alleged invention (as well as the constructions discussed below), and I have applied such understandings in my analysis of the '007 patent and the prior art. Namely, I have been asked to consider and apply in my analysis two separate constructions of the claimed "first configurable area" and "second configurable area" recited in the challenged claims, which I address below. I have also applied such understandings in my analysis of the '007 patent and the prior art. Thus, as noted, for the remaining claim terms in the challenged claims, I have been asked to give and apply in my analysis their plain and ordinary meaning, as would have been understood by a person of ordinary skill in the art, at the time of the alleged invention (mid-late 2010 including up to October 1, 2010) having taken into consideration the language of the claims, the specification, and the prosecution history of the '007 patent.

A. "first configurable area" and "second configurable area"

50. Independent claims 1, 10, and 17 each recite "a first configurable area" and a "second configurable area." (EX1001, 32:62-33:24, 34:1-28, 35:17-36:12.) As mentioned, I have been asked to address the challenged claims under the following two distinct interpretations of these terms. I applied each of those interpretations in my analysis of the challenged claims and prior art, which is reflected in my opinions below in §IX.

1. First Interpretation

51. I have been asked to provide my opinions concerning the prior art and the challenged claims under the assumption that the claimed "[first/second] configurable area" recited in the challenged claims of the '007 patent is interpreted to be: "**an area capable of receiving input and has display or limited display capabilities and is not part of the first [touch sensitive] or second [touch sensitive] display that provides content.**" I understand that the [touch sensitive] portion of this interpretation relates to claim 17, which recites a first touch sensitive display and a second touch sensitive display, whereas claims 1 and 10 do not recite the first and second displays as "touch sensitive." (EX1001, claims 1, 10, 17.)

52. Upon review of the language of the challenged claims, the specification, and prosecution file history for the '007 patent, it is my opinion that the above first interpretation is consistent with the descriptions of configurable areas in the specification and prosecution file history of the '007 patent, and with the language of the claims of the patent.

53. For example, I understand from my review of the specification that it describes configurable areas as an area "capable of receiving input and has display

or limited display capabilities." (EX1001, 11:19-23.) Also, the specification describes configurable areas 112/116 in context of being not part of display areas110/114. For example, as presented in annotated form below, FIGS. 1A-1B of the specification describes configurable areas **112** and **116** located/positioned outside of displays **110** and **114**.

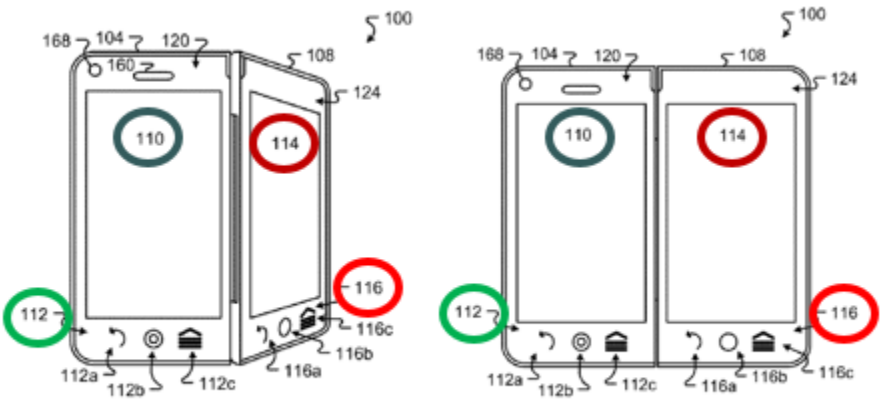


FIG. 1A FIG. 1B

(EX1001, FIGS. 1A-1B, 7:40-8:13.)

54. Similar to the above, FIG. 2 of the '007 patent (annotated below) also shows configurable areas (**112**, **116**) provided in an area outside of display areas (**110**, **114**). (*Id.*, FIG. 2, 10:60-11:36 (describing three separate areas/regions of device 100: (1) touch sensitive displays 110, 114, (2) gesture capture regions 120, 124, and (3) configurable areas 112, 116).)

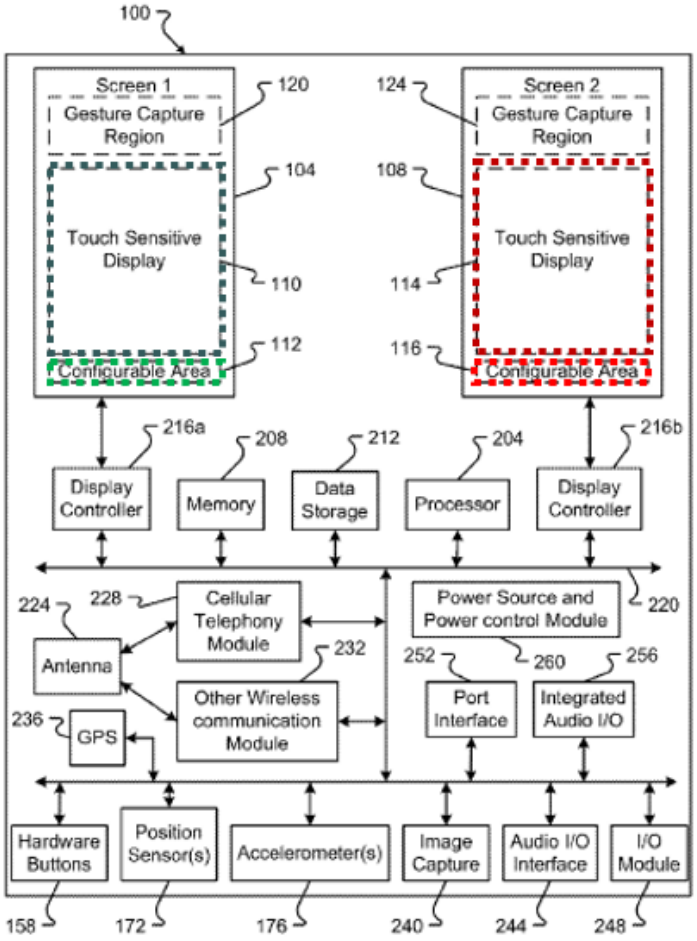
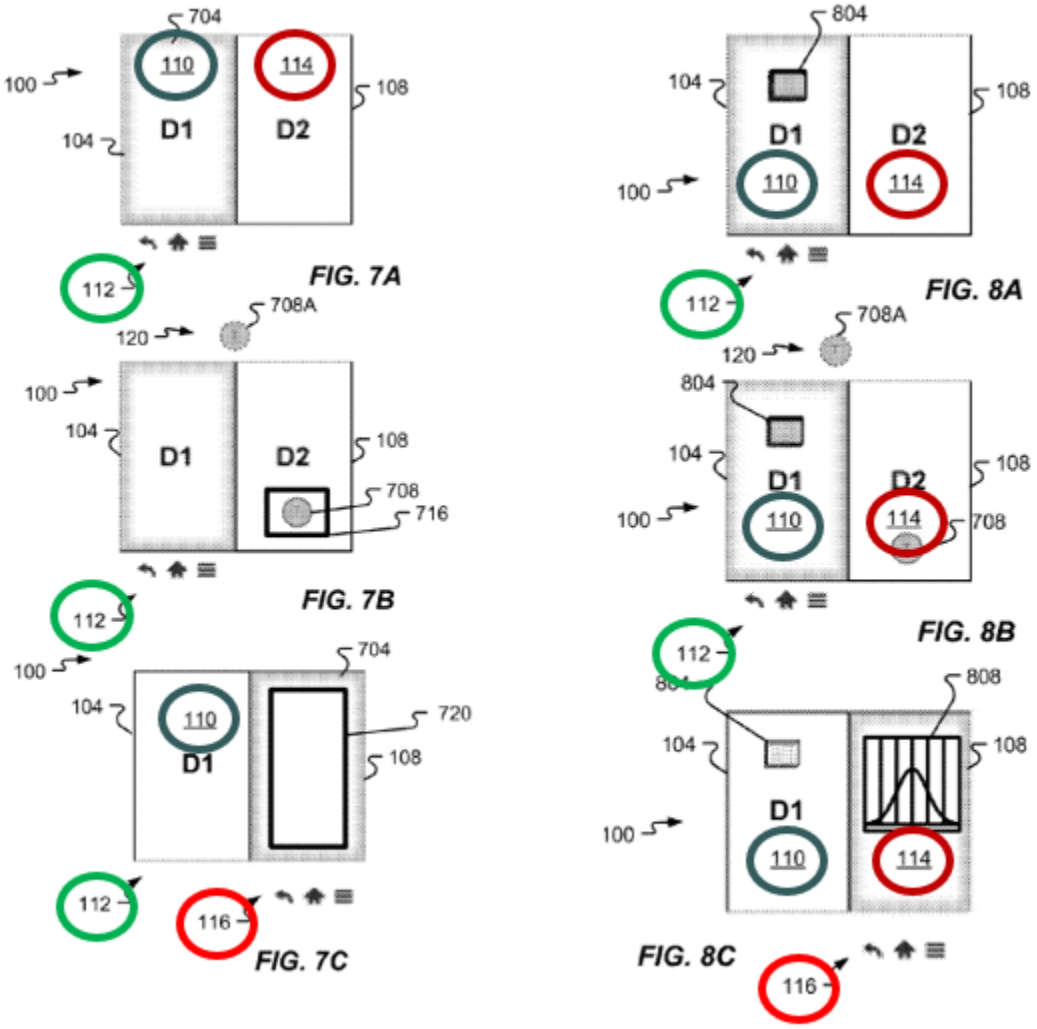


FIG. 2

(*Id.*, FIG. 2 (annotated).)

55. Similarly, the specification of the '007 patent describes, in connection with FIGS. 7A-7C and 8A-8C, configurable areas **112** and **116** that are outside displays

110 and **114**. (*Id.*, FIGS. 7A-7B, 26:16-27:57, FIGS. 8A-8C, 27:58-29:3.)



(*Id.*, FIGS. 7A-7C, 8A-8C (annotated).)

56. Other figures show areas that resemble configurable areas 112 and 116 that are not part of the device displays. (*See id.*, FIGS. 1H-1J, 3A, 6A-6J.)

57. I have reviewed the prosecution file history (EX1004). I understand from my review that the patentee made the following statements in presenting arguments to the U.S. Patent Office during prosecution of the application that led to the issued '007 patent.

58. For example, I understand that the patentee added the following limitations to the independent claims that were pending before the U.S. Patent Office, "wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application." (EX1004, 362-364, 366-370.)

59. The patentee provided arguments along with the amendments to argue the claim elements were not taught in the cited art. In particular, the patentee identified a "missing limitation" including those added to the claims as identified above, to argue

> The Office Action states that Kim does not teach elements associated with the configurable area but relies on the following sections of Rapp as teaching these elements of the claims: (*See Office Action,* pp. 11-12).

(EX1004, 362-363.)

60. Referring to the Examiner's remarks about the applied prior art reference, the patentee stated "[t]he handles shown on the object [in the prior art to Rapp] is contained in a display where content is provided." (EX1004, 364.) The patentee then distinguished the Rapp prior art by stating the "**configurable area *of the claim* is not part of the display of content**." (*Id.*, 364.) I reproduced below the patentee's statements from the '007 patent's prosecution file history, where the patentee referenced and presented Figure 1B of the specification to explain:

> Indeed, the configurable areas 112 and 116 below ***are not part of*** displays 11[0] and 114 that provide content. Thus, Rapp is describing a function and device that is ***completely different what is claimed***.

(*Id.*)

The Examiner states: "(the activation region is only provided around the second interface object 5004-a and not the first interface object 5002-c Figure 5E; the first interface object does not have the current focus and therefore, the activation regions around the first interface object are not enabled and cannot be manipulated while the first object is not selected…" The handles shown on the object is contained in a display where content is provided. The configurable area of the claim is not part of the display of content. Indeed, the configurable areas 112 and 116 below are not part of displays 11 and 114 that provide content.

FIG. 1A

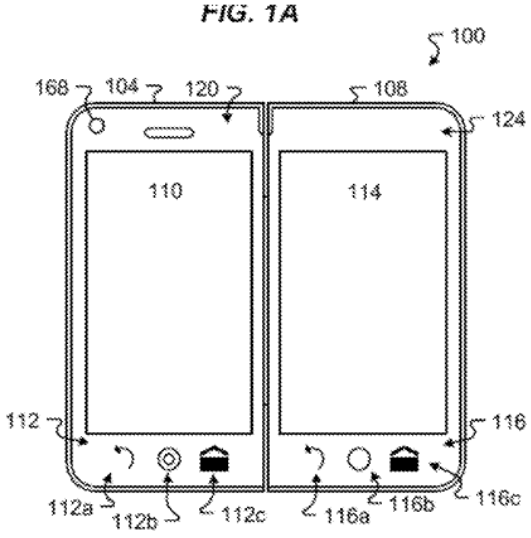


FIG. 1B

Thus, Rapp is describing a function and device that is completely different from what is claimed. If there are other ways to describe the configurable areas to overcome the art, applicants welcome Examiner's suggestions, as it appears Rapp does not show what applicant is attempting to claim.

For at least these reasons, the combination of Kim and *Rapp* fails to teach all the claim elements of the present claim. Therefore, the Office Action has failed to show a *prima facie* case of obviousness, and the claim should be allowed.

(EX1004, 364 (showing and referencing to Fig. 1B of the '007 patent).)

61. From my review of the '007 patent file history, I understand that, following the patentee's representations, the examiner allowed the pending claims and provided reasons for allowance that specifically referenced the limitations added in the amendment addressed by the patentee as I explained above. (*Id.*, 395-398.) Below is an excerpt from the notice of allowability:

Allowable Subject Matter

3. Claims 21-40 are allowed.

The following is an examiner's statement of reasons for allowance:

Examiner has carefully considered the independent claims 21, 30 and 37.

In claims 21, 30 and 37, the prior art of record: Kim, Rapp, Kondo, alone or in combination, do not teach or fairly suggests "wherein the first configurable area does not display content from an application, wherein the second configurable area does not display content from an application."

These limitations, in specific combination as recited in claims 21, 30 and 37, define the patentability of the claims.

Dependent claims 22-29, 31-36 and 38-40 are allowed based on the same rationale.

(*Id.*, 397.)

62. In my opinion, a person of ordinary skill in the art would have understood that the above-discussed patentee's statements made to distinguish the prior art were clear and unmistakable. That is, a person of ordinary skill in the art would have understood that the patentee, clearly and unmistakably, distinguished the prior art based on its representation/characterization of the claimed "**configurable area**." For example, as shown from the reproduced page from the

'007 patent prosecution file history above, a person of ordinary skill in the art would have found no ambiguity that the patentee stated that "the configurable area" at issue is that "***of the claim***." (*Id.*, 364.) The patentee also pointed to the specification's Figure 1B and explained that "[i]ndeed, ***the configurable areas***…***are not part of displays***…that provide content." (*Id.*) The patentee went on to say that **the prior art** "is **completely different from *what is claimed***" and "**does not show *what applicant is attempting to claim***." (*Id.*) Then, the patentee stated that "**[f]or at least *these reasons***" the prior art "fails to teach all the claim elements of ***the present claim***." (*Id.*)

63. Thus, in my opinion, patentee's statements made during prosecution to distinguish the prior art, such as those noted above, are clear and unmistakable to a person of ordinary skill in the art. Such a person would have clearly understood patentee's statements made in the file history, as I noted above, ***excludes*** from the scope of the then pending claims (which are substantively the same as those now in the issued '007 patent)[3] configurable area(s) that are part of

[3] The file history shows an amendment after the claims were allowed, which did not make any substantive changes. (EX1004, 415-420.)

the first [touch sensitive] or second [touch sensitive] display (as recited in the independent claims) that provides content. (which I understand substantively track those of the issued challenged claims—especially in terms of the features added and discussed by patentee during prosecution) configurable area(s) that are part of a display that provides content. (*Id*.)

64. In my opinion, the combination of Gillespie and Yook as I discussed below in § IX.B discloses and/or suggests the limitations of challenged claims 1, 4-5, 9-10, 16-17, and 20 under this interpretation as I applied it.

2. Second Interpretation

65. I have been asked to provide my opinions concerning the prior art and the challenged claims under the assumption that the claimed **"[first/second] configurable area"** recited in the challenged claims of the '007 patent is interpreted such that each configurable area **is part of the first [touch sensitive] or second [touch sensitive] display that provides content**.

66. In my opinion, the combination of Purcell and Nicholas as I discussed below in § IX.A disclose and/or suggest the limitations of challenged claims 1-5, 9-10, 16-17, and 20 under this interpretation as I applied it.

IX. THE PRIOR ART DISCLOSES AND/OR SUGGESTS ALL RECITED FEATURES OF CLAIMS 1-5, 9-10, 16, 17, and 20 OF THE '007 PATENT

67. In my opinion, the prior art discussed below discloses and/or suggests the limitations of claims 1-5, 9-10, 16, 17, and 20.[4]

A. Purcell in View of Nicholas Discloses and/or Suggests Claims 1-5, 9-10, 16, 17, and 20

68. As I pointed out above, in my opinion the combination of Purcell (EX1010) and Nicholas (EX1006) discloses and/or suggest the limitations of claims 1-5, 9-10, 16-17, and 20 under the second interpretation that I was asked to consider and apply. (*See* §VIII.A.2.)

1. Purcell Overview

69. Purcell discloses conventional operations with interfacing with multiple applications on a computer system, including switching between

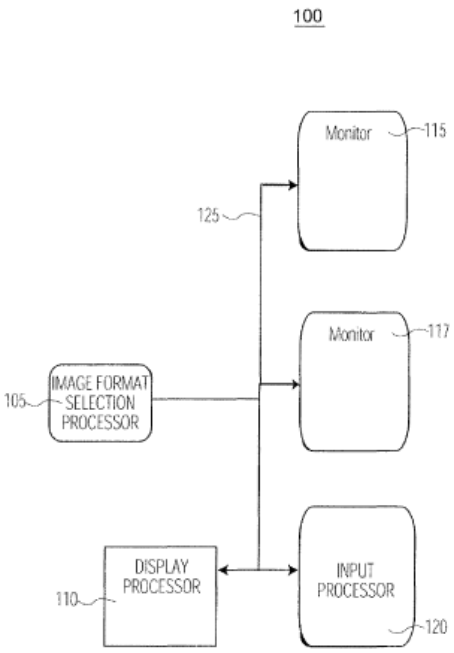
[4] In this section (Section IX), I refer to exhibits other than those identified prior art reference(s) (Exhibits 1005, 1006, 1010, 1011) that in particular combination disclose and/or suggest the challenged claim limitations. Such exhibits reflect the state of the art known to a person of ordinary skill in the art at the time of the alleged invention.

applications that are displayed active in the foreground and thus in focus based on user actions interfacing with the application. For example, Purcell recognized where related executable application operate in a system with multiple monitors, the "executable applications frequently employ display images that need to share image area." (EX1010, ¶0003.) A primary application may invoke second executable applications, which initiates generation of an image window in the foreground of a display image overlaying a primary executable application image window, in response to user interaction with the secondary application." (*Id.*) "When the user interacts with the primary application, it appears in the foreground overlaying a secondary application image window, thus obscuring it completely (or partially)." (*Id.*) To interact with the second application again, the user would perform additional user interface action to bring the second image window to the foreground. (*Id.*)

70. To address burdens with such "non-user friendly" processes, Purcell provides a computer system 100 configured to selectively control display of executing software applications via multiple displays. (EX1010, Abstract, FIGS. 1-3.) The system may ensure that "a primary executable application main image window displays on both monitors in a dual-monitor system and automatically

switches between single and dual-monitor usage as necessary to permit other applications to operate concurrently with the primary application." (*Id.*, ¶0004.) Figure 1 of Purcell shows how system 100 may include, *e.g.*, monitors 115 and 117 that respectively display content for executing applications. (*Id.*, ¶0004, FIG. 1 (below).)

FIGURE 1



(*Id*. FIG. 1.)

71. The system can be employed as a stand-alone configuration, such as a personal computer (PC), a desktop computer, a laptop or notebook computer, a personal digital assistant (PDA), a cellular telephone, a pager, and wristwatch, and

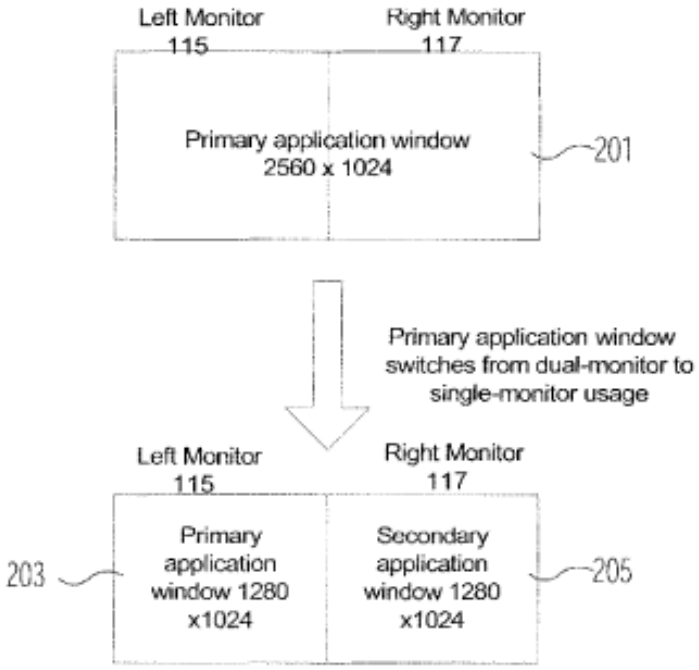
provides for touchscreen, keyboard, and mouse user input controls. (*Id.*, ¶¶0013-0014, 0017; *see also id.*, ¶0015 (discussing applications, and use of a user interface "comprising one or more display images enable user interaction").) The system 100 may be implemented in a centralized or decentralized configuration, such as a "client-server, web-based, or stand-alone configuration." (*Id.*, ¶0014.) "Elements of system 100 communicate via path 125, which is (otherwise called network bus, link, connection, channel, etc.) that represents any type of protocol or data format." (*Id.*) The protocol or data format includes, e.g., known IP, TCIP, HTTP, RS232, and Ethernet protocols, among others." (*Id.*)

72. In certain configurations, the primary application may operate in the space of two or more monitors and may modify "a main image window to use the coordinate space of just one of the logical monitors." (*Id.*, ¶0008.) Purcell explains that while in some configurations, "the first image window encompasses multiple display screens of the plurality of monitors (e.g., first and second display screens of respective first and second monitors)," in other configurations, "the first image window comprises a first size image on a first display monitor." (*Id.*, ¶0018.) In response to a "user closing a secondary executable application, the primary executable application switches back to multiple monitor usage (using

predetermined data indicating the image coordinate space of available logical monitors)." (*Id.*, ¶0008.) Such features "provides an improved user interface and associated workflow (task sequences performed by personnel, devices or both) involving multiple executable applications" (*Id.*, ¶0009; *see also id.*, ¶¶0010-0012.)

73. Figure 2 (below) describes an example where a primary application may run as "a top-level image window [that] obscures image windows of … any other executing applications." (*Id.*, ¶0016, FIG. 2.)

FIGURE 2



(*Id.*, FIG. 2.)

To permit display and execution of a second application on the other display, system 100 may change the image size of the primary window for left monitor 115 and "initiates execution of a secondary application that displays an associated image window on the right monitor (monitor 117)," thus "enabling a user to interact with both applications" without obscuring each other. (*Id.*, ¶0016.)

74. Figure 3 describes an exemplary method performed by the system consistent with the above-discussed features. (*Id.*, ¶¶0018-0020, FIG. 3.) In response to an "entry of a command," the system initiates execution of a function of a second application and display of, and access to, an associated second image window on the second display screen. (*Id.*, ¶0018.) In response to a "command to terminate execution of the second application or a function of the second application," the system adjusts the size of the first image window to encompass display screens of the first and second monitors. (*Id.*, ¶0020.)

75. Purcell explains that,

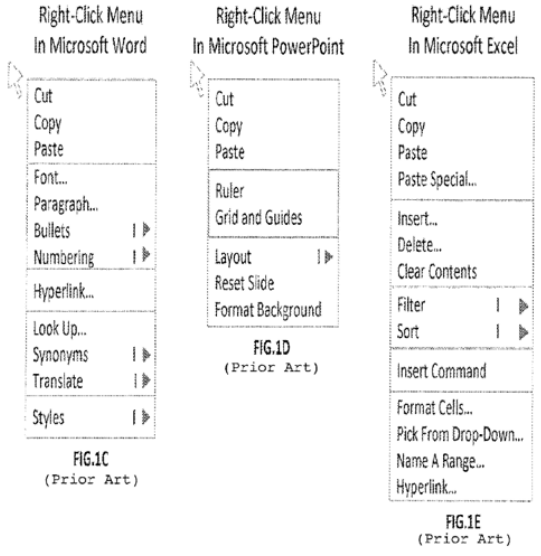
> In one embodiment, **the first image window encompasses multiple display screens of the plurality of monitors** (e.g., first and second display screens of respective first and second monitors). In another embodiment, **the first image window comprises a first size image on a first display monitor**.

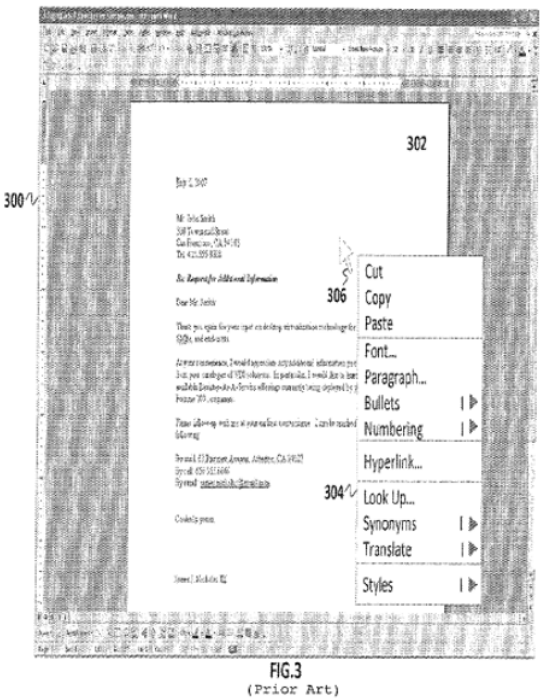
(*Id.*, ¶0018.) (*See also id.*, claim 1 ("plurality of display monitors …"), dependent claim 6 ("said plurality of display monitors comprise a first monitor and a ***different*** second monitor"), dependent claim 8 (reciting similar language); independent claim 10 ("plurality of display monitors" … "a second ***different*** monitor").) In my opinion, a person of ordinary skill in the art would have understood Purcell's claims to describe features that support the understanding that Purcell's disclosed plurality of monitors may encompass the same monitor because unlike independent claim 10 (which requires ***different*** monitors), independent claim 1 and dependent claims 6 and 8 (which depend from claim 1) recite features that limit the monitors recited in claim 1 to include a "***different*** second monitor." (*Id.*, claims 1, 6, 8, 10.) Such features are consistent with the disclosure above from paragraph 0018 of Purcell.

2. Nicholas Overview

76. Nicholas describes a system and method of managing applications using cursor—based graphical user interface functionalities rooted in conventional user-invoked input features. (EX1006, Abstract.) For example, Nicholas discusses well-known features of interface controls where a user can selectively invoke the display of menus with input options, which were traditionally contextual in nature.

(*Id.*, 1:13-28.) Among those conventional features, Nicholas describes the "commonly used" "right-click menu" features, typically provided by Microsoft Windows software known at the time. (*Id.*, 1:21-33.) Nicholas confirms, right-click menus were known in the "prior art" to appear when "invoked within Microsoft Word, Microsoft PowerPoint and Microsoft Excel." (*Id.*, FIGS. 1C-1E, 1:33-36.) Shown below, right-click invoked menus provided options for a user to select, from which the display and computer system would receive and provide certain functionalities. (*Id.*, 1:33-44, FIG. 3, 4:54-5:5.)





(*Id.*, FIGS. 1C-1E, 3.)

77. Nicholas describes methods and systems to expand on the conventional right-click features to provide enhanced functionalities that allow a right-click invoked menu to provide options beyond those associated with an underlying application. Namely, Nicholas describes innovations where a right-click menu may enable a user to manage a computing environment and multiple applications, including launching new applications, provide log-in and authentication features, and receive event and message notifications. (*Id.*, 1:42-2:47, FIGS. 4-5, 5:6-6:8.)

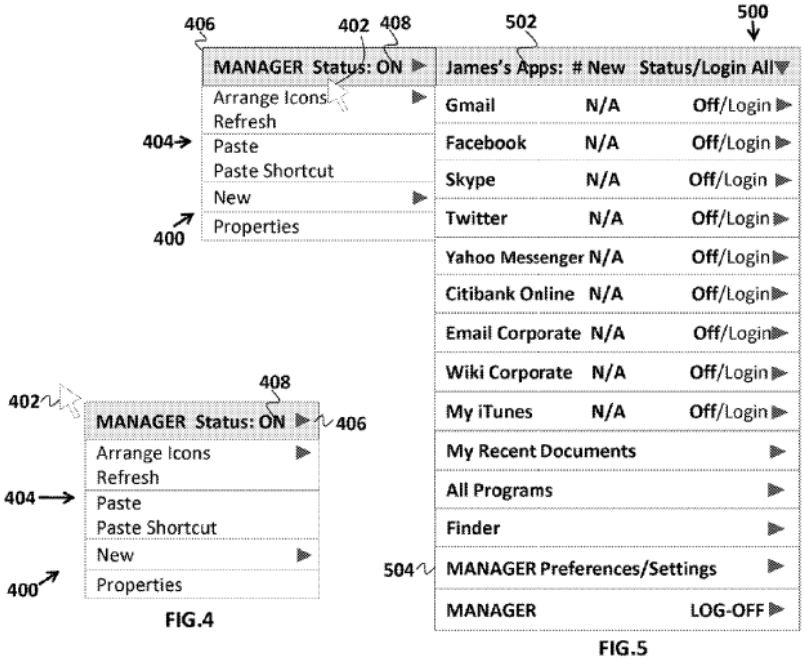


FIG.4 FIG.5

(*Id.*, FIGS. 4-5.)

3. Motivation to Combine the Teachings of Purcell and Nicholas

78. In addition to the modifications and related reasons and disclosures that I discuss below in §§IX.A.4-13, it is my opinion that a person of ordinary skill in the art would have been motivated to combine the teachings of Purcell and Nicholas in order to configure the Purcell multi-display system and processes to run known Microsoft Windows software available at the time, including Word, PowerPoint, and Excel applications, such that multiple applications may be used and displayed concurrently or individually in a manner consistent with the features disclosed by Purcell. In doing so, such a skilled person would have had reasons to configure the modified Purcell system to enable the software to provide features commonly known to be provided with such Windows applications, including the right-click features as described by Nicholas.

79. In my opinion, a person of ordinary skill in the art, would have been motivated to look to Nicholas when contemplating configuring and implementing a multiple application computer system like that disclosed by Purcell, including ways to enhance the features of Purcell's system, especially since Nicholas describes features in a similar technical field as Purcell. For example, both disclose a computer system that executes software applications commonly known

in the art, such as word processing (e.g., Word), database processing (e.g., Excel), and presentation processing (e.g., Power Point). (EX1010, ¶¶0003-0004, 0010-0013, 0016-0020; EX1006, FIGS. 1C-1E, 3-5, 1:13-44, 4:54-5:5.) A person of ordinary skill in the art would have also appreciated that Purcell contemplates implementations including personal computer, desktop, laptop, cellular phone, PDA, systems that execute applications to facilitate workflow, document/report and image review and analysis (EX1010, ¶¶0009-0010). Therefore, in my opinion, such a skilled person would have had reasons to consider the disclosures of Nicholas, which describes conventional and enhanced features relating to common document, spreadsheet, and presentation processing like that provided by Microsoft Windows software. Accordingly, a person of ordinary skill in the art would have been motivated to enhance the features offered by the Purcell system by providing well-known Microsoft Office-based applications that allowed a user to be more efficient in creating, editing, and providing, *e.g.*, reports and worksheets, as contemplated by Purcell. (EX1010, ¶0010.)

80. In my opinion person of ordinary skill in the art have been motivated to configure the multi-display Purcell computer to execute known Word, Excel, PowerPoint, or related software applications in a manner consistent with their

capabilities, operations, and functionalities known at the time. These include leveraging known user input invoked control mechanisms, such as the right-click features described by Nicholas and known in the art at the time. Such an implementation would have beneficially added features to Purcell's system/process by allowing a user to have user-friendly mechanisms that provide short cut menus to appear on a display that offered the user input options for performing selected functionalities, such as manipulating information provided by an underlying application presented on a given display of Purcell's multi-display/application system.

81. Implementing such features in the Purcell system/process would have been a straightforward implementation of known functionalities, technologies, and techniques (e.g., known right-click functionalities in conventional (and enhanced) document, worksheet, and presentation applications like those offered by Microsoft software available at the time) in a computer system configured to execute and display multiple applications, as described by Purcell. A person of ordinary skill in the art would have had a reasonable expectation of success in implementing such known features in the Purcell computer system and process because such modification/implementation would have involved the use of conventional

computer hardware and software components and design and programming techniques contemplated by both Nicholas and Purcell. (*See above* §§IX.A.1-A.2.) Once implemented, the Purcell-Nicholas system would have been configured such the applications provided known features, such as the right-click menu dialog functionalities, in a conventional way, and also in accordance with Nicholas' enhanced features (e.g., launching applications, etc.)

82. The discussions here and in §§IX.A.2-3, together with the analysis below, demonstrate and support my opinions as to how and why the Purcell-Nicholas combination discloses and/or suggests the challenged claims in Section IX.A. I thus incorporate the above opinions and discussions below to support my opinions in §§IX.A.4- IX.A.13.)

4. Claim 1

i) [1.pre] "A method comprising:"

83. I understand that this limitation is a preamble of the claim and I have been asked to assume that the preamble of claim 1 is limiting. Under that assumption, Purcell discloses a "**method**" associated with its multi-display functionalities as I explained below. For example, as I discussed above Purcell discloses a computer system 100 including monitors 115/117 that display application images/content and performs processes that control display of such

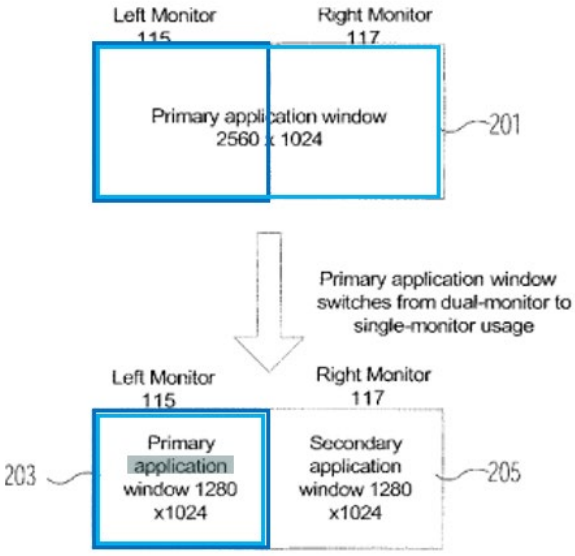
applications (EX1010, FIG. 3, ¶¶0004, 0008-0010, 0013-0014, 0018-0021.) Moreover, the combination of Purcell-Nicholas as I discuss below likewise discloses and/or suggests the "**method**" of claim 1. (*See above* §§IX.A.1-IX.A.3; *infra* §§IX.A.4.ii-IX.A.4.vii.)

ii) [1.a]

(1) [1.a.1] "displaying a first image of a first application on a first display,"

84. As I explained in §IX.A.1, Purcell discloses a computer system 100 that performs processes for displaying an image window ("**first image**") of a first primary application ("**first application**") executed by the system on at least a left monitor 115 ("**first display**"). (*See above* §IX.A.1; EX1010, ¶¶0008-0020, FIGS. 1-2.)

FIGURE 2



(EX1010, Fig. 2 (annotated).) The first image window of the primary application may "encompass[] multiple display screens of the plurality of monitors" or alternatively "the first image window comprises a first size image of first display monitor." (*Id.*, ¶0018.) Further, in my opinion, the Purcell-Nicholas combination discloses limitation 1.a.1 for the reasons I discuss below for limitation 1.a.2. (§IX.A.4.ii(2).)

(2) [1.a.2] "wherein the first image is in focus, wherein input options for the first application are displayed in a first configurable area, wherein input is allowed from the first configurable area and the first display,"

85. Purcell discloses that the first image window ("**first image**") of the first application is active and/or selected for receiving input. (EX1010, Fig. 2, ¶¶0003 (typical execution where user interacts with a primary application), 0008-0009 (the user can use an executable application to invoke other applications, where the user has access to those applications), 0010 (user can "directly interact with both applications via corresponding image windows which are operating concurrently," 0016 (primary application runs in one example across both monitors 115-117), 0017, 0018 (same and alternatively may be displayed on the first display monitor).) In my opinion, Purcell discloses the "**first image is in focus**," like that described by the '007 patent. (EX1001, 5:43-49 (explaining that "focus" includes "an open window of an application, and/or a desktop/portion of a desktop"), 26:19-21.) Purcell's teachings are also consistent with a person of ordinary skill in the art's understanding as to how an application may have focus. (EX1010, ¶0003; EX1005, ¶0076 ("In most computer operating systems, application windows on the

main display screen are given the focus based on which was last clicked by the pointing device, or on which currently contains the cursor")[5].)

86. Purcell states that the disclosed features provided by system 100 may assist users working with applications to review/use medical/clinical information, where images, reports, and worksheets are displayed. (EX1010, ¶¶0010, 0017.) A person of ordinary skill in the art would have appreciated that Purcell does not limit its disclosed features to any specific applications. (*Id.*, ¶¶0015-0016, 0021.) Although Purcell does not provide details as to the specific types of other applications that may be executed in system 100, a POSITA would have been motivated to configure system 100 such that conventional word, database, and presentation-type applications (among others) may be executed and used by users of system 100. These include conventional Microsoft® Word, Excel, and PowerPoint applications provided and known at the relevant time. For instance, Purcell confirms system 100 can be implemented as a notebook/laptop/desktop

[5] I reference EX1005 here to support my opinion regarding a person of ordinary skill in the art's state of art knowledge at the time of the alleged invention for the '007 patent.

computer (EX1010, ¶0017) and mentions the conventional use of a "Windows Taskbar" (*id.*, ¶0003) for interacting with applications running on such systems. In my opinion, a person of ordinary skill in the art would have understood Purcell's reference to "Windows" to refer to Microsoft Windows software available at the time. Such a skilled person would have been knowledgeable of the various document processing applications provided by Microsoft at the time, such as Microsoft® Word/Excel/PowerPoint, and the features provided by those applications at the time. For example, Exhibit 1008 contains excerpts from a publication that describes features available from Word 2007 and Exhibit 1009 contains excerpts from a publication that describes features available from Excel 2007. (EX1008 (Word 2007); EX1009 (Excel 2007).)[6] In my opinion, a person of ordinary skill in the art would have been well aware of such software applications and how to configure them for use by users of a computer system, such as system 100 described by Purcell.

[6] I reference Exhibits 1008-1009 here to support my opinion regarding a person of ordinary skill in the art's state of art knowledge at the time of the alleged invention for the '007 patent.

87. Accordingly, in my opinion such a skilled person would have been motivated to configure system 100 to use such conventional applications and related features to facilitate the preparation/review/use of *e.g.*, medical/clinical information contemplated by Purcell. Indeed, Purcell explains,

> In an example of the image format determination system operation involving a medical image and clinical data, a physician reviews patient medical images on a dual-monitor system using a primary application and both monitors to **display reports, worksheets, and the images**. In response to a physician opening a NM. (Nuclear Medicine derived) image study on a left monitor, another secondary application is automatically initiated on a right monitor to manage display of NM images while a workstation switches to single-monitor usage. The physician is able to directly interact with both applications via corresponding image windows which are operating concurrently and displayed on left and right monitors respectively. Neither of the corresponding image windows of the two applications obscures the other, thus requiring none of the extra user interface processing steps which are necessary to bring obscured windows to the foreground. In response to termination of operation of the secondary application and closing of its

> corresponding image window, the workstation automatically switches to dual-monitor usage in which the image window of the primary application is displayed using both monitors.

(EX1010, ¶0010; *see also id.*, ¶0017.)

88. Nicholas also confirms the well-known use of Microsoft Windows operating system software and Word/Excel/PowerPoint applications in a computer system. (EX1006, FIGS. 1A-1G, FIG. 3, 19, 1:13-62, 4:54-5:5, 10:58-11:44, 14:24-37; *see* §IX.A.2.) Nicholas' teachings are consistent with a skilled person's knowledge at the time. (*See* state of art knowledge supporting disclosures in EX1008; EX1009; EX1005, ¶¶0066, 0082, 0095-0097, FIG. 11.)

89. A person of ordinary skill in the art would have been well aware of the wide use of operating system and document/database/presentation processing software for computer systems, such as those from Microsoft. Thus, in my opinion, a person of ordinary skill in the art would have been motivated to configure Purcell's system 100 to execute such software in a manner consistent with that taught by Nicholas. This includes the implementation of Word/Excel/PowerPoint applications and their respective features, such as the

right-click functionalities, to enhance the user's efficiencies when using such software.

90. For example, Nicholas confirms that Graphical User Interface (GUI) interfaces were known to involve[] the use of a cursor controlled by an interface control (e.g., a mouse or touchpad)." (EX1006, 1:13-20.) "One example of a commonly used GUI is a right-click menu" which is "a cursor-based drop down menu that appears on the display screen of a computer when the right mouse button is pressed." (*Id.*, 1:21-24.) Nicholas explains that those types of menus "are traditionally contextual in nature" and thus "typically change depending on the cursor's location on the display screen or the application that is current running on the computer." (*Id.*, 1:25-28; *id.*, 1:39-41.) Nicholas presents in Figures 1A and 1C-1D (below) exemplary "conventional right-click menus" that "appear[] when opened in a Windows OS desktop" and within "Microsoft Word, Microsoft PowerPoint and Microsoft Excel respectively **according to the prior art**." (*Id.*, 1:30-36, FIGS. 1A, 1C-E.)

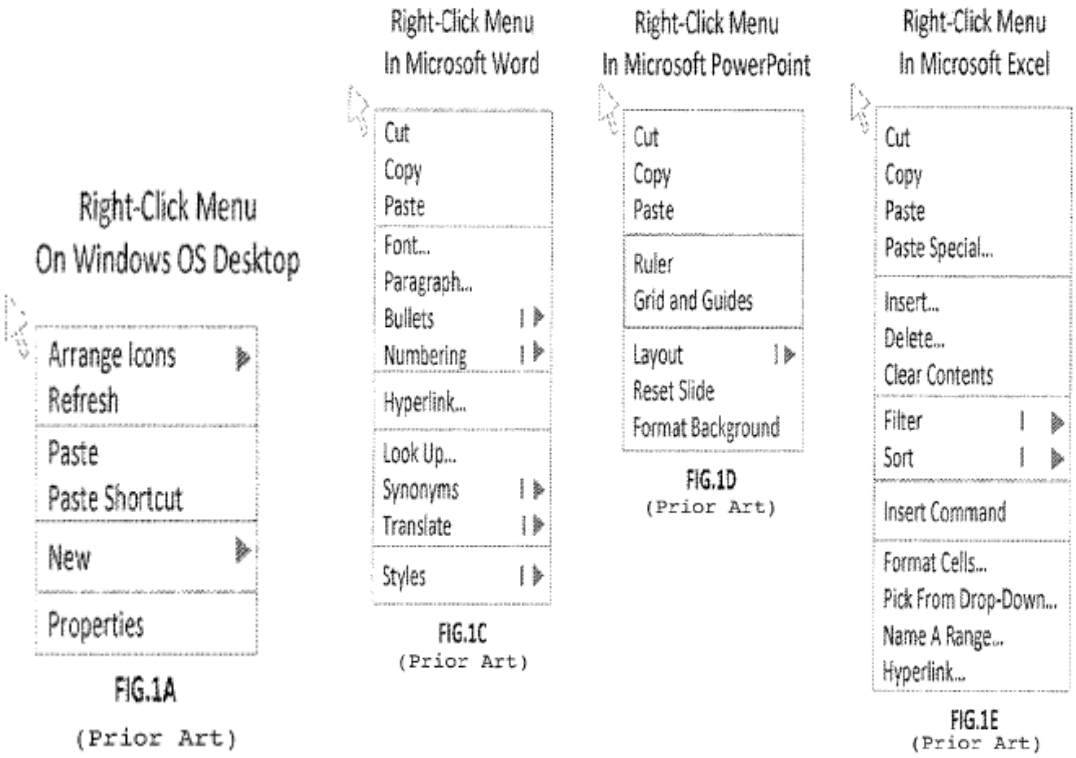


FIG.1A
(Prior Art)

FIG.1C
(Prior Art)

FIG.1D
(Prior Art)

FIG.1E
(Prior Art)

(*See also id.*, 1:36-38, 4:65-5:5.)

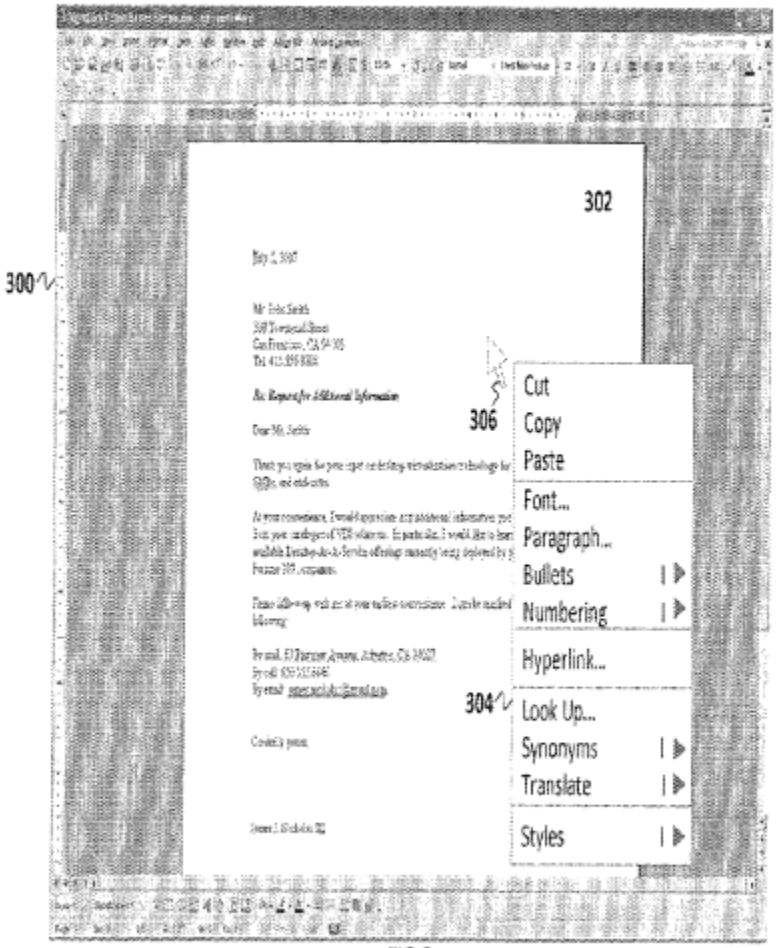
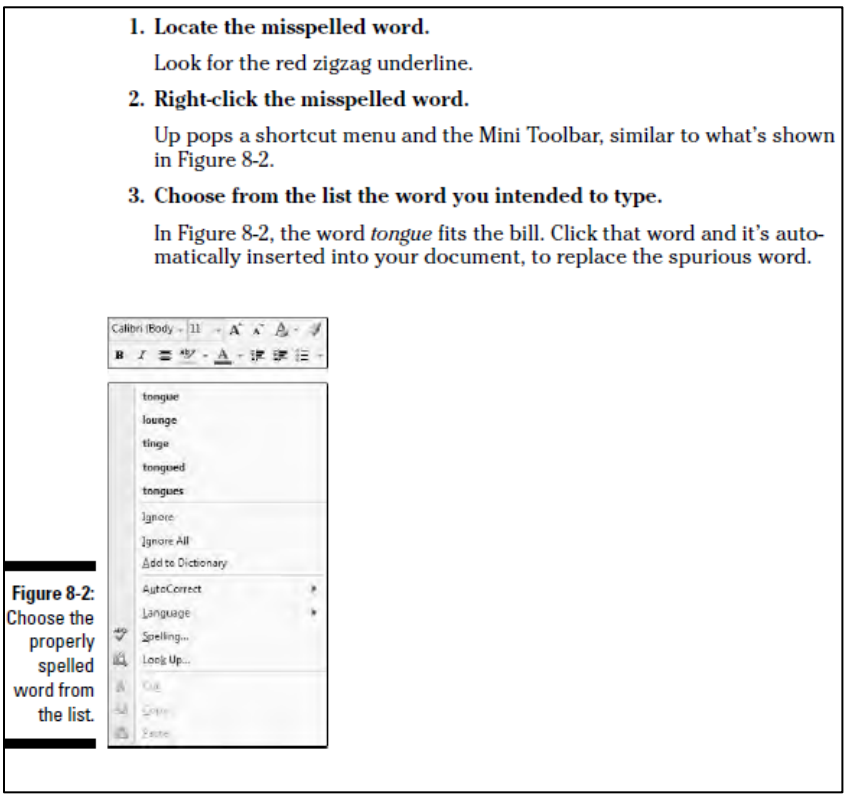


FIG.3
(Prior Art)

(*Id.*, FIG. 3.) The conventional right-click features taught by Nicholas are consistent with a person of ordinary skill in the art's knowledge at the time of the alleged invention. For example, Word 2007 and Excel 2007 based publications disclose similar features known in the art at the time. (*See* EX1008, 19 ("You can hide the Ribbon if you would rather have more room to write: Right-click

anywhere on the Ribbon and choose the Minimize Ribbon command from the pop-up menu. To restore the Ribbon, right-click any tab and choose the Minimize Ribbon command again"), 20, 102, 104.)



1. **Locate the misspelled word.**

   Look for the red zigzag underline.

2. **Right-click the misspelled word.**

   Up pops a shortcut menu and the Mini Toolbar, similar to what's shown in Figure 8-2.

3. **Choose from the list the word you intended to type.**

   In Figure 8-2, the word *tongue* fits the bill. Click that word and it's automatically inserted into your document, to replace the spurious word.

Figure 8-2: Choose the properly spelled word from the list.

(EX1008, 97; *id*, 98.) (*See also* EX1009, 19-20 (right-click command button), 122 160, 165, 167).)

To display the mini-bar, select the cells that need formatting and then right-click somewhere in the cell selection. The mini toolbar then appears immediately above the cell selection's shortcut menu (see Figure 3-8).

As you can see in this figure, the mini-bar contains most of the buttons from the Font group of the Home tab (with the exception of the Underline button). It also contains the Center and Merge and Center buttons from the Alignment group (see "Altering the Alignment" later in this chapter) and the Accounting Number Format, Percent Style, Comma Style, Increase Decimal and Decrease Decimal buttons from the Number group (see "Getting comfortable with the number formats" later in this chapter). Simply click these buttons to apply their formatting to the current cell selection.

In addition, the mini-bar contains the Format Painter button from the Clipboard group of the Home tab that you can use to copy the formatting in the active cell to a cell selection you make (see "Fooling Around with the Format Painter" later in this chapter for details).

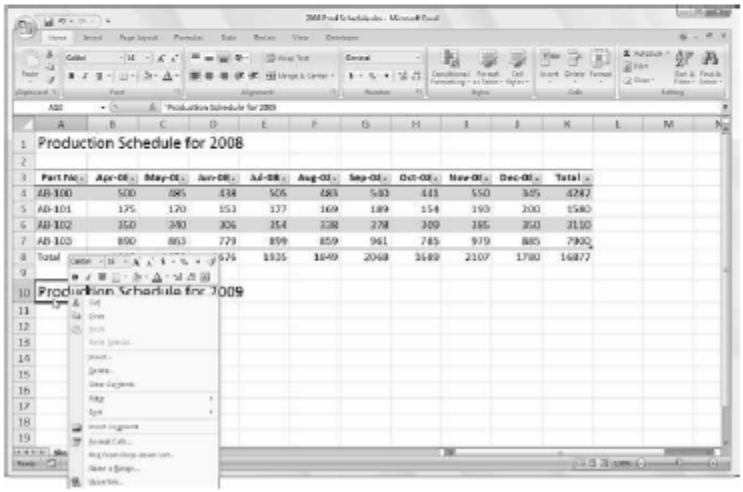


Figure 3-8: Use the buttons on the mini toolbar to apply common formatting changes to the cell selection within the Worksheet area.

(*Id.*, 113 (annotated).)

91. In my opinion, a person of ordinary skill in the art would have been aware of and known how to invoke and use such right-click features when working with such conventional operating system and application software run by computer systems, such as the system disclosed by Purcell.

92. Nicholas also teaches additional functionalities beyond those typically provided by conventional right-click invoked menus, such as allowing requests to launch an application. (EX1006, FIGS. 4-8, 1:66-3:7, 5:6-6:8, FIG. 18, 10:13-36.)

93. In light of the Purcell-Nicholas teachings and the state of art knowledge at the time, a person of ordinary skill in the art would have been motivated to configure Purcell's system 100 to provide known Microsoft Windows software applications (*e.g.*, Windows OS/Word/Excel/PowerPoint) having conventional functionalities (*e.g.*, right-click) at the time and enhanced functionalities similar to that taught by Nicholas. (*Supra* §§IX.A.4.i-IX.A.4.ii(1); EX1006, Abstract, 1:66-3:7, 5:6-6:8, 19:13-36.) For example, the additional teachings of Nicholas would have likewise motivated a person of ordinary skill in the art to expand the functionalities of Purcell's computer system to provide enhanced right-click features like those taught by Nicholas (*e.g.*, manage, select, and launch applications, alerts, etc.). In my opinion, a person of ordinary skill in the art would have recognized that such a modification would have foreseeably resulted in the Purcell system executing any of such known applications (e.g., Word) as a primary application for display on monitor 115 and allowing its use in a manner consistent with that known in the art and taught by Nicholas.

94. For example, a person of ordinary skill in the art's state of art knowledge bolstered by the teachings of Nicholas would have motivated such a person to configure Purcell's system 100 to execute such Microsoft applications to perform tasks consistent with those contemplated by Purcell (EX1010, ¶¶0010, 0017). Such a modification would have predictably resulted in the system displaying an image of, *e.g.,* a Microsoft Word document (which is a "**first image**" of a "**first application**") that was "**in focus**" on a display for monitor 115 (or alternatively depending on the configuration (EX1010, ¶0018), on displays for both monitors 115/117) consistent with that described by Purcell-Nicholas. (EX1010, Fig. 2, ¶¶0016-0018; EX1006, 1:66-3:7, 5:6-6:8.) The combined Purcell-Nicholas teachings and suggestions would have also motivated a person of ordinary skill in the art to configure the system such that when such an application was in use and in-focus, the user of the system was able to, and did, invoke the implemented right-click feature (stemming from teachings by Nicholas and known in the art for Word). Invoking the right-click feature would have predictably resulted in the modified system displaying on a display of monitor 115 ("**first display**") that displayed the Word image window ("**first image**" of a "**first application**"), a right-click dialog menu of selectable options (*e.g.,* cut/copy,

launch application etc.) for the Word application in a manner consistent with Nicholas and the state of art. (*See above* §IX.A.4.ii(1); EX1010, ¶¶0004, 0015-0020; EX1006, FIGS. 1C, 3, 4:54-5:60; EX1008, 97-98, 102, 104.) The menu area and its included options are a "**first configurable area**" and "**input options**" as claimed and exemplified below from Nicholas.

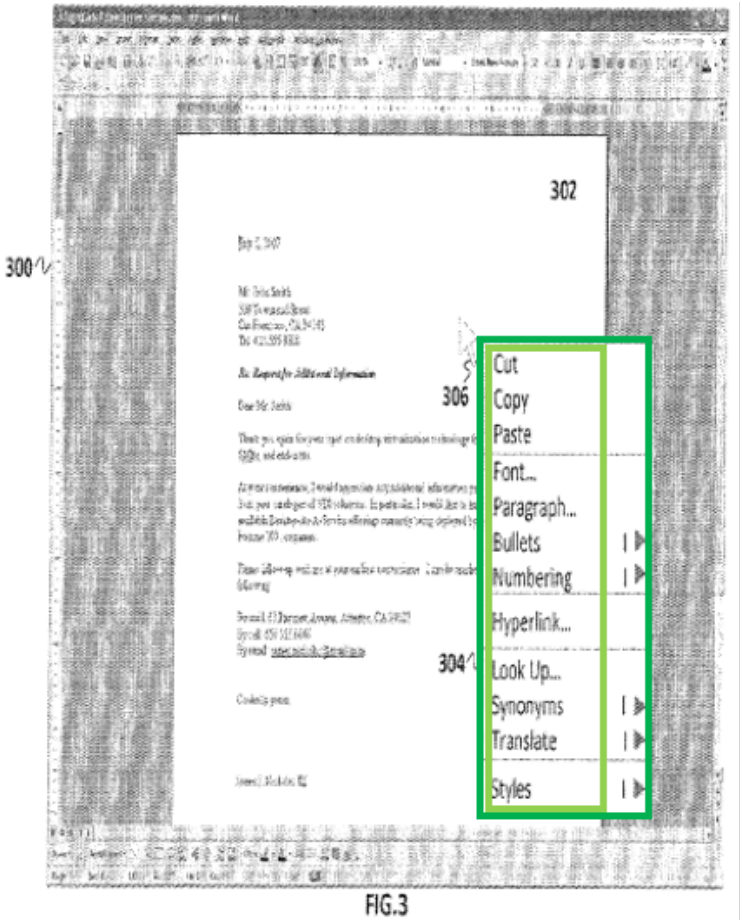
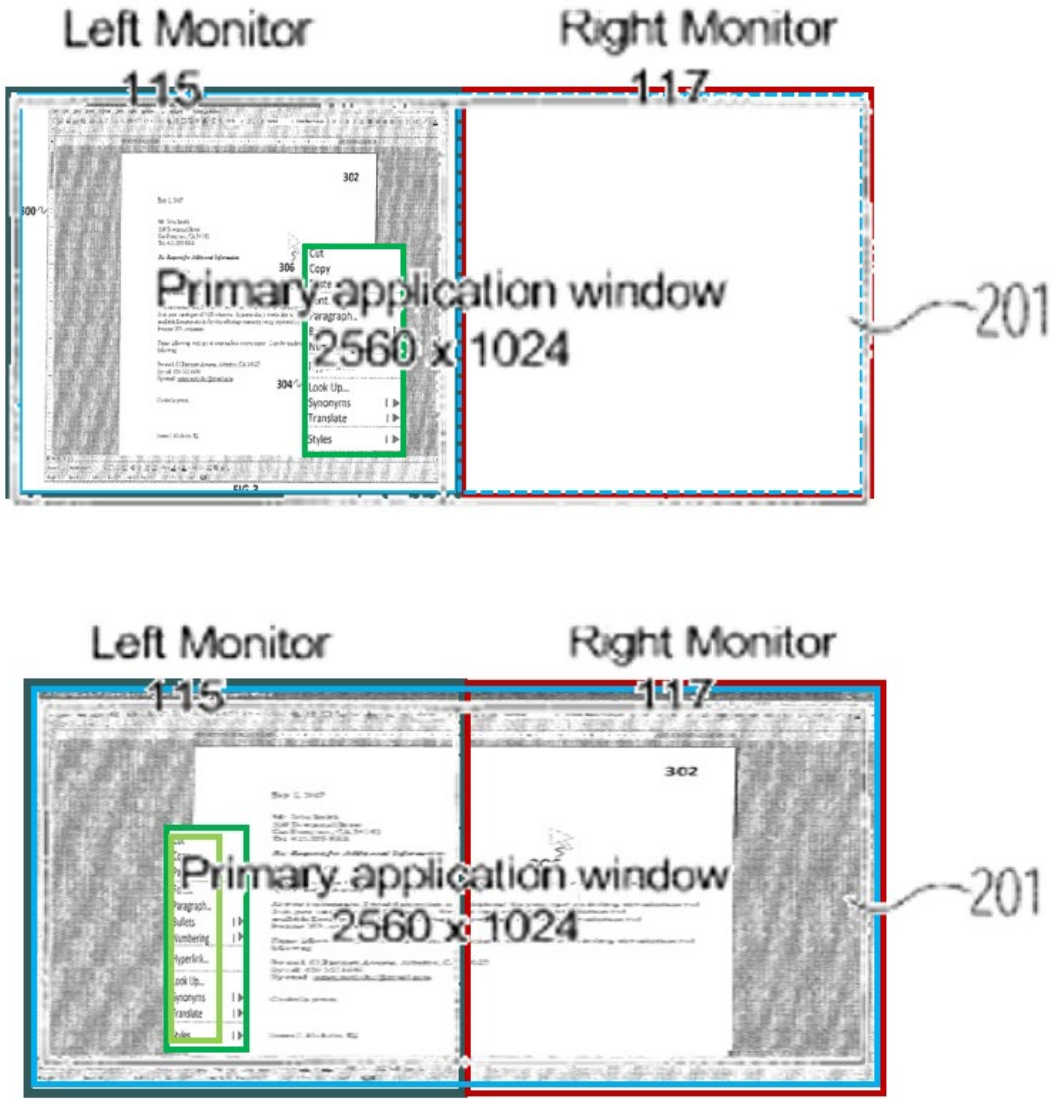


FIG.3
(Prior Art)

(EX1006, FIG. 3.) (*See also*, EX1008, 102 (FIG. 8-3).) Depending on the configuration (EX1010, ¶0018), the image of the Word application may be

displayed across both monitors 115/116 or may be presented as "first size image on the first display monitor" (*id.*).



(EX1010, FIG. 2, EX1006, FIG. 3 (combined/annotated showing right-click short cut menu with selectable items ("**first configurable area**" with "**input options**")

on a Word document image ("**first image**") of a Word application ("**first application**) displayed on a display in monitor 115 ("**first display**"); EX1010, ¶0018 (first primary application image window may encompass display screens of monitors 115/117 or may "comprise a first size image of first display monitor").)

95. A person of ordinary skill in the art would have known how to configure, implement, and use this type of application software and associated right-click features when working with computer systems like that described by Purcell. The advantages of providing such conventional application software were also readily apparent to a person of ordinary skill in the art. Further guided by the teachings from Nicholas, such a skilled person would have been motivated to configure Purcell's system to store, execute, and display images/content from such applications (*e.g.*, Word/Excel, etc.) allowing a user to interface with functionalities (*e.g.*, right-click menus) to perform tasks to display and work with "reports, worksheets, and images" as contemplated by Purcell-Nicholas. (EX1010, ¶1010.)

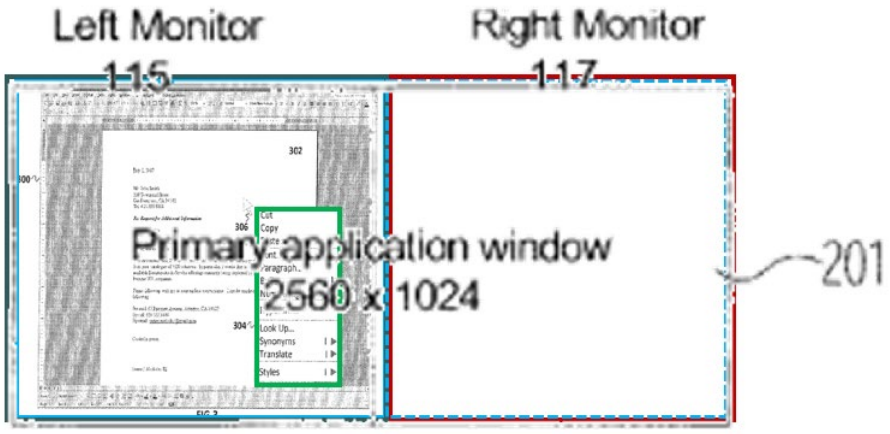
96. In my opinion, a person of ordinary skill in the art would have had a reasonable expectation of success in implementing such a modification given the known use of Microsoft Windows OS and Word/Excel/PowerPoint application

software in computer systems encompassed by those taught by Purcell. (EX1010, ¶¶0013, 0017.) The above modification would have been a foreseeable application of known technologies and techniques (*e.g.*, like that taught by Nicholas) that would have beneficially added features to Purcell's system 100 to assist users of the system in creating/editing/displaying documents, spreadsheets, and/or presentations in a user-friendly manner consistent with the features offered by such known technologies (*e.g.*, Microsoft Word/Excel).

97. The Purcell-Nicholas system as modified would have thus been configured to perform processes for displaying, in response to computer 100 and the in-focus Word application receiving a right-click input from the user, a shortcut menu of input options for the *e.g.*, Word, application, where input is allowed from the menu and also from other portions of the Word application displayed in monitor 115 (or alternatively both monitors 115 /117). In this way, as one example, the Purcell-Nicholas combination discloses a "**first configurable area**" (*e.g.*, the area encompassed by the right-click invoked menu) that displays "**input options**" for the "**first application**" (e.g., Word-based menu options) where "**input is allowed from the first configurable area**" (e.g., select an option in the menu).

98. A person of ordinary skill in the art would have understood that "**input is allowed from** … **the first display**" in two ways. First, as configured above, the system would have allowed a user to access, manipulate, and use features for the Word document outside of right-click menu features, which would have resulted in allowing input from the first display (display in monitor 115). Second, by allowing the user to invoke the right-click menu and receive a selection of one of the menu options (which is displayed on the display of monitor 115, the system likewise allows input from the first display like that claimed.

99. Therefore, for the reasons and disclosures I discussed above, it is my opinion that the Purcell-Nicholas combination discloses or suggests limitation 1.a.2 in a manner that is **consistent with the second interpretation** (the first configurable area **is part of the first or second display that provides content** as explained in §VIII.A.2 and shown below.

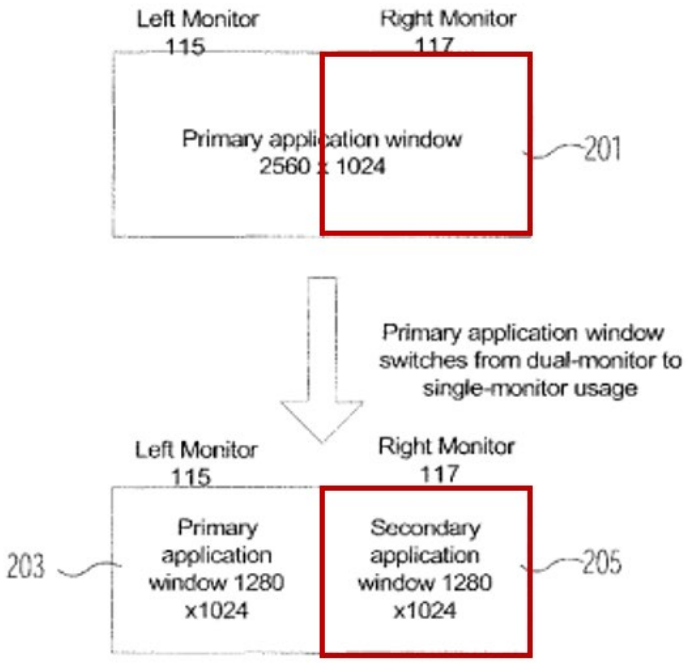


(EX1010, FIG. 2, EX1006, FIG. 3 (annotated/revised) (menu-box ("first configurable area") displayed **as part of** Word application ("first application").)

(3) [1.a.3] "wherein no input options are displayed in a second configurable area, wherein input is not allowed from the second configurable area, wherein input is allowed from a second display,"

100. For reasons discussed above, the Purcell-Nicholas system discussed above also includes a "**second display**" (display in monitor 117). (*Supra* §§IX.A.4.i-IX.A.4.ii(2); EX1010, FIG. 2, ¶¶0013-0020.)

FIGURE 2



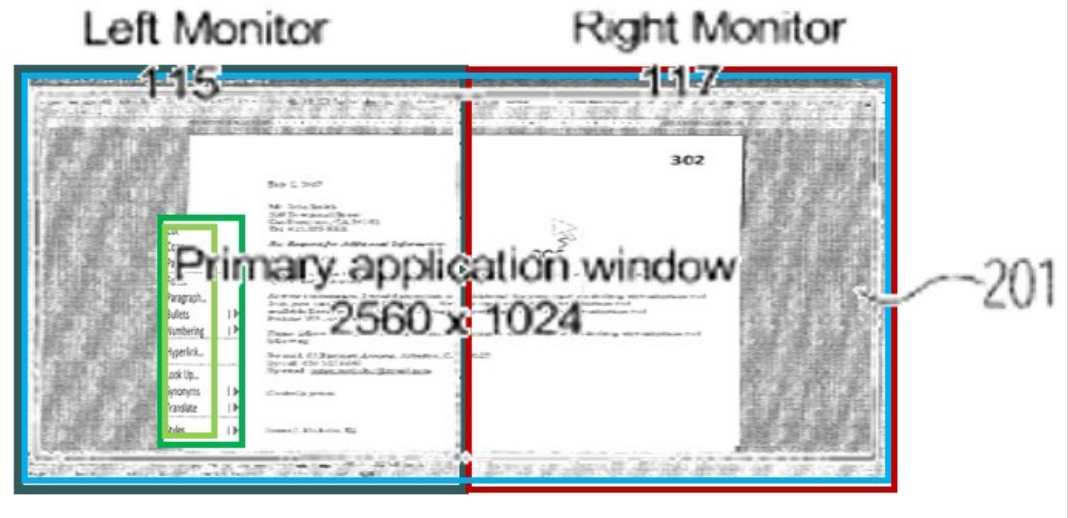
(EX1010, FIG. 2 (annotated to show a second display in monitor 117).)

101. Purcell's system 100 performs processes that allows a second application to be launched, which results in displaying a second image window for the second application in the display of monitor 117 ("**second display**"). (EX1010, ¶¶0004, 0008-0009, 0018, FIGS. 2-3.) In combination with the teachings of Nicholas and related rationale that I explained above for limitation 1.a.1, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to execute another Microsoft application, such as

Microsoft Excel ("**second application**"), for reasons similar to those explained for using the Word application ("**first application**") in limitation 1.a.1, such as t o facilitate tasks such as creating/manipulating reports/worksheets, etc. as taught by Purcell. (*See above* §IX.A.4.ii(2); EX1010, ¶¶0010-0012, 0016-0020; EX1006, FIG. 1D, 1:13-36.)

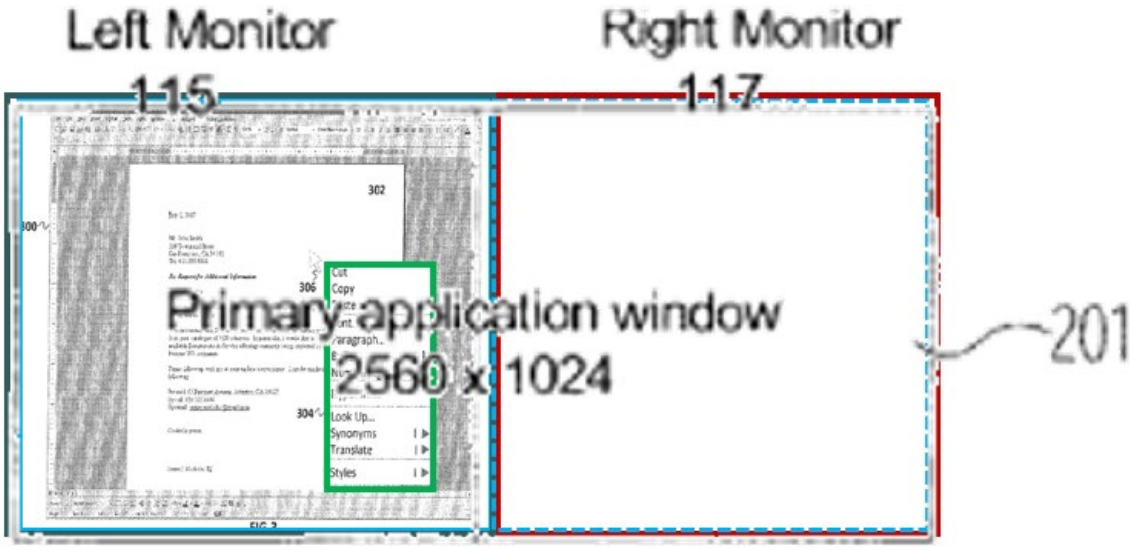
102. A person of ordinary skill in the art would have appreciated and recognized that **prior to launching the second application** (*e.g.*, Excel), the Purcell-Nicholas system would have operated consistent with Purcell's teachings, where the system provides a first image window of the in-focus first primary application (*e.g.*, Word) on monitor 115 ("**first display**") (or across both monitors 115/117) as I explained above. (EX1010, ¶0018.) At that time, there would be "**no input options are displayed in a second configurable area, wherein input is not allowed from the second configurable area**" as recited in limitation 1.a.3. For example, consistent with the teachings of Purcell and the reasons I discussed above, the Purcell-Nicholas system would have been configured such that the first application image (*e.g.*, Word document image) may be displayed across both monitors 115/117. (§IX.A.4.ii(2); EX1010, ¶0018, FIGS. 2-3, ¶¶0013, 0016,

0019-0020.) At that time, no input options from a second configurable area are displayed and no input would have been allowed for such an area.



(EX1010, FIG. 2, EX1006, FIG. 3 (annotated/combined/excerpted).) Also a person of ordinary skill in the art would have understood that at that time, "**input is allowed from a second display**" as the system allows a user to access/manipulate/edit or otherwise provide input in the Word application document in the area displayed on monitor 117 that is received by the system from the display of monitor 117 ("**second display**").

103. The same understanding would have applied to a person of ordinary skill in the art where the Purcell-Nicholas system was configured such that the first application and image (*e.g.*, Word document) is first displayed only in the display of monitor 115, consistent with Purcell's teachings. (EX1010, ¶0018.)



(EX1010, FIG. 2, EX1006, FIG. 3 (annotated/combined/excerpted).) Again, while no input options from a "**second configurable area**" are displayed to allow for any input, the system **allows input from the** "**second display**" of monitor 117. Purcell does not preclude a user from providing input via monitor 117 in such a scenario.

104. However, to the extent not disclosed, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to allow input from the display of monitor 117 ("second display") where the first primary application is displayed in the first display of the left monitor 115 (as shown above). For example, such a skilled person would have been motivated to configure the system such that desktop software images are

provided in the second display of monitor 117, allowing conventional input to be received in the display consistent with Windows OS software known at the time and contemplated by the Purcell-Nicholas combination. (EX1010, ¶0015; EX1006, FIG. 1B, 1:29-33.) A person of ordinary skill in the art would have had the motivation to implement, and a reasonable expectation of success in achieving, such features because the person would have recognized it would have been a foreseeable application of known technologies and technologies consistent with those known in the art and Purcell-Nicholas, and within the capabilities and skills of such a skilled person at the time.

(4) [1.a.4] "wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application;"

105. In my opinion, the above Purcell-Nicholas combination that I discuss above discloses and suggests this limitation. First, the right-click invoked menu ("**first configurable area**") that I discussed above for limitations 1.a.2 does not display "**content from an application**" as claimed in a manner that is consistent with the '007 patent. Purcell-Nicholas' "**first configurable area**" includes menu options such as those exemplified by Nicholas (EX1006, FIGS. 1C, 3 (which is shown below illustrating known Cut/Copy/Paste, etc. input options).)

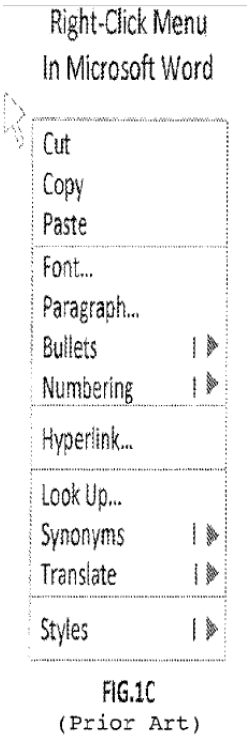


FIG.1C
(Prior Art)

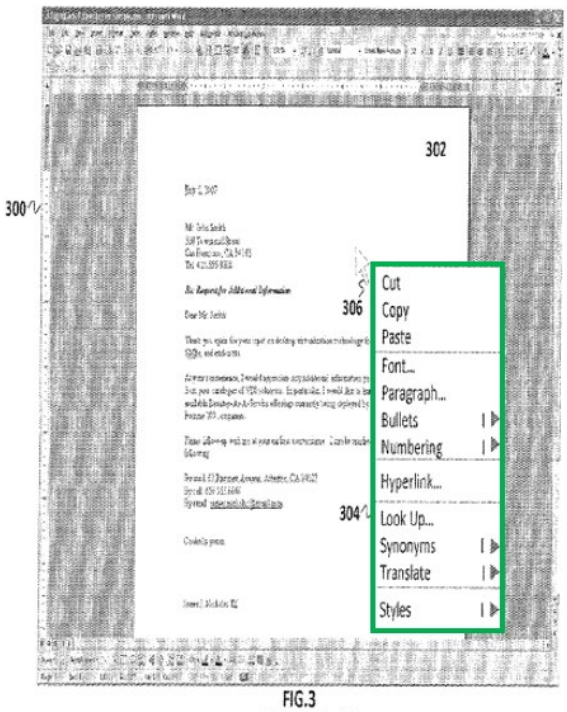


FIG.3
(Prior Art)

The '007 patent describes configurable areas that may include a "menu" to receive input "indicating the user would like to view options from a menu." (EX1001, 7:55-65.)

106. Additionally, the analysis and reasons that I discussed above for limitation 1.a.3, explains that where the Purcell-Nicholas system has not yet launched/displayed a "second application" or invoked a right-click menu for the second display, there is no "**second configurable area**" that displays any information and thus it "**does not display content from an application**" as claimed. (§IX.A.4.ii(3).) A person of ordinary skill in the art would have also

understood that the later displayed "**second configurable area**" that I address below for limitation 1.d.3 (§IX.A.4.v(3) (Excel right-click menu)) does not display content from an application for the same reasons that I explained above for the "first configurable area" in this limitation 1.a.4 (*supra*). Both right-click invoked menu options (for Word (first configurable area) and for Excel (second configurable area) do not display content that is content that is displayed in the first display of monitor 115 (e.g., Word document image content) or the second display of monitor 117 (e.g., whether not yet launched or later launched as an Excel application (*see* below for limitations 1.b-1.d).

iii) [1.b] "receiving first input indicating a request to launch a second application;"

iv) [1.c] "launching the second application; and"

107. In my opinion, the Purcell-Nicholas combination discloses and/or suggests this limitation. Purcell discloses receiving a **first input indicating a request to launch a second application** and **launching the second application** to display a second window of a second application on the second display (117). (*See above* §IX.A.1; EX1010, FIGS. 2-3, ¶¶0010-0012, 0016 (describing displaying an image window of another application adjacent to an image window of the primary application where "system 100 initiates execution of a second

application"), 0018 ("command data representing a command to initiate execution of a function of a second application … in response to user entry of a command, where such function may include "initiation of execution of execution of the second application"), 0019-0020.) Also, a person of ordinary skill in the art would have also recognized that Nicholas discloses the use of right-click functionalities with an in focus application presented on a computer display to launch a second application for subsequent display and use. (EX1006, FIGS. 3-4, 18, 4:54-5:57, 10:13-36.) For reasons that I discussed above for limitations 1.a.1-1.a.4, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to perform similar functionalities.

108. In my opinion, based on such teachings and for reasons similar to those I discussed above for limitations 1.a.2-1.a.4, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to execute multiple applications from Microsoft, such as Word, Excel, and/or PowerPoint. (*See above* §IX.A.4.ii(2)-(3).) Furthermore, for similar reasons that I discussed above for limitation 1.a, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to receive input to initiate and launch another Microsoft application (*e.g.*, Excel or

PowerPoint), as a "**second application**" for subsequent use by the user who is using the first application (*e.g.*, Word). (*Id.*; EX1010, ¶¶0004, 0008-0010, 0015-0020; EX1006, FIGS. 1D-1E, 3, 18, 1:29-47, 4:54-5:57, 10:13-36.) For example, a person of ordinary skill in the art would have been motivated to leverage Nicholas's teachings relating to enhanced right-click application launching functionalities to launch the "**second application**." (EX1006, 5:6-6:8, FIG. 4.) A person of ordinary skill in the art would have thus been motivated to implement similar features in the Purcell-Nicholas system, allowing a input request to be received by the system indicating a request to launch such second application, and to launch that application for display and use in a manner consistent with the teachings of Purcell-Nicholas as known in the art at the time. The resulting modification to the system would have included the system performing a process like that in limitations 1.b-1.c. Accordingly, in my opinion, the Purcell-Nicholas combination discloses or suggests those limitations.

v) [1.d] "in response to launching the second application:"

(1) [1.d.1] "displaying, by the second application, a second image on the second display; and changing the focus from the first image to the second image;"

109. In my opinion, Purcell in view of Nicholas discloses and/or suggests this limitation for similar reasons I discussed above for limitations 1.a-1.c. (§§IX.A.4.ii-iv.) A person of ordinary skill in the art would have recognized that consistent with Purcell's operations, when the second application (*e.g.*, Excel or PowerPoint) is launched, the second application **displays**, via the Purcell-Nicholas system, a second image window ("**second image**") for the second application ("**second application**") on the display of monitor 117 ("**second display**"). (EX1010, ¶¶0010-0018, *e.g.,* ¶0012 (the system can "switch to single-monitor usage to allow another secondary application to run, visibly, on the second monitor"), ¶0013 (a processor 120 receives command data representing a command to initiate execution of a function of a second application and display an associated second image window") FIGS. 1-2; EX1009, 13 (FIG. 1-1 (below)); *see above* §§IX.A.1, IX.A.4.ii(2)-(4).) For example, where an Excel application was launched as the second application, it would have provided an image similar to that

known for conventional Excel application window images, similar to that illustrated below.

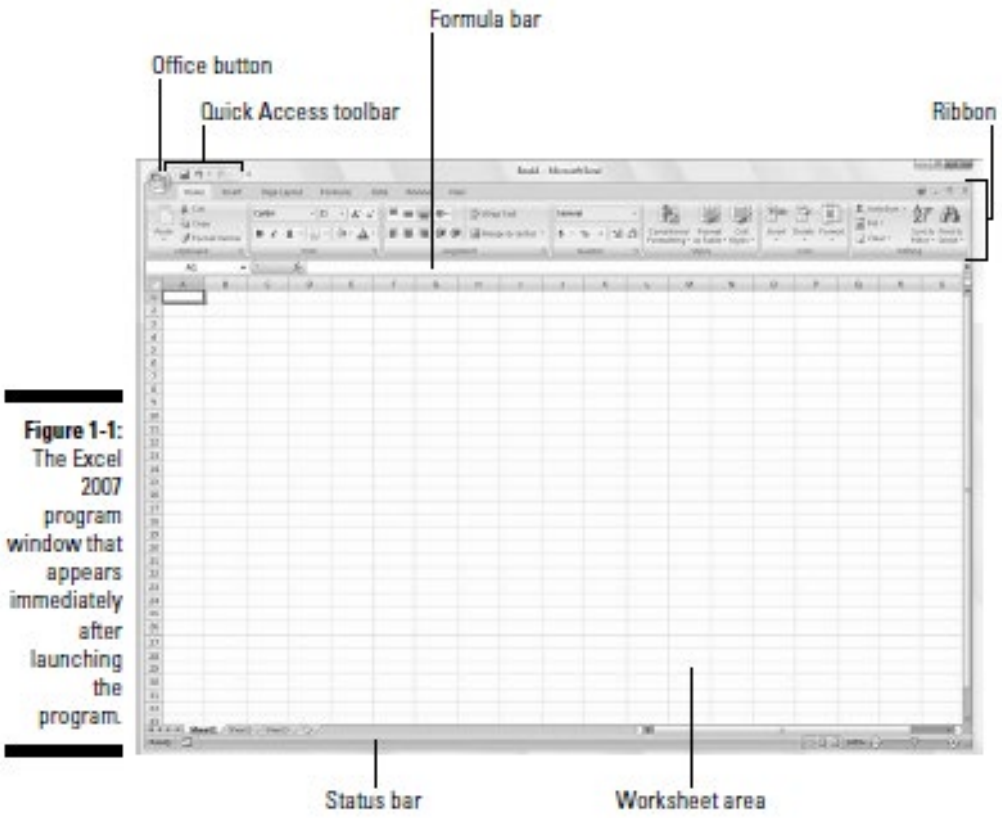
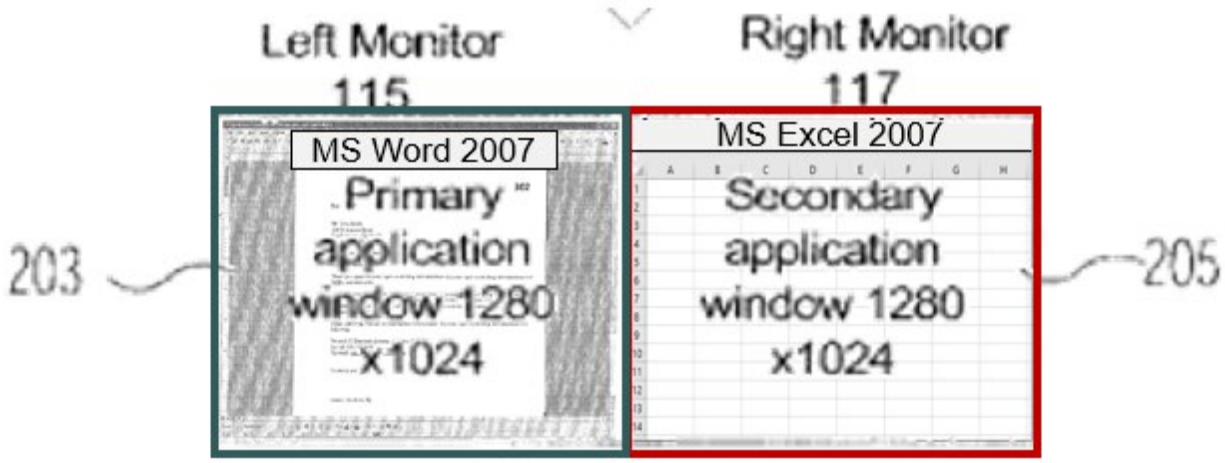


Figure 1-1: The Excel 2007 program window that appears immediately after launching the program.

(EX1009, FIG. 1-1.)

110. A person of ordinary skill in the art would have also understood that consistent with the teachings of Purcell and Nicholas, the Purcell-Nicholas system would have been configured such that it also **changes focus** from the first application (*e.g.* Word application) (*above* §IX.A.4.ii(2)) to the second application (*e.g.*, Excel or PowerPoint) in response to launching the second application

("**changing the focus from the first image to the second image**"). Namely, a person of ordinary skill in the art would have understood that once launched and displayed on monitor 117 ("**second display**"), the second image window is active and available for use (and is used) by the user. (EX1010, ¶¶0003, 0011-0018, FIGS. 2-3, ¶0020 (explaining how the first image window is reduced to accommodate the newly displayed second image window on display 117).



(EX1010, FIG. 2 (annotated and revised with labels (Word 2007/Excel 2007.)

111. In my opinion, the Purcell-Nicholas combination discloses "**changing the focus from the first image to the second image**," in a manner consistent with the teachings of Purcell and Nicholas, the state of art (*see e.g.,* EX1005, ¶0076 (demonstrating state of art knowledge that in "most computer operating systems,

application windows on the main display screen are given the focus based on which was last clicked by the pointing device, or on which currently contains the cursor"), and with the '007 patent. (*See* EX1001, 5:43-49 ("focus" includes "an open window of an application, and/or a desktop/portion of a desktop," 26:19-21.)

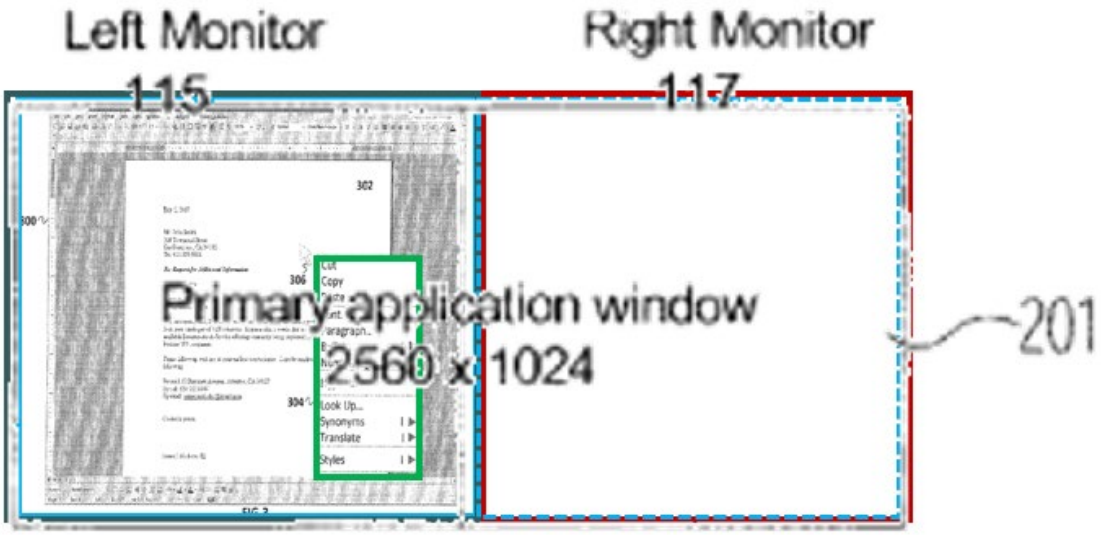
(2) [1.d.2] "stopping display of input options in the first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first display; and"

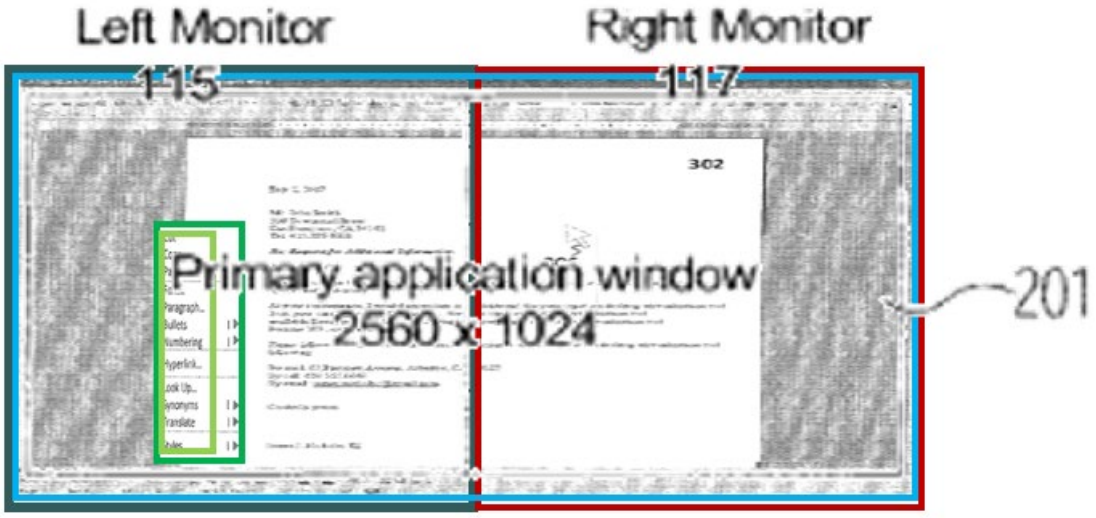
112. In my opinion, the Purcell-Nicholas combination discloses and/or suggests these limitations. Consistent with that explained above for limitation 1.d.1, launching the second application in the Purcell-Nicholas computer device (*see above* §IX.A.4.v(1)) results in shifting focus from the first window image to the second window image of the second application displayed in monitor 117. For example, as the computer device and user accesses and/or uses the second application via monitor 117 ("**second display**"), the system would stop display of the right click invoked shortcut menu ("**first configurable area**" with "**input options**") on the display area of monitor 115 ("**first display**"), consistent with conventional right-click functionalities known at the time. (*E.g.*, EX1010, ¶¶0012-0013; EX1008, 14, 16.19, 97-99, 102, 104 ; EX1006, FIGS. 1C-1E, 3, 18, 4:54-

5:57, 10:13-36.) For instance, a person of ordinary skill in the art would have understood that the Purcell-Nicholas system would have performed processes as modified above such that as the user activates a pointer/cursor or performs other invoking actions with the second application, the right-click shortcut menu ("**first configurable area**") will no longer be displayed in the display area of monitor 115 ("**stopping display of input options in the first configurable area**").

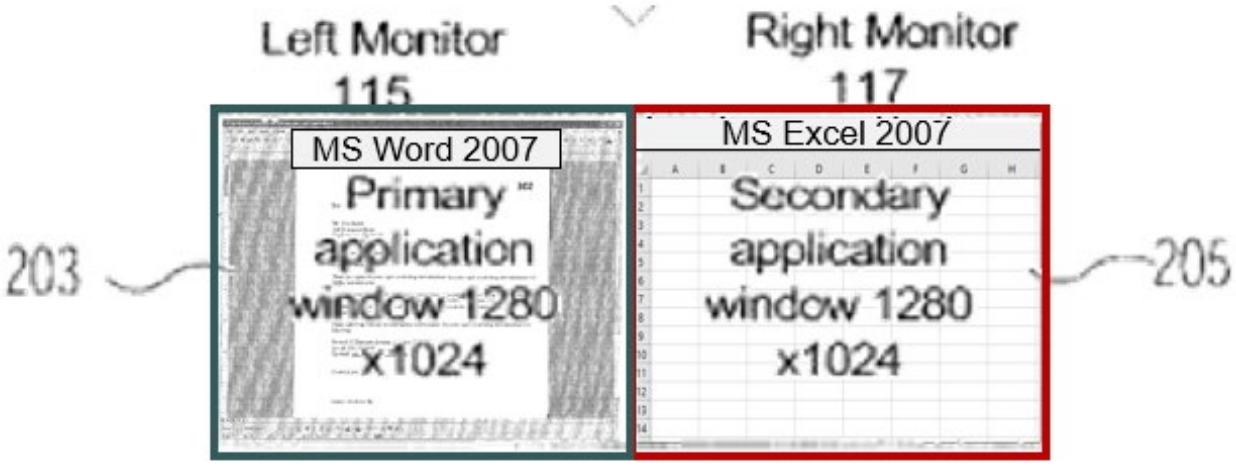
113. As a result, because the first application's right-click menu is no longer displayed, the Purcell-Nicholas system would no longer allow input from that menu ("**input is not allowed from the first configurable area**") as exemplified below. The system also **allows input from the first display**, such as when the user activates the pointer/cursor or performs other actions with the Word document via monitor 115 after working with the second application image (Excel) via monitor 117, consistent with my discussions here in this section and above for limitation 1.d.3. (§IX.A.1.v(3).)

Before Launching Second Application





After Launching Second Application



(EX1010, FIG. 2 (annotated and revised showing non-limiting exemplary first and second application image windows in the first and second displays, where the second application image is in focus and the right click menu is no longer displayed in the first display).)

114. Such features as explained above meet the claimed "**stopping display of input options in the first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first display**" in limitation 1.d.2.

(3) [1.d.3] "displaying input options for the second application in the second configurable area, wherein input is allowed from the second configurable area and the second display."

115. In my opinion, the Purcell-Nicholas combination discloses and/or suggests these limitations. My discussions above for limitations 1.a-1.d.2 explain how the Purcell-Nicholas computer system would have been configured to execute Microsoft applications, such as Word, Excel, and/or PowerPoint. (§IX.A.4.ii.) I also discuss and explain above how a person of ordinary skill in the art would been motivated to launch a second application, (*e.g.*, Excel), which would have resulted in displaying an Excel second image window in the display of monitor 117. (§§IX.A.4.iii-IX.A.4.v(2).) Additionally, my above discussions for claim 1 explain how the teachings of Nicholas in context of a person of ordinary skill in the art's state of art knowledge would have motivated such a person to configure the Purcell-Nicholas computer device to provide right-click features like those taught by Nicholas. (*Id.*)

116. In my opinion, consistent with such teachings and reasons, a person of ordinary skill in the art would have been similarly motivated to configure the Purcell-Nicholas system to provide right-click shortcut menu features for the second application in focus on the display of monitor 117. (*Id.*; EX1010, FIGS. 2-

3, ¶¶0016-0020). A person of ordinary skill in the art would have had the same rationale, motivation, and expectation of success in providing such right-click features with the second application (*e.g.,* Excel application) as I discussed for doing so with the first application (*e.g.,* Word). A person of ordinary skill in the art would have appreciated that, consistent with that known in the art, Nicholas describes the similar right-click shortcut menu features that were available for other applications like Excel and PowerPoint (EX1006, FIGS. 1D-1E, 1:21-36; EX1009, 19-20, 113, 122, 160, 165, 167.)

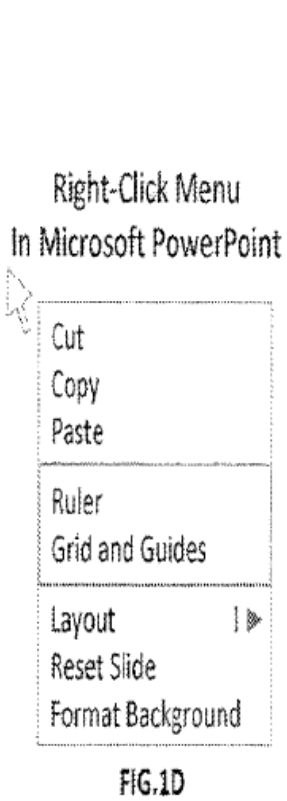


FIG.1D
(Prior Art)

FIG.1E
(Prior Art)

(EX1006, FIGS. 1D-1E.)

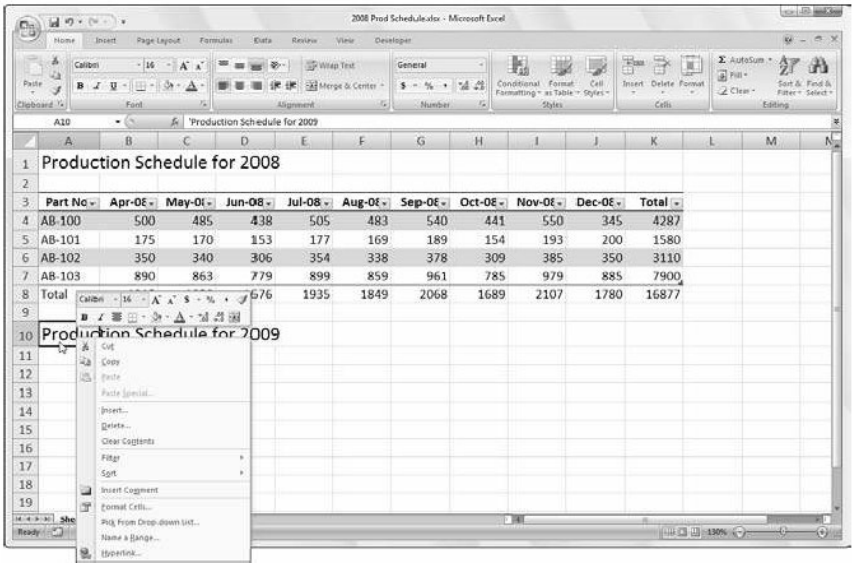


Figure 3-8: Use the buttons on the mini toolbar to apply common formatting changes to the cell selection within the Worksheet area.

(EX1009, 113.)

117. Therefore, where (and when) Excel ("**second application**") is launched and in focus as I explained above for limitations 1.b-1.c, an Excel application image window ("**second image**") similar to the spreadsheet image window shown above would have been displayed on the display of monitor 117 ("**second display**"), consistent with Purcell and Nicholas and as known in the art at the time. (EX1010, FIGS. 1-2, ¶¶0004, 0011, 0015-0020; *see above* §IX.A.1-A,2.)

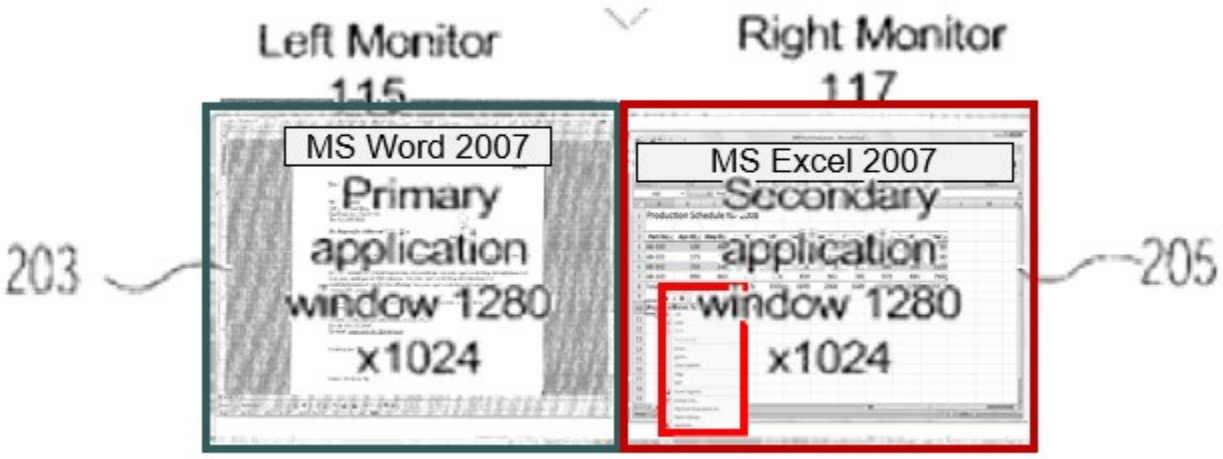
118. For the reasons that I discussed above for the first application (Word), it is my opinion that a person of ordinary skill in the art would have been motivated to operate and use the Excel application ("**second application**") in a

conventional manner consistent with the teachings of Nicholas, which encompass the above-discussed right-click functionalities. (§IX.A.4.ii.) This includes taking advantage of known Excel functionalities, such as the right-click feature discussed above. Consistent with such features, when a right-click operation is invoked, a shortcut menu of options would have been displayed in a manner similar to that shown by Nicholas and known in the art. (EX1006, FIG. 1E, EX1009, 113).)

119. In my opinion, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to receive input relating to a user selection of a menu option in the Excel right-click invoked menu and/or receive input from other portions of the "second display" of monitor 117 to manipulate/use other features in the displayed Excel worksheet as desired, thus allowing input from both a "**second configurable area**" and the "**second display**." (EX1010, ¶¶0004, 0015-0020; EX1006, FIG. 1E, 1:29-36; EX1009, 113, 122, 160, 165, 167.) Such rationale would have been consistent with the rationale that I discussed above for using such features with a Word application (§IX.A.4.ii) and with teachings of Purcell-Nicholas,

120. A person of ordinary skill in the art would have understood and appreciated that the foreseeable result of such combined teachings and

configuration would have been having the Purcell-Nicholas system configured to perform processes including displaying, in response to launching the second (Excel) application, a shortcut menu of input options for the *e.g.*, Excel application, where input is allowed from the menu and also from other portions of the Excel application displayed in the display of monitor 117. For example, upon invoking the right-click feature in the Excel application spreadsheet, the user would have been allowed to select a menu option from the displayed shortcut menu, and provide input in other portions of the Excel spreadsheet as desired ("**input is allowed from the second configurable area and the second display**"). (*See above* §§IX.A.1-3, IX.A.4.ii; EX1010, ¶¶0004, 0015-0020; EX1006, FIGS. 1E, 1:29-36; EX1009, 113, 122, 160, 165, 167.)



(EX1010, FIG. 2 revised/annotated/excerpted using figures from EX1006 (FIG. 3, left) and EX1009 (FIG. 3-8) showing a **second configurable area**.)

121. Accordingly, for the reasons above, it is my opinion that the Purcell-Nicholas combination discloses and/or suggests "**displaying input options for the second application**" (*e.g.*, Excel right-click invoked shortcut menu options) in "**the second configurable area**" (e.g., shortcut menu area), "**wherein input is allowed from the second configurable area and the second display**" (e.g., allowing input from the shortcut menu and from the other portions of the Excel spreadsheet), consistent with ***the second interpretation*** of the claimed "configurable area" as I was asked to consider and apply, which is explained above in §VIII.A.2 (the "second configurable area" **is part of the first or second display** that provides content).

5. Claim 2 "The method of claim 1, wherein the first image is displayed in portrait mode on the first display and the second image is displayed in portrait mode on the second display, and wherein the first display, the first configurable area, the second display, and the second configurable area are on a common first screen."

122. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations. (*See* §§IX.A.1-A.4.) Although Purcell does not explicitly describe the orientation of application image(s) displayed on the displays (EX1010,

FIG. 2), it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to display on the first/second displays (115/117) the first/second application images (Word/Excel) in portrait mode. Page orientation modes was known to a person of ordinary skill in the art at the time, especially in context of applications like those provided by Microsoft as implemented in the above Purcell-Nicholas system. (§§IX.A.1-4; *see also* EX1008, 185-186, 188 (Word 2007 **portrait**/**landscape** page orientation modes); EX1009, 177 (page orientation), 182 (Excel 2007 page orientation (**portrait/landscape** modes).) In fact, Nicholas discloses a Word document image displayed in portrait mode. (EX1006, FIG. 3, 4:54-5:5.)

123. Based on such teachings and knowledge, it is my opinion that a person of ordinary skill in the art would have been motivated to provide such common page orientation features with the application software (e.g., Word, Excel, PowerPoint, etc.) executed by the Purcell-Nicholas computer for the same reasons I explained for modifying Purcell's system to use such available software and related functionalities. (§IX.A.1-3, IX.A.4.ii.) Providing the application images in a portrait mode would have been a predictable application of such known technologies that would have resulted in the combined system presenting

information in known user-friendly and selectable page orientations, formats. Therefore, a person of ordinary skill in the art would have had, in my opinion, a person of ordinary skill in the art would have expected such features to be successfully implemented and achieved in the modified Purcell computer discussed above for claim 1. Thus, such a person would have had a reasonable expectation of success in implementing such features in the Purcell-Nicholas system. Consequently, for reasons stated, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas device to such that the first and second application images were displayed in **portrait mode** (claim 2) and if desired, in **landscape mode** (relevant to claim 3) on their respective first and second displays.

124. In addition, consistent with Purcell's teachings, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system such that the first/second displays and first/second configurable areas were provided on a **common first screen** as claimed. (*Supra* §IX.A.4.ii, IX.A.4.v.) A person of ordinary skill in the art would have had reason to implement such features in light of Purcell's teachings and such a person's state of art knowledge at the time. Such a skilled person would have appreciated that Purcell contemplated

modifications that "may be implemented by those skilled in the art" and confirmed the disclosed system is not limited to using "different monitors" but also encompassed use of a common monitor (providing a "**common screen**") with displays:

> [a] system according to invention principles is usable wherever multiple concurrent applications employing corresponding multiple image windows are to be displayed on a user interface employing one or more display monitors.

(EX1010, ¶0021.) (*See also id.*, ¶¶0013, 0014-0015, 0017 (system can be a laptop, PDA, cellphone, wristwatch, etc.), claims 1-2, 6, 8, 10 (supporting how Purcell's teachings are not limited to "different monitors" but also encompass a common monitor (providing a "**common screen**") for multiple displays and configurable areas).) Purcell's teachings are consistent with the state of art knowledge associated with providing multiple displays (and configurable areas) on a single screen. (EX1011, FIGS. 1-3, 7A-12, Abstract.) (*See also* EX1001, 3:38-4:11 (describing a "screen" as a physical structure including component(s) that provide the ability to render a user interface and/or receive user input, and encompasses display(s)), 4:3-11 ("display" may be a single-screen display or a multi-screen

display), FIGS. 1A-1J, 2, 7A-8C, 1:40-55, 26:16-29:3).) Thus, a person of ordinary skill in the art would have had the rationale to implement, and a reasonable expectation of success in implementing, such a modification, which would have predictably resulted in the Purcell-Nicholas system having the first display / first configurable area and the second display / second configurable area "**on a common first screen**."

6. Claim 3 "The method of claim 1, wherein the first image is displayed in landscape mode on the first display and the second image is displayed in landscape mode on the second display, and wherein the first display and the first configurable area are on a first screen, and wherein the second display and the second configurable area are on a different second screen."

125. Purcell in view of Nicholas discloses and/or suggests the claimed "landscape mode" limitations of claim 3 for the same reasons explained above for claim 2 (discussing both portrait and **landscape** mode). (*See above* §IX.A.5.) Thus, for the same reasons, the Purcell-Nicholas system would have been foreseeably configured such that the first image and second image is displayed in landscape mode on respective first/second displays like that claimed.

126. Further, for reasons and teachings discussed above for claim 1, the first display/configurable area and second display/configurable area would have

been provided on a **different respective first and second screen** of the Purcell-Nicholas computer system. (*See above* §IX.A.4.ii, IX.A.4.v.) For example, Purcell describes examples where monitors 115/117 are different monitors (although Purcell contemplates that the system is not limited to such an arrangement). (*See e.g.*, EX1010, FIG. 1, ¶¶0020-0021 (variations contemplated for multiple image windows to be displayed on a user interface employing one or more display monitors), claims 1-2, 6, 8, 10 (supporting how Purcell's teachings may encompass a different monitor for each display), ¶¶0013, 0014-0015, 0017-0018.)

FIGURE 1

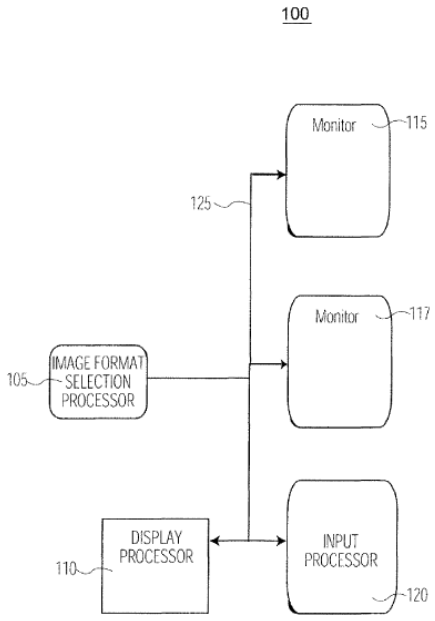
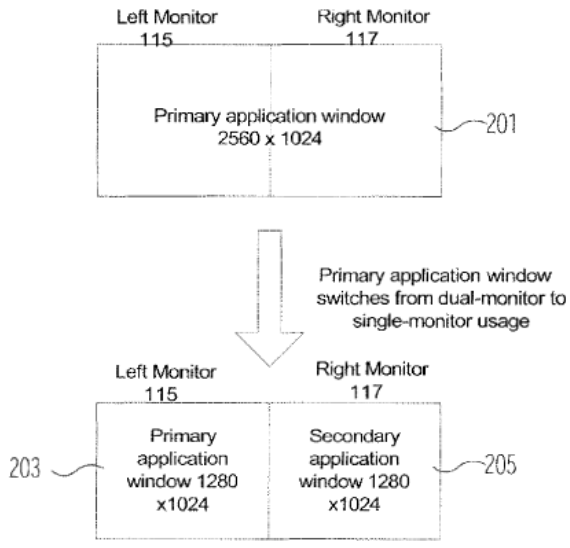


FIGURE 2



(EX1010, FIGS. 1-2.)

127. Consistent with Purcell's teachings and for reasons similar to those that I explained above for claim 1 (§IX.A.1-A.4), a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas computer device to include different monitors that respectively provide a first screen and second screen (e.g., monitors 115/117) for the first/second configurable areas (right-click invoked menu areas for Word and Excel) and first/second displays (displays in monitors 115/117) consistent with that disclosed by Purcell and with the '007 patent. (EX1001, 3:38-4:11.) Thus, for such reasons, the Purcell-Nicholas combination discloses the claimed "**the first display and the first configurable area are on a first screen, and wherein the second display and the second configurable area are on a different second screen**."

7. Claim 4 "The method of claim 1, further comprising: wherein the first image is a first open window of the first application and the second image is a second open window of the second application."

128. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations for reasons that I explained for claim 1. (§§IX.A.1-A.4 (describing and showing open windows for Word and Excel corresponding to first and second images in the Purcell-Nicholas system).) Purcell discloses a "first image window" and second image window" provided in displays 115/117 like that

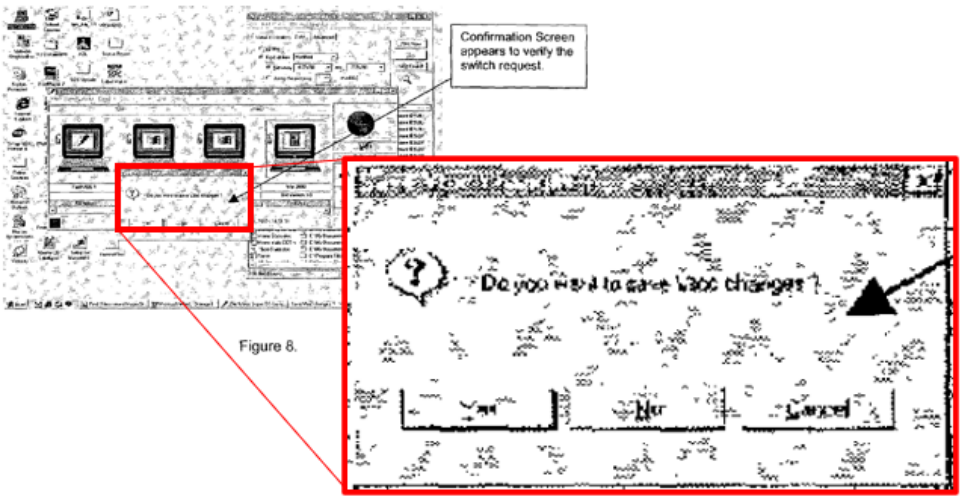
recited in claim 4. (EX1010, FIGS. 2-3, ¶¶0004, 0016-0021, claims 1, 2, 6, 8, 10.) Similar features would have predictably been implemented in the Purcell-Nicholas computer device for similar reasons for modifying and implementing the Purcell-Nicholas system as I explained for claim 1, which would have been consistent with a skilled person's knowledge regarding the use of windows in user interfaces. (§§IX.A.1-4; *see* EX1019, 20-21; EX1016, FIGS. 2A-4B, 6:48-67, 7:24-8:57, 12:13-13:33.) Consistent with such reasons and associated disclosures addressed for claim 1, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas computer system such that images of the first and second applications were provided as respective open windows on the respective first and second displays, in a manner consistent with Purcell's teachings and the limitations of claim 4. (EX1008, 16-20, EX1009, 7, 12-13, 16, 40.)

8. Claim 5 "The method of claim 1, further comprising: receiving second input indicating that in response to receiving the first input, the second application should be launched and the focus should be placed on the second image displayed by the second application."

129. In my opinion, Purcell-Nicholas discloses and/or suggests these limitations. (§§IX.A.1-A.4.) My analysis above for limitations 1.b-1.d shows how the Purcell-Nicholas system discloses in response to receiving the first input

indicating the second application be launched, launching the second application and shifting focus to the second image by the second application. (§§IX.A.2.iii-iv.) A person of ordinary skill in the art would have appreciated that although Purcell-Nicholas does not expressly disclose features for verifying the request to launch the second application, there were foreseeable reasons for considering and implementing such features in the Purcell-Nicholas system. In fact, among the known options available in the art at the time, a person of ordinary skill in the art would have been aware of and capable of implementing conventional confirmation input features to verify a user requested action, such as when a user intends to launch another application. (*See e.g.*, EX1012 FIG. 6, ¶0088 (describing a system providing a user-verifiable trusted path that performs verification processes including "receiving an input from a user indicative of confirmation to execute [a] trusted executable" where the "human confirmation in this step may be confirmation to execute the trusted executable" when proper hypervisor/driver shim measurements are confirmed or alternatively, "the human confirmation in this step may be confirmation to override a situation in which the measurements … does not correspond with the policies … but in which the user still wants to execute the trusted executable"), FIG. 16, ¶0138 ("Step 1610 includes **receiving**

an input from a human user indicative of confirmation to execute the trusted executable 312"), claim 28 (same); EX1015, 13:9-23, FIGS 8-9 (below) (describing confirmation boxes to confirm request to switch OS environment and shut down current running OS).)



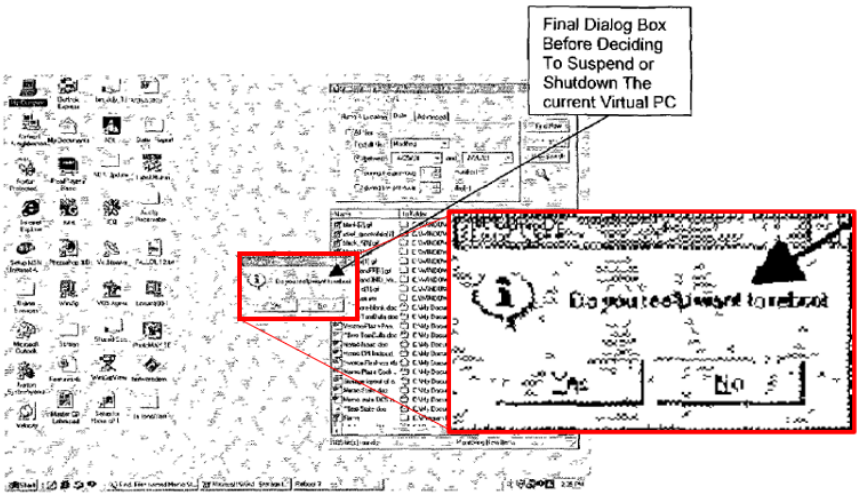


Figure 9

(*See also* EX1008, 160 (describing "OK" confirmation to confirm settings for Word 2007); EX1009, 21, 23 (describing "OK" confirmation dialog for actions for Excel 2007).)[7]

130. A person of ordinary skill in the art would have thus been motivated to configure the Purcell-Nicholas system to provide confirmation dialog features to verify the received input request to launch the second application prior to committing resources to launch the software and changing focus to that application as discussed above for limitations 1.b-1.d. (§§IX.A.4.iii-IX.A.4.v). A person of ordinary skill in the art would have recognized and appreciated the advantages and the benefits of conserving system resources that would have been used to launch, display, and allow use of a new application (*e.g.*, processing, memory, display, power, etc. resources). Such a skilled person would have also found benefit in ensuring a user's intent/preference for such actions by launching a new application only after a second input confirmation of a first input request was verified, consistent with that known in the art. Such features would confirm that the second

[7] Exhibits 1008-1009, 1012, 1015 are referenced to demonstrate a person of ordinary skill in the art's state of art knowledge at the time.

application should be launched and that the focus should be placed on the second image subsequently displayed by the launched second application.

131. A person of ordinary skill in the art would have found such a modification a predictable application of known technologies/techniques that was in the capabilities and knowledge of such a skilled person at the time. As such, a person of ordinary skill in the art would have had a reasonable expectation of success in its implementation. Thus, for reasons above, a person of ordinary skill in the art would have been motivated to modify the Purcell-Nicholas system to provide features as discussed above, which would have predictably resulted in the system performing processes to allow "**receiving second input indicating that in response to receiving the first input, the second application should be launched and the focus should be placed on the second image displayed by the second application**" as recited in claim 5.

9. Claim 9 "The method of claim 1, <u>wherein the first input is a tap gesture received by one of the first display</u>, the second display, a first gesture capture region, or a second gesture capture region, wherein the first gesture capture region is separate from the first display and the second gesture capture region is separate from the second display, and

wherein the first and second gesture capture regions are not capable of displaying images of applications."[8]

132. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations. In addition to the teachings supporting the combination of teachings from Purcell-Nicholas discussed for claim 1 (§IX.A.4), a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas system to provide touch sensitive display features with the displays of monitors 115 and 117 to enhance the input functionalities offered by the modified system. A person of ordinary skill in the art would have appreciated that Purcell discloses that the computer system can be configured for "**touchscreen**," keyboard, and mouse user input controls. (EX1010, ¶¶0013; *see above* §IX.A.1.) Such a skilled person would have also appreciated and recognized that Nicholas also discloses the known use of touchscreen technologies for providing input to a computer system. (EX1006, 5:16-18.)

[8] The prior art meets claim 9 by disclosing at least the underlined portion "first input is a tap gesture received by … the first display." A person of ordinary skill in the art would have understood that the remaining limitations in claim 9 relate to alternatives as to how the "tap gesture" is received. (EX1001, 33:60-67.)

133. Such a skilled person would have also understood and appreciated that touchscreen technologies for use with computer systems like that of Purcell was widely known at the time (as demonstrated by Purcell and Nicholas). (*see* state of art supporting disclosures in: EX1013, FIGS. 7A, 8, 9(a), 10(a), 1:11-15, 4:31-52; EX1014, Abstract, FIGS. 1, 3(a)-4(c), 8(a)-8(c), 10-12, 16(a)-16(b), 19(a)-19(b), 1:58-3:37, 4:61-5:6, 11:31-48, 12:44-14:3, 16:30-17:23, 20:35-47; EX1011, Abstract, FIGS. 1-4E, ¶¶0006-0009, 0024-0026, 0030-0057.) Accordingly, such a person would have been motivated to implement such touch sensitive display features with the Purcell-Nicholas system to provide enhanced options for users to provide input to the system.

134. Based on such teachings and state of art knowledge, a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas computer system such that the first and second displays in monitors 115 and 117 were implemented as a first touch sensitive display and a second touch sensitive display, that can be and are used by the user to provide tap gestures (e.g., finger taps on the screen of the displays) to make selections, move a cursor, provide commands, etc. consistent with the operations of Purcell and Nicholas. A person of ordinary skill in the art would have appreciated the benefits of providing

touchscreen capabilities in the system, such as offering user-friendly input mechanisms that allowed a user to input and manipulate information displayed by application(s) running on the system and provide commands consistent with my analysis and discussions above for claim 1. A person of ordinary skill in the art would have had a reasonable expectation of success in achieving such an implementation given the use of touch sensitive displays was known and expressly contemplated by Purcell and the knowledge and capabilities of a person of ordinary skill in the art at the time.

135. For example, Purcell discloses receiving commands relating to requests to launch an application, where the command may be received via "touchscreen." (EX1010, ¶0013; *id.*, ¶0018; *supra* §§IX.A.4.iii-IX.A.4.v.) Nicholas also discloses the common features of launching applications based on input to the computer system. (EX1006, FIGS. 3-5, 18, 4:54-6:45, 10:13-36.) Such teachings coupled with the disclosures and analysis I explained above for modifying Purcell's system, would have motivated a person of ordinary skill in the art to configure the Purcell-Nicholas system to receive the first input indicating a request to launch the second (Excel) application (discussed for limitation 1.b

(§§IX.A.4.iii-IX.A.4.iv) via a tap gesture received by the display of monitor 115 ("**first display**"), consistent with that taught by Purcell (EX1005, ¶0013).

136. A person of ordinary skill in the art would have had a reasonable expectation of success in achieving such an implementation given the use of touch sensitive displays and application launch requests/commands were known and expressly contemplated by Purcell-Nicholas, and known in the art, and configuring such changes was within a skilled person's capabilities at the time.

137. Thus, for the above reasons, the Purcell-Nicholas combination discloses and/or suggests "the **first input is a tap gesture received by one of the first display …**" recited in claim 9.

10. Claim 10

i) **[10.pre] "A non-transitory computer readable medium storing computer executable instructions that when executed by at least one processor perform a method, comprising:"**

ii) **[10.a] "displaying a first image of a first application on a first display, wherein the first image is in focus wherein input is allowed from the first display, and wherein input is allowed from a second display;"**

iii) **[10.b] "receiving first input indicating a request to launch a second application, the input is received by one of the first display and the second display;"**

iv) **[10.c] "in response to receiving the first input, launching the second application;"**

v) **[10.d] "displaying, by the second application, a second image on the second display; and"**

vi) **[10.e] "changing focus from the first image to the second display, wherein input is allowed from the first display, and wherein input is allowed from the second display;"**

vii) **[10.f] "in response changing focus, stopping display of input options in a first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first display; and"**

viii) **[10.g] "in response changing focus, displaying input options for the second application in a second configurable area, wherein input is allowed from the second configurable area and the second display,"**

ix) [10.h] "wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application."

138. As shown in the table below, claim 10 recites limitations that track those in claims 1, 9, 17, and 20. In my opinion, the Purcell-Nicholas combination as I discussed above to address claims 1, 9, 17, and 20, disclose and/or suggest claim 10. I incorporate in their entirety my opinions for those claims here to support my opinions for claim 10. Thus, Purcell in view of Nicholas discloses and/or suggests the limitations of claim 10 for the reasons above for claims 1, 9, 17, and 20. (§§IX.A.1-IX.A.4, IX.A.9, IX.A.12-IX.A.13.) The table below references the limitations that follow corresponding limitations in claim 10, and thus my opinions for those listed limitations are incorporated in their entirety to support my opinions regarding claim 10 here.

[10.pre]	*See* my opinions regarding Limitation [17.c] (§IX.A.12.iv)
[10.a]	*See* my opinions regarding Limitation [1.a] (§IX.A.4.ii); Limitations [17.a]-[17.b], [17.c.1] (§§IX.A.12.ii-iv.)
[10.b]	*See* my opinions regarding Limitation [1.b] (§IX.A.4.iii); Claim [9] (§IX.A.9); Limitation [17.c.2] (§IX.A.12.iv); Claim [20] (§IX.A.13]
[10.c]	*See* my opinions regarding Limitation [1.b] (§IX.A.4.iii); Limitation [1.c] (§IX.A.4.iv); Claim [9] (§IX.A.9); Limitation [17.c.3] (§IX.A.12.iv); Claim [20] (§IX.A.13)
[10.d]	*See* my opinions regarding Limitation [1.d.1] (§IX.A.4.v); Limitation [17.c.4] (§IX.A.12.iv)
[10.e]	*See* my opinions regarding Limitations [1.d.1]-[1.d.3] (§§IX.A.4.v) Limitations [17.c.5-17.c.6] (§§IX.A.12.iv)
[10.f]	*See* my opinions regarding Limitation [1.d.2] (§IX.A.4.v); Limitations [17.c.5-17.c.6] (§§IX.A.12.iv)
[10.g]	*See* my opinions regarding Limitations [1.d.1]-[1.d.3] (§§IX.A.4.v); Limitations [17.c.5-17.c.6] (§§IX.A.12.iv)

11. Claim 16 "The non-transitory computer readable medium of claim 10, wherein the method further comprises: receiving second input indicating that in response to the first input, the focus should be changed to the second display."

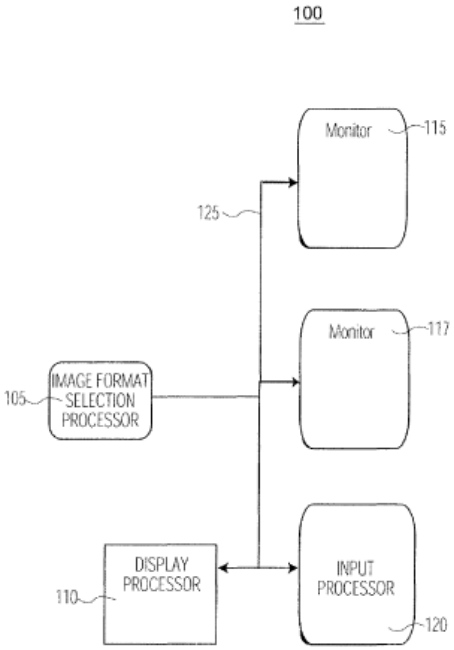
139. In my opinion, the Purcell-Nicholas combination discloses and/or suggests this limitation for the same reasons I discuss above for claims 5 and 10. (§§IX.A.8, IX.A.10.)

12. Claim 17

i) [17.pre] "A communication device, comprising:"

140. I understand that this limitation is a preamble of the claim and I have been asked to assume that the preamble of claim 17 is limiting. Under that assumption, Purcell discloses the preamble of claim 17. My analysis above for claim 1, and my analysis below for claim 17, demonstrates how Purcell discloses "**a communications device**." (*See above* §§IX.A.1, IX.A.4.i-4.v(3); *see below* §§IX.A.12.ii-iv.) For example, Purcell's computer system 100 includes, *e.g.*, monitors 115 and 117 that display application images and content. (EX1010, Abstract, FIGS. 1-3, ¶0004) *Id.*, ¶0004.)

FIGURE 1



141. The system can be employed as a stand-alone PC, a desktop, a laptop or notebook computer, a personal digital assistant (PDA), a cellular telephone, a pager, and wristwatch, and provides touchscreen, keyboard, and mouse user input controls. (*Id.*, ¶¶0013, 0014-0015, 0017.) The plurality of monitors may encompass the same monitor or different monitors. (*See id.*, claim 1 ("plurality of display monitors …"), dependent claims 2, 6, 8 (plurality of monitors comprise a "***different*** second monitor"), independent claim 10).) "Elements of system 100 **communicate** via path 125 (otherwise called network, **bus, link, connection**, channel, etc.) that represents any type of protocol or data format." (EX1010,

¶0014; *id.* (describing exemplary protocols/formats, including bus compatible protocols).)

142. Purcell's system is a "**communication device**" consistent with that contemplated by the '007 patent. (EX1001, FIGS. 1B-1J, 3:38-51 (screen may include external peripheral devices), 4:3-11 (display *may* be a multi-screen display" and a single physical screen can include multiple displays as "logical displays"), 7:31-38 ("embodiments of a device" that "**can be**" a communications device, such as a cellular telephone, or other smart device).) A person of ordinary skill in the art would have thus understood the '007 patent contemplates other types of communication devices beyond a cellular phone or smart device.

143. A person of ordinary skill in the art would have understood Purcell's system (including as Purcell's system is modified below in view of Nicholas for reasons explained (§§IX.A.12.ii-IX.A.12.iv)) to encompass a **communication device** given Purcell contemplates the system being a computer (EX1010, ¶0013) with a path 125 that "represents any type of protocol or data format" including *e.g.*, IP, TCIP, HTTP, LAN, WAN, etc. type protocols (*id.*, ¶0014) known to facilitate communications. Moreover, to the extent not disclosed, a person of ordinary skill in the art would have been motivated to implement the system (including as

modified below in view of Nicholas) as a **communication device** for similar reasons. (EX1010, ¶¶0013-0014.)

ii) [17.a] "a first touch sensitive display and a first configurable area;"

144. My discussions/analysis above for limitation 1.a demonstrates how the Purcell-Nicholas combination discloses and/or suggests a "**first [] display** and a **first configurable area**," in limitation 17.a. (*See above* §IX.A.4.ii.)

145. My analysis and disclosures above for claim 9 demonstrate how/why a person of ordinary skill in the art would have been motivated to configure monitors 115/117 in the Purcell-Nicholas system as **touch sensitive displays** to receive input via tap gestures. (*See above* §IX.A.9.) A person of ordinary skill in the art would have appreciated and recognized that Purcell's device can be configured with "**touchscreen**" input controls (EX1010, ¶¶0013). Also, a person of ordinary skill in the art would have appreciated and recognized that that Nicholas discloses similar features. (EX1006, 5:16-18.) Therefore, in my opinion and for similar reasons I explained for claim 9 (§IX.A.9) and those I discuss above for limitation 1.a (§IX.A.4.ii), a person of ordinary skill in the art would have been motivated to configure the above discussed Purcell-Nicholas device such that

monitors 115/117 provide respectively a "**first touch sensitive display**" (limitation 17.a) and a "**second touch sensitive display**" (limitation 17.b below).

146. A person of ordinary skill in the art would have appreciated the benefits of providing touchscreen capabilities in the Purcell-Nicholas device, such as offering additional user-friendly ways for a user to input and manipulate applications running on the device consistent with that disclosed by Purcell and Nicholas. A person of ordinary skill in the art would have had a reasonable expectation of success in achieving such an implementation given the use of touch sensitive displays is expressly contemplated by Purcell and would have involved the implementation of known technologies at the time. (*See e.g.,* EX1005, Abstract, ¶0006 ("[t]ouch screens are also well known in the art")[9].)

iii) [17.b] "a second touch sensitive display and a second configurable area; and"

147. In my opinion, Purcell in view of Nicholas discloses and/or suggests this limitation. My discussions/analysis above for claim limitations 1.a and 1.d.3 demonstrates how the combination of Purcell-Nicholas discloses a "**second []**

[9] EX1005 is referenced to demonstrate a skilled person's state of art knowledge at the time.

display and a **second configurable area**," as recited in limitation 17.b. (*See above* §§IX.A.4.ii; IX.A.4.v(3).) My discussions and analysis above for limitation 17.a demonstrates that a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas device such that the second display is a "**second touch sensitive display**," as recited in limitation 17.b. (*See above* §IX.A.12.ii.) thus, for those reasons, the Purcell-Nicholas combination discloses and/or suggests limitation 17.b.

iv) [17.c] "a computer readable medium that stores computer executable instructions that, when executed by at least one processor, perform a method comprising:"

148. In my opinion, Purcell in view of Nicholas discloses and/or suggests this limitation for reasons similar to those I explained for limitation 1.pre and the limitations of claim 17 addressed below. (*See above* §IX.A.4.i; *see below* §§IX.A.12.ii-iv.)

149. In addition to those teachings and rationale I discussed above, a person of ordinary skill in the art would have recognized and appreciated that Purcell discloses the use of computer-readable media (memory) storing software and instructions and processor(s) for executing such software to perform processes consistent with the teachings of Purcell. (*See* EX1010, ¶0013 (system 100

employing a "microprocessor, controller or other processing device"), ¶0015 (describing executable applications as code or instructions for performing particular process, including operations, etc. and that a "processor" described by Purcell refers to a device and/or set of machine-readable instructions for performing tasks, and may comprise hardware, firmware and/or software, and provides capabilities of a controller or microprocessor), ¶0018 (input processor), ¶0019 (selection processor), ¶0020 (display processor and image format processor).)

150. Further, such a skilled person would have appreciated that Nicholas likewise discloses the known use of processor(s) and computer software instructions that when executed perform features consistent with the features disclosed by Nicholas. (EX1006, FIGS. 2, 19, 4:42-53 (client system including processor, operating system, application software, application programs), 10:57-11:28 (discussing client computer including processors and memory storing computer programs and program products that "when executed, enable the computer system 204 to perform the features of the present invention discussed herein").) Nicholas specifically discloses configurations with a "computer readable medium" having a program with "instructions" that are executed by a

processor to cause it to "perform the function of the invention as described herein." (*Id.*, 11:29-44.)

151. In view of such teachings, along with the disclosures and reasons that I explained above for limitations 17.pre to 17.b, and claim 1 (§IX.4), it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Purcell-Nicholas device (described above for claim 1 and further below) to include a "**computer readable medium that stores computer executable instructions that, when executed by at least one processor, perform a method"** as recited and addressed below for the remaining limitations of claims 17 and 20. (*See above* §§IX.A.4, IX.A.12.i; *see below* §§IX.A.12.c.1 to IX.A.13.) Such an implementation would have been a predicable application of known technologies and techniques (e.g., program coding and execution) as contemplated by Purcell and Nicholas, that would have predictably led to providing a program product with instructions that when executed by the "device" noted above, perform processes consistent with those discussed herein for claims 17 and 20.

(1) [17.c.1] "displaying a first image of a first application on the first touch sensitive display, wherein the first image is in focus, wherein input options for the first application are displayed in the first configurable area, wherein input is allowed from the first configurable area and the first touch sensitive display, wherein no input options are displayed in the second configurable area, wherein input is not allowed from the second configurable area, wherein input is allowed from the second touch sensitive display, wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application;"

152. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations for the same reasons explained above for limitation 1.a and limitations 17.pre-17.c. (*See* §IX.A.4.ii, §§IX.A.12.i-IX.A.12.iv.)

(2) [17.c.2] "receiving first input on the first touch sensitive display or the second touch sensitive display indicating a request to launch a second application;"

(3) [17.c.3] "launching the second application;"

153. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations for the same reasons explained above for limitations 1.b-1.c and claim 9, and limitations 17.pre-17.c.1 (*See* §IX.A.4.iii-IX.A.4.iv, §IX.A.9, §§IX.A.12.i-IX.A.12.iv(1).)

(4) [17.c.4] "displaying, by the second application, a second image on the second touch sensitive display; and"

(5) [17.c.5] "changing the focus from the first touch sensitive display to the second touch sensitive display,"

154. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations for the same reasons explained above for limitations 1.d-1.d.1 and limitations 17.pre-17.c.3 (*See* §IX.A.4.v-IX.A.4.v(1), §§IX.A.12.i-IX.A.12.iv(3).)

(6) [17.c.6] "wherein no input options are displayed in the first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first touch sensitive display, wherein input options for the second application are displayed in the second configurable area, and wherein input is allowed from the second configurable area and the second touch sensitive display."

155. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations for the same reasons explained above for limitations 1.d.2-1.d.3 and limitations 17.pre-17.c.5 (*See* §IX.A.4.v(2)-IX.A.4.v(3), §§IX.A.12.i-IX.A.12.iv(5).)

13. Claim 20 "The device of claim 17, wherein the first input is a tap gesture received by one of the first touch sensitive display, the second touch sensitive display, a first gesture capture region, or a second gesture capture region, wherein the first gesture capture region is separate from the first touch sensitive display and the second gesture capture region is separate from the second touch sensitive display, and wherein the first and second gesture capture regions are not capable of displaying images of applications."

156. In my opinion, Purcell in view of Nicholas discloses and/or suggests these limitations for the same reasons explained above for claims 9 and 17 (*see e.g.*, limitations 17.a-17.b (touch sensitive display). (§IX.A.9, §§IX.A.12.)

B. Gillespie In View of Yook Discloses and/or Suggests Claims 1, 4-5, 9-10, 16, 17, and 20 under the First Interpretation

1. The Gillespie-Yook Combination

157. Gillespie discloses a notebook computer 100 including a main display 102 and a touchscreen 106 that occupies a touch pad portion of computer 100 that is not part of display 102. (EX1005, ¶¶0036-0037.)

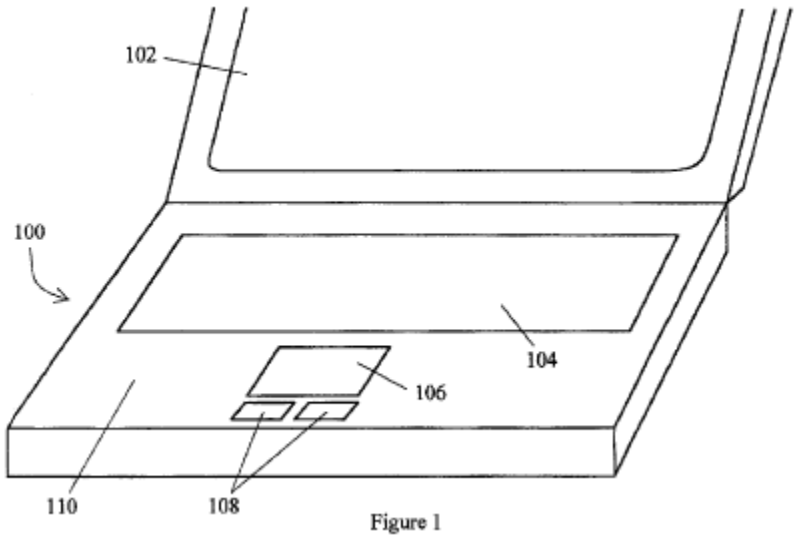


Figure 1

(EX1005, FIG. 1; *id.*, FIG. 2, ¶¶0014, 0037.)

158. Gillespie's notebook 100 leverages different displays 102 and 106 to perform processes to control the execution and display of application content/images. Touchscreen 106 can provide input controls and display functionalities that enhance the user's experience and efficiencies when using applications executed by the computer. (EX1005, ¶¶0002, 0007-0011, 0050-0058,

FIG. 16, ¶¶0123-0130.) Those applications relate to *e.g.*, Microsoft® applications (Word, Excel, PowerPoint), document viewers (*e.g.,* Adobe Acrobat®), and database applications (EX1005, FIGS. 8A, 8D, 9, 10A, 11 (Word, Excel PowerPoint), ¶¶0082, 0084-0089, 0095-0099), calculator applications (FIG. 12, ¶¶0099-0100), mail applications (FIGS. 4-5, 11, ¶¶0055, 0059, 0113), and Internet search applications (FIGS. 8C, ¶0081), applications that receive input via handwriting recognition for ideographic languages (FIG. 14, ¶¶0104-0105), among others. Display 102 displays image/content for an active application. (EX1005, ¶0022 (describing FIGS. 8A-8D by "reserving entire main display for visual data associated with the application"), ¶¶0024-0026 (describing FIGS. 9-10C where the "main display [is] free to display" a document, game graphics, or image "unobstructed").) Depending on the active application used via main display 102, the notebook may present associated input options for the application on touchscreen 106. (EX1005, FIGS. 4-5, 8A-12, Abstract, ¶¶0048-0062, 0076-0100.)

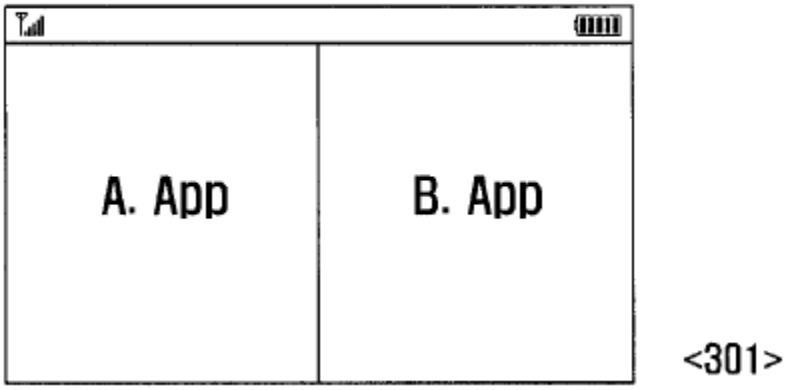
159. A person of ordinary skill in the art would have appreciated that although Gillespie's notebook 100 provides input controls/menus for an application in touchscreen 106, the notebook's separate main display 102 provides

typical display features for a laptop computer, including displaying content/images for active applications. (*Id.*, FIG. 1, ¶¶0022-0025, 0036.) Being a single main display, such a skilled person would have appreciated the potential for content/image obstruction issues by having multiple applications etc. running and displayed in the main display 102 (e.g., overlapping windows, etc.) Looking to further enhance the user-interface capabilities of notebook 100, a person of ordinary skill in the art would have been motivated to consider other technologies/techniques to expand the display functionalities of notebook 100 when running multiple applications executed by the device.

160. Yook discloses features that would have motivated a person of ordinary skill in the art to consider, design, and implement modifications to Gillespie's notebook to enhance the device's user interface and application execution capabilities. Similar to Gillespie and the '007 patent, Yook discloses systems and methods for controlling the display of a mobile computer device by providing "divided screen areas" to present multiple applications to a user. (EX1011, Abstract, FIGS. 1-2, ¶¶0006-0009, 0024-0026, 0030-0036, 0117.) By selectively displaying application images/content on separate displays, a user is able to simultaneously view different applications allowing efficient interaction

with a respective active application and between applications. (*Id.*, ¶¶0038-0042 (FIG. 3 (below)), 0043-0057 (FIGS. 4A-4E).)

FIG . 3



161. Yook provides examples of various types of multi-application/display configurations and functionalities. (EX1011, ¶¶0077-0080 (FIG. 7A (Web access and Music playback applications)), 0081-0083 (FIG. 7B (mail and map applications), 0084-0087 (FIG. 8C (mail and phone applications), 0088-91 (FIG. 8 (Web access and memo applications), 0094-0103 (FIGS. 10-11 (Web access and Twitter applications)), 0104-0107 (FIG. 12 (file search and Twitter applications)), 0108-0112 (split twitter application)).)

FIG . 7a

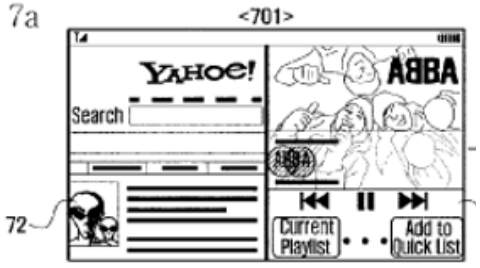


FIG . 10

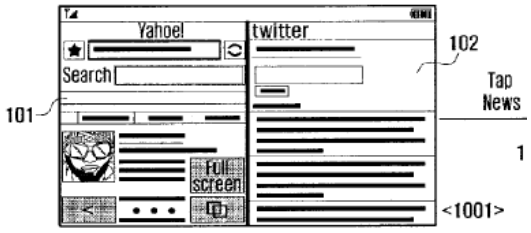


FIG . 7b

FIG . 7c

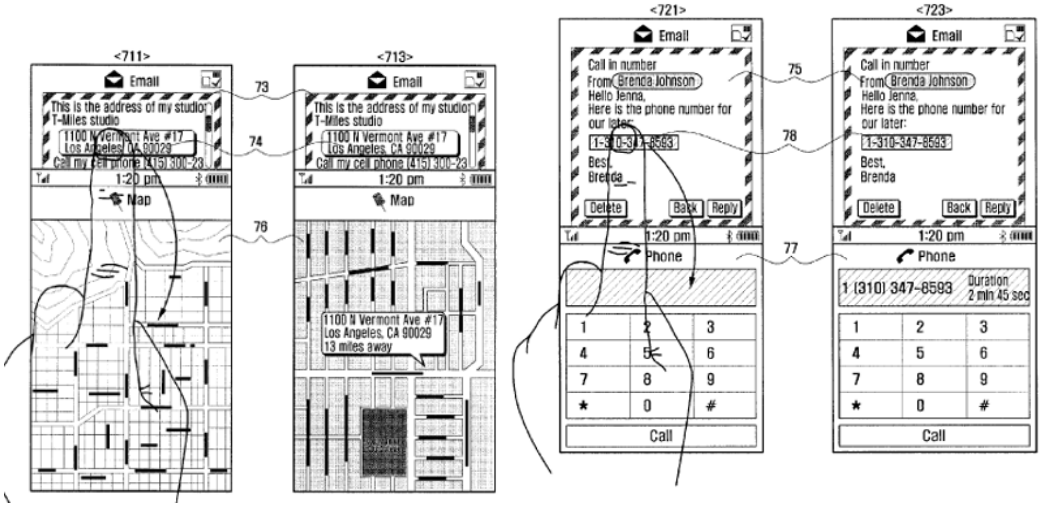


FIG . 11

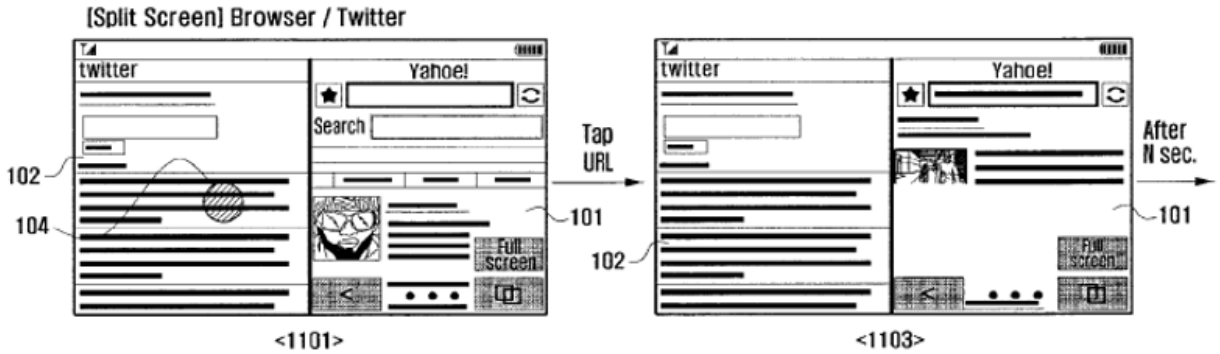
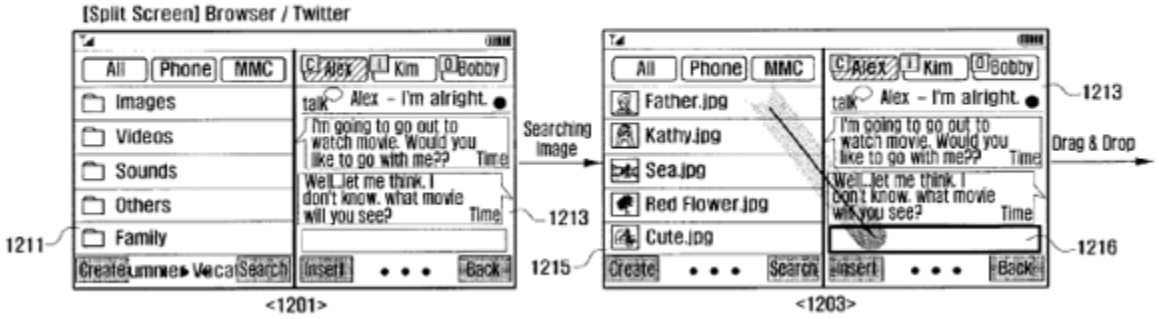


FIG . 12



(EX1011, FIGS. 7A-7C, 10-12, (some excerpted).)

162. Yook's "mobile terminal of the present invention … can be any information and communication application and multimedia appliance, including any of a mobile communication terminal, … a smartphone, **a notebook computer**, or a handheld computer." (*Id.*, ¶0116.) Yook's teachings are consistent with a person of ordinary skill in the art's knowledge of multiple display/application functionalities at the time. (*See* state of art disclosures in *e.g.*, EX1013, Abstract, FIGS. 3-4A, 6-13, 1:60-67 (mobile terminal may include "a laptop computer"), 7:3-10:47.)

163. In my opinion, a person of ordinary skill in the art would have appreciated that both Gillespie and Yook disclose features for controlling the display and associated user interaction with multiple applications on multiple displays on a portable computer device. Such a skilled person addressing the

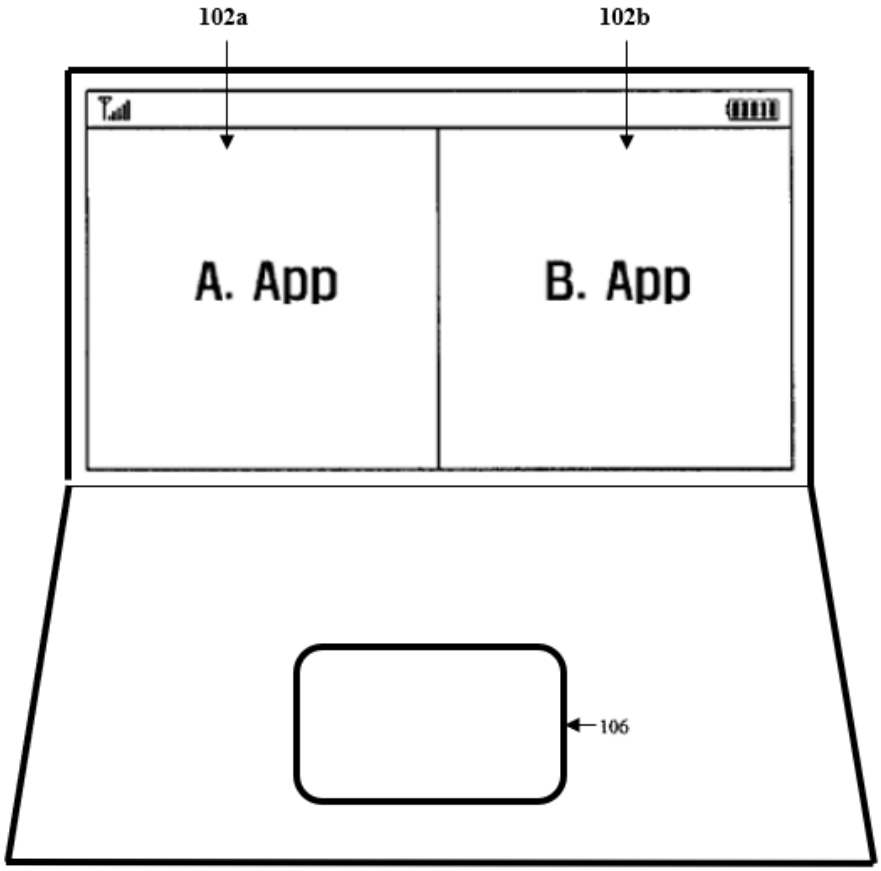
technology of the ’007 patent therefore would have had reason to look to Gillespie and Yook. For instance, a person of ordinary skill in the art would have appreciated that although Gillespie provides mechanisms and processes for controlling multiple displays based on executing applications, Gillespie does not describe ways to display multiple applications in main display 102 in a more user-friendly and efficient manner. Yook, in the same technical field as Gillespie, teaches those features for use in, *e.g.*, a notebook device like that described by Gillespie.

164. A person of ordinary skill in the art thus would have been motivated to look to Yook for enhancing the features of Gillespie’s notebook. Both Gillespie and Yook disclose portable computer devices (e.g., notebook computer) that provides multiple display features to facilitate and enhance user interface functionalities relating to applications running on the computer. (*See e.g.*, EX1011, ¶¶0006-0009, ¶¶0077-0112, FIGS. 1-2, 7A-12), EX1005, ¶¶0055, 0059, 0082, 0084-0089, 0095-0098, 0099, 0113).) Such a skilled person thus would have had reasons to consider their collective teachings to configure Gillespie’s notebook to provide multiple application/display features similar to that disclosed by Yook.

165. Motivated by the teachings and inspirations mentioned in Yook and Gillespie, a person of ordinary skill in the art would have been predictable led to configure Gillespie's notebook device to provide split display-type functionalities similar to that described by Yook and known in the art. Such combined teachings would have foreseeably resulted in configuring Gillespie's notebook to include requisite hardware/software that enabled the computer to provide dual display functionalities to present multiple applications on main display 102, while maintaining the features provided in connection with touchscreen 106, such as the auxiliary/pop-up input options and control functionalities described by Gillespie.

166. Such a Gillespie-Yook combination would have been a routine and conventional implementation of known technologies and techniques that was within a skilled person's skills and capabilities at the time. As explained, a person of ordinary skill in the art would have recognized that the use of multiple display portable computers for providing separate application area and input option display areas was known in the art. (*Id.*, EX1016, FIGS. 1A-1E, 4A-4B, 2:35-3:43, 11:55-12:2.) Therefore, a person of ordinary skill in the art would have had a reasonable expectation of success in achieving the modifications discussed herein. Such a modification would have predictable led to an implementation consistent with that

shown below, where display 102 is configured such that it includes a first display 102a and a second display 102b, each respectively providing application image/content (A.App/B.App), consistent with the features taught by Yook.



(EX1010, FIG. 1 and EX1011, FIG. 3 (combined/annotated/excerpted).)

167. The advantages of such modifications would have been foreseeable to a person of ordinary skill in the art, because it would have allowed Gillespie's notebook to provide dual application display on main display 102 (similar to that

taught by Yook) while also maintaining the beneficial features provided by touchscreen 106 (as taught by Gillespie), which a person of ordinary skill in the art would have recognized furthered Gillespie's aim of providing an improved user interface experience. (EX1005, ¶¶0002-0011.)

168. A person of ordinary skill in the art would have had the necessary knowledge, skills, and capabilities to design, program, and configure the Gillespie notebook to successfully accommodate and implement such new features. A person of ordinary skill in the art would have weighed various design factors associated with the changes, such as cost, size, program updates/changes, and other factors and ultimately have found the benefits of providing the discussed enhanced user interface features outweighed any potential disadvantages, and thus been motivated to implement the modification. A person of ordinary skill in the art would have thus been motivated to modify Gillespie to perform processes and includes features like that recited in the challenged claims as I discussed below. (*See below* §§IX.A.B.2-B.11

2. Claim 1

i) [1.pre] "A method comprising:"

169. To the extent limiting, Gillespie discloses the preamble of claim 1. Consistent with Gillespie's teachings above (§IX.B.1) and with the discussions I

provide below (§§IX.B.2.ii-IX.B.2.v), when combined with the teachings of Yook, the Gillespie-Yook notebook performs a process ("**a method**") consistent with that recited in claim 1.

ii) [1.a]

(1) [1.a.1] "displaying a first image of a first application on a first display,"

170. In my opinion, Gillespie-Yook discloses and/or suggests this limitation.

171. As to **limitation 1.a.1**, as I discussed above, Gillespie's notebook executes and displays images/content related to one or more applications, including *e.g.*, Microsoft Word, Excel, PowerPoint, document viewers, mail, Web browser, database applications, and Internet search applications. (*See* §IX.B.1; EX1005, FIGS. 8A-11, ¶¶0055-0059, 0081-0082, 0084-0089, 0095-0100, 0113).) When executed, the computer displays a "**first image**" of a "**first application** on main display 102. (EX1005, ¶0022 (FIGS. 8A-8D "reserving entire main display for visual data associated with the application"), ¶¶0024-0026 (FIGS. 9-10C, "main display [is] free to display" a document, game graphics, or image "unobstructed").)

172. A person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to provide similar features, consistent with

such teachings and the discussions in §§IX.B.1. However, for reasons above, the notebook would have been modified in light of Yook such that main display 102 provided two displays (*e.g.*, 102a, 102b). Therefore, as a first application was executed, the notebook would display image(s) of the first application in one of those displays (*e.g.,* 102a ("**first display**")), such as that relating to *e.g.*, a PowerPoint, Word, flight simulator, Adobe Acrobat, or music player application as discussed by Gillespie. Consequently, the Gillespie-Yook combination discloses **"displaying a first image of a first application on a first display**" as claimed.

(2) [1.a.2] "wherein the first image is in focus, wherein input options for the first application are displayed in a first configurable area, wherein input is allowed from the first configurable area and the first display,"

173. In my opinion, Gillespie-Yook discloses and/or suggests this limitation.

174. As to **limitation 1.a.2**, as one of the applications (*e.g.*, PowerPoint, Adobe, Word, music player, game, etc.) ("**first application**") is executed, a person of ordinary skill in the art would have recognized and understood that it would have been active and/or selected for receiving input via "**first display**" 102a. Therefore, a person of ordinary skill in the art would have understood that the first

application's "**first image**" would be "**in focus**" consistent with that described by the '007 patent. (EX1001, 5:43-49, 26:19-21.) For example, consistent with such understanding, Gillespie explains "[i]n most computer operating systems, application windows on the main display screen are given **the focus** based on which was last clicked by the pointing device, or on which currently contains the cursor." (EX1005, ¶0076; *id.*, ¶0123 (discussing "application [or] application window … has the input focus" and that an auxiliary image sent to display 106 when an application has input focus), ¶¶0124-0127.)

175. Gillespie also describes various examples as to how touchscreen 106 provides different features/operations associated with active applications displayed by the notebook. These features are associated with an iconic mode (*e.g.*, EX1005, FIGS. 4-5, ¶¶0049-0062), auxiliary and pop-up modes (FIG. 8A, ¶¶0076-0079 (PowerPoint), FIG. 8B, ¶¶0079-0080 (music player), FIG. 8C, ¶0081 (Web browser), FIG. 8D, ¶0082 (Word and Adobe Acrobat), FIG. 9, ¶¶0083-0086 (document preparation help/toolbar menu)), word processor dialogs (FIG. 10A, ¶¶0088-0089), game controls, (FIG. 10B, ¶¶0091-92), toolbar menu/options (FIG. 10C, ¶0093), application launcher (FIG. 11, ¶¶0095-98), and calculator

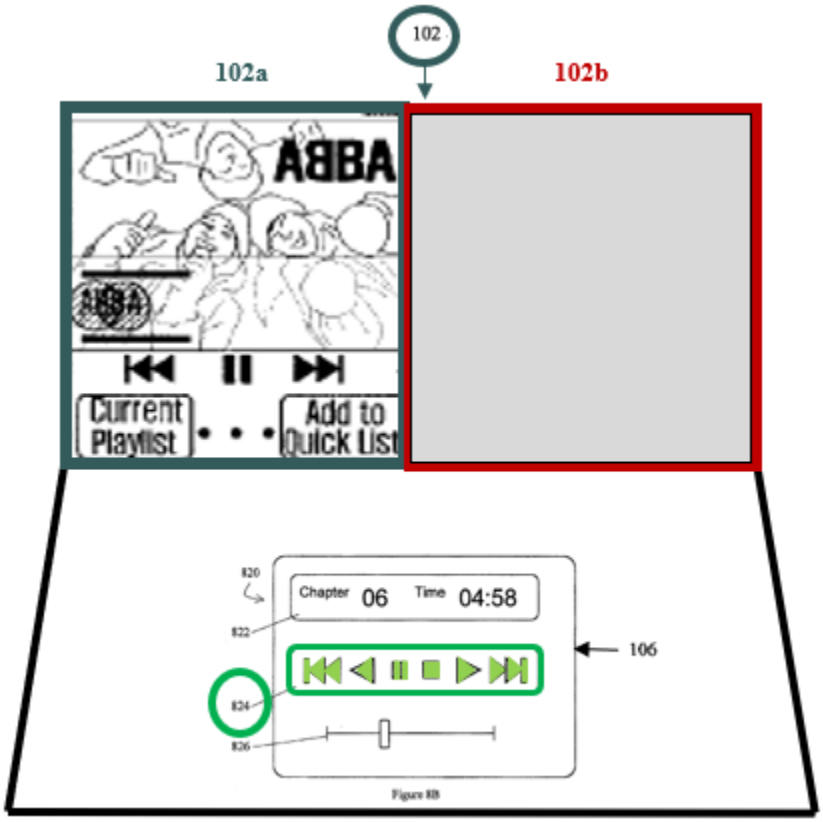
applications (FIG. 12, ¶0099). (*See also id.*, FIG. 16, ¶¶0123-0127 (auxiliary image sent to display 106 when application has input focus).)

176. Gillespie explains while "[a]ll of the preceding examples have features auxiliary screens tied to a particular application" it is "possible for particular window or dialog within an application to have an associated auxiliary screen." (*Id.*, ¶0087.) Further, "many other types of applications can make use of auxiliary displays and controls on the touchscreen" and the "examples disclosed and illustrated here in **no way limits the scope of applications that can benefit from an auxiliary touchscreen** according to the present invention." (*Id.*, ¶0094.)

177. A person of ordinary skill in the art would have recognized and been motivated in light of such teachings that the above features would have been maintained and implemented to properly operate in the Gillespie-Yook combined notebook discussed above. Consequently, in my opinion, the corresponding auxiliary/pop-up/control/handwriting-input recognition/display features provided in touchscreen 106 for a given in focus application demonstrates how the Gillespie-Yook combination discloses **"wherein input options for the first** application **are displayed in a first configurable area, wherein input is allowed from the first configurable area and the first display**." For example,

touchscreen 106 provides an area that displays menu/dialog/control options (depending on the application in focus) that a user can use to manipulate/control/select features for the application. A person of ordinary skill in the art would have recognized and understood that at the same time, the modified notebook would have allowed input from "**first display**" 102a to facilitate conventional application operations consistent with the teachings from Gillespie-Yook and known in the art.

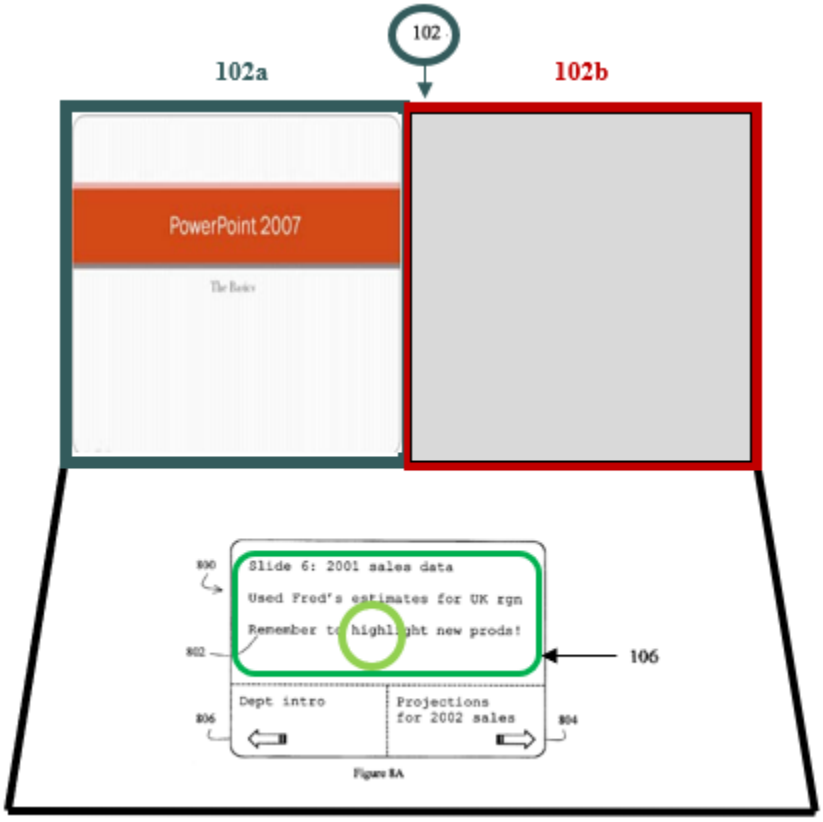
178. Consistent with the teachings and rationale noted above, the following demonstratives illustrate non-limiting exemplary configurations of the Gillespie-Yook notebook providing features as recited in **limitations 1.a.2-1.a.3**. These examples are also further detailed in Demonstratives G-L (that I discuss below in §IX.B.2.iv(3).) (EX1005, FIGS. 8A-8B, 8D, 9, 10B ¶¶0079-0080, 0082, 0085, 0091-0092; EX1011, FIG. 7a.)



Demonstrative A

First image: Music/CD player image
First application: Music/CD player
First display: 102a
First configurable area: 834
Input options: FF, RW, Stop, Play, Pause, etc.

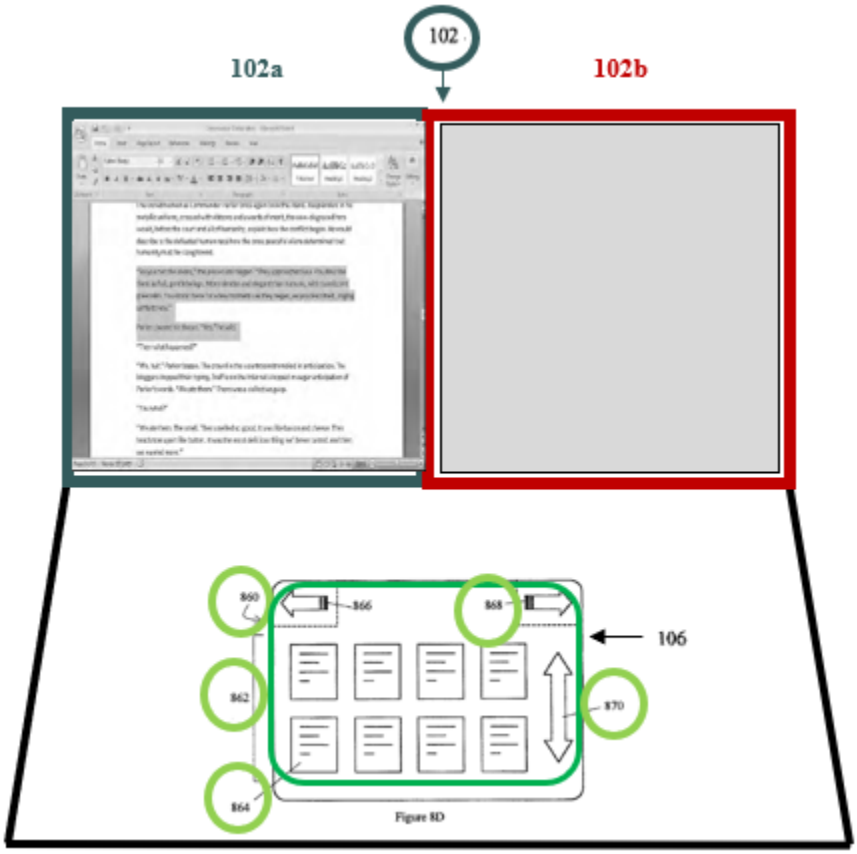
(EX1005, FIG. 8B, ¶¶0079-0080; EX1011, FIG. 7a.)



Demonstrative B

First image: PowerPoint image
First application: PowerPoint
First display: 102a
First configurable area: 802
Input options: right click menu by tapping 802.

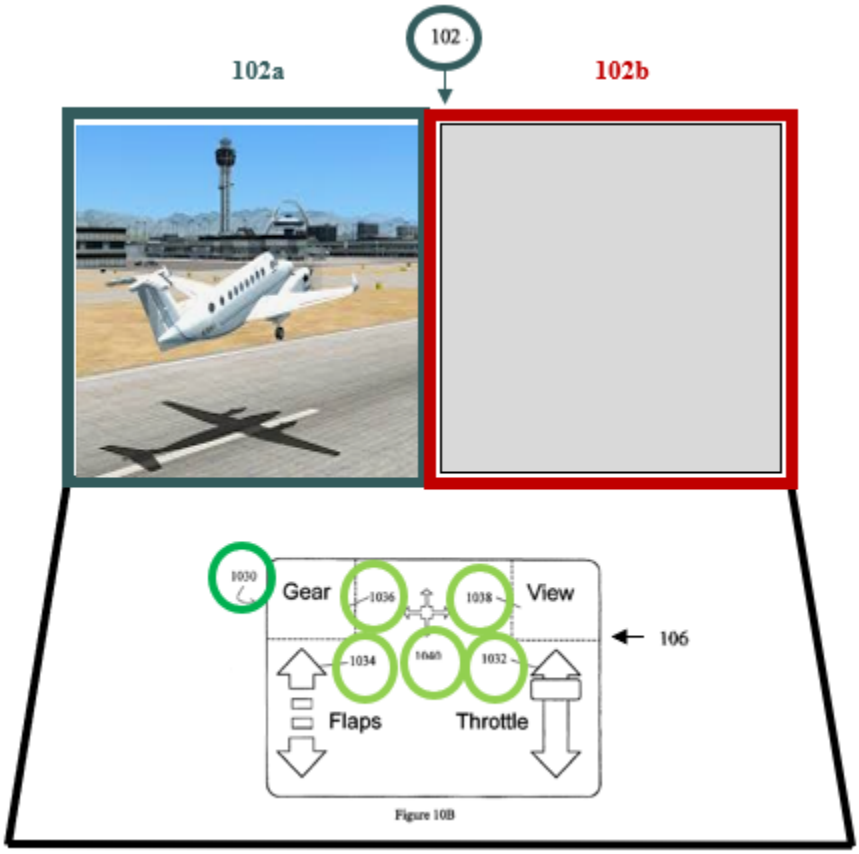
(EX1005, FIG. 8A, ¶¶0077-0078 ("tapping on region 802 would simulate a right mouse button click").)



Demonstrative C

First image: Word image
First application: Word
First display: 102a
First configurable area: Area displaying options in 106
Input options: two or more of the options (table of contents, previous/next page, scroll)

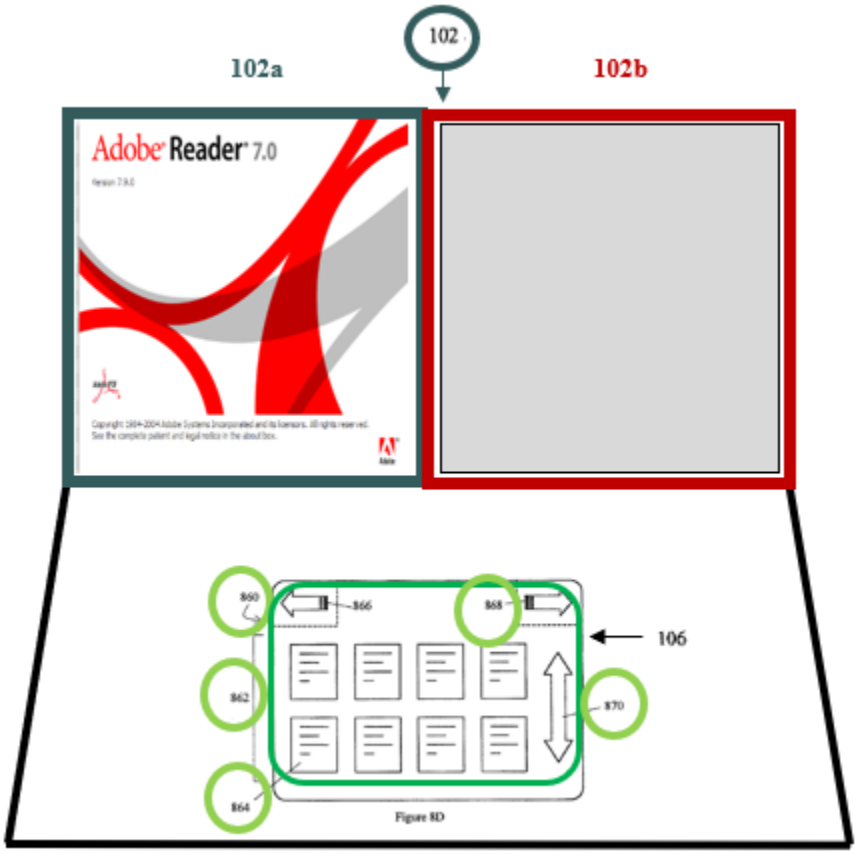
(EX1005, FIG. 8D, ¶0082.)



Demonstrative D

First image: Flight simulator image
First application: Flight simulator
First display: 102a
First configurable area: 1030
Input options: 1032. 1034. 1036, 1038, 1040 (flight controls)

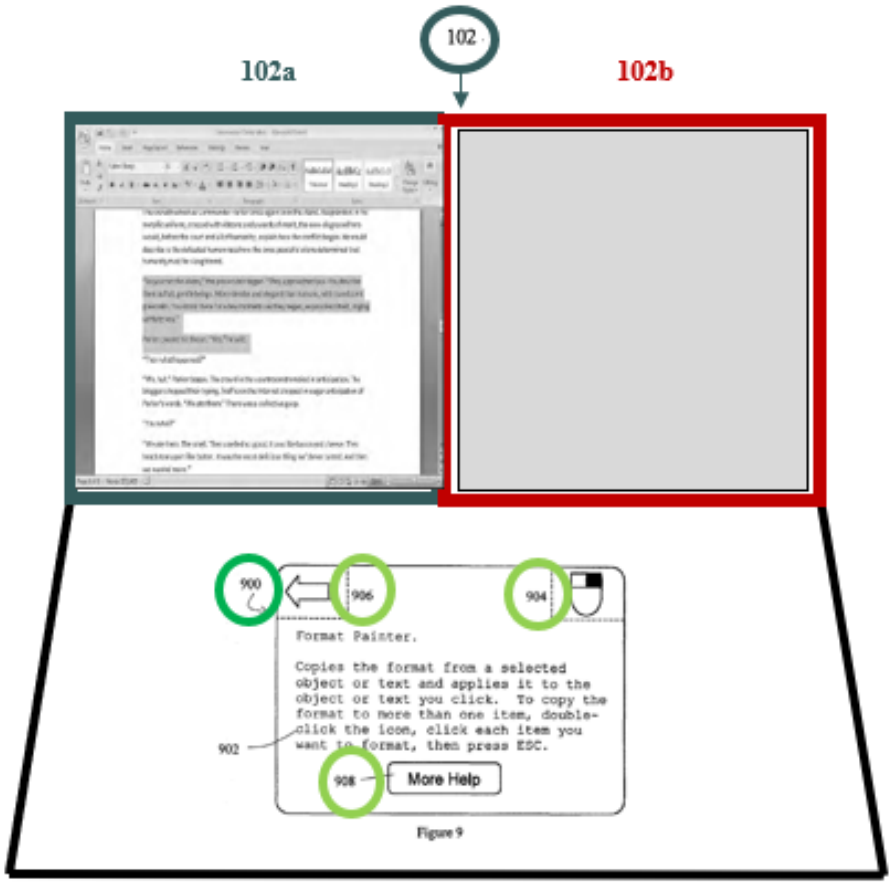
(EX1005, FIG. 10B, ¶¶0091-0092.)



Demonstrative E

First image: Acrobat image
First application: Adobe Acrobat
First display: 102a
First configurable area: Area displaying options in 106
Input options: two or more of the options (thumbnails 862, previous/next page 866/868, scroll 870)

(*See* EX1005, FIG. 8D, ¶0082.)



Demonstrative F

First image: Word
First application: Word image
First display: 102a
First configurable area: 900
Input options: 904/906/908

(*See* EX1005, FIG. 9, ¶0085.)

179. The above demonstratives (and those I discuss below for limitation 1.d) are exemplary as other configurable area/input options described and

contemplated by Gillespie would have been implemented in the Gillespie-Yook notebook for the same reasons I discussed above and below for this claim. (EX1005, FIG. 9, ¶¶0083 (pop-ups "displaying additional or subsidiary information"), 0084 ("more extensive pop-up help or other explanatory or subsidiary information").)

(3) [1.a.3] "wherein no input options are displayed in a second configurable area, wherein input is not allowed from the second configurable area, wherein input is allowed from a second display,"

180. In my opinion, Gillespie-Yook discloses and/or suggests this limitation.

181. Regarding **limitation 1.a.3**, for reasons explained, the Gillespie-Yook notebook discussed above includes a "**second display**" 102b. (*See above* §§IX.B.1, IX.B.2 (limitations 1.a.1-1.a.2).) In my opinion, and for similar reasons and teachings that I discussed above (*id.*), a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to execute at least one of the other applications, as contemplated by Gillespie and also consistent with Yook's teachings. (*See above* §§IX.B.1, IX.B.2.i-B.2ii; EX1005, FIGS. 8A-11,

¶¶0055-0059, 0081-0082, 0084-0089, 0095-0100, 0113; EX1011, ¶¶0077-0080-0091, 0094-0112.)

182. A person of ordinary skill in the art would have understood and recognized that, **prior to launching** the second application, the Gillespie-Yook notebook would have operated in a manner consistent with Gillespie's teachings. For example, as the first application is in focus, it provides a first image on display 102a, consistent with that I explained above. (*See above* §§IX.B.1, IX.B.2.i-B.2ii.) A person of ordinary skill in the art would a have understood that at that time, there would be no associated controls/menu/input options for the yet-to-be executed second application in touchscreen 106. Thus, there would be "**no input options are displayed in a second configurable area, wherein input is not allowed from the second configurable area**" as recited in limitation 1.a.3. (*See above* Demonstratives A-E (showing how touchscreen presents only input options in a first configurable area for the first application).) In my opinion, and consistent with the rationale I discussed above for modifying Gillespie in view of Yook, a person of ordinary skill in the art would have been motivated to display default content in display 102b, such as a desktop typically provided with Windows operating systems. At that time, in the Gillespie-Yook notebook, "**input is**

allowed from a second display" as the user would have been allowed to access and otherwise provide input in in the desktop area provided in display 102b at that time.

183. In my opinion, **Limitation 1.a.3** is also met where the Gillespie-Yook notebook is executing two applications consistent with that described by Yook. Consistent with such teachings and the rationale explained above (§§IX.B.1-IX.B.2.ii), where the notebook executes two applications (respectively displayed on displays 102a/102b), touchscreen 106 would still operate consistent with Gillespie's teachings by providing input options in a configurable area for the application actively used by the user. Thus, where a first application in display 102a was in focus, touchscreen 106 would only provide a "**first configurable area**" for that application. (EX1005, ¶¶0076-0077, 0087.) A person of ordinary skill in the art would have understood that while at that time no "**second configurable area**" would be provided in touchscreen 106, "**input is allowed from a second display**" because the user would have been allowed to access and

use the other application via display 102b[10] in display 102b, consistent with the teachings of Gillespie-Yook and known interface operations relating to such systems.

(4) [1.a.4] "wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application;"

184. In my opinion, Gillespie-Yook discloses and/or suggests this limitation.

185. As to **limitation 1.a.4**, for similar reasons that I explained for limitations 1.a.1-1.a.3, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to provide features consistent with Gillespie's touchscreen 106 functionalities, where it

[10] The "other application" I discuss here is not to be confused with the claimed "**second application**" that I address below for limitations 1.b-1.d.3. Consistent with the teachings of Yook and Gillespie, a person of ordinary skill in the art would have been motivated to configure the notebook to launch a further application (*e.g.*, "second application") that would replace the "other application" displayed in, *e.g.*, display 102b discussed here. (*Infra* §§IX.B.2.iii-v.)

displays in an configurable area, input options for an in focus application while not displaying content from an application. (*See above* discussions for Demonstratives A-F; *infra* §IX.B.iv (Demonstratives G-L); EX1005, ¶¶0076-0077.)

186. Consistent with the rationale and teachings that I explained above, a person of ordinary skill in the art would have recognized and appreciated that where no other application is executed/displayed in 102b, or where another application is displayed in 102b but not in-focus, the Gillespie-Yook notebook would not display any corresponding input options/controls in touchscreen 106 for that other application consistent with the teachings and operations of Gillespie. (§IX.B.1.) Therefore, there would **be no** "**second configurable area**" that "**display[s] content from an application**" like that claimed. Also, the later displayed "**second configurable area**" that I discussed for limitation 1.d.3 below (§IX.B.2.iv) does not display content from an application for reasons explained for the "**first configurable area**" here for limitation 1.a.4 (*supra*).

187. For instance, a person of ordinary skill in the art would have recognized that Gillespie describes features where the touchscreen 106 auxiliary/pop-up, etc. screens ("**first**/**second** **configurable area**(s)") displays input options that are not displayed by the application in main display 102. (EX1005,

¶¶0076-0111.) As one example, Gillespie's discussions regarding the execution of a flight simulator game application confirms that the resulting flight control configurable area that is presented in touchscreen 106 (exemplified in FIG. 10B) displays input controls that are not displayed in main display 102, which displays content associated with the flight simulator application in-focus at that time. (*Id.*, FIG. 10B, ¶¶0091-0092.) The same would be true when such application is executed in the Gillespie-Yook combination. A person of ordinary skill in the art would have understood that other "configurable area(s)" in Gillespie operate in similar fashion. (*E.g.*, i*d.*, ¶¶0080-0084.) Therefore, the Gillespie-Yook notebook discussed above would have provided similar features for similar reasons explained above. Such features are also consistent with the '007 patent's discussion of a configurable area. (EX1001, 7:55-65 (encompassing a menu with selectable options).) Accordingly, Gillespie-Yook notebook's "**first**/**second** **configurable area**(s)" each "**does not display content from an application**" as claimed.

188. Also, a person of ordinary skill in the art would have recognized that Gillespie describes that the pop-up/auxiliary configurable areas (that I discuss above) can be implemented with touchscreen driver software/hardware/controller

or supplied by "the operating system," and not an application. (EX1005, ¶0097, ¶¶0083-0087, 0107-0109.) Based on such teachings and the rationale above for modifying Gillespie in view of Yook, a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to implement similar functionalities, where touchscreen 106's "configurable area(s)" were provided by touchscreen driver software/hardware or an operating system, and not an application. Thus, in my opinion, for this **additional reason**, the "**first/second configurable area**(s)" in the Gillespie-Yook notebook each "**does not display content from an application**."

189. Thus, in my opinion, the Gillespie-Yook combination discloses "**the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application**," as claimed.

190. For similar reasons that I explained above, it is my opinion that since the "**first configurable area**" and "**second configurable area**" in the Gillespie-Yook notebook is implemented via touchscreen 106, each of them is **an area capable of receiving input and has display or limited display capabilities and is not part of the first display or second display that provides content** (*e.g.,*

display 102a/102b) consistent with the first interpretation discussed in §VIII.A.1 ("[first/second] configurable area" is "**an area capable of receiving input and has display or limited display capabilities and is not part of the first or second display that provides content**).)

iii) [1.b] "receiving first input indicating a request to launch a second application;"

[1.c] "launching the second application; and"

191. In my opinion the combined Gillespie-Yook notebook that I discussed above for claim limitations 1.pre through 1.a disclose and suggest **limitations 1.b and 1.c**. My discussions above in §IX.B.1 and §§IX.B.2.i-2.ii show how Gillespie and Yook disclose requests to launch and launching and executing applications. (§IX.B.1.) For example, Gillespie describes various features that allow the notebook computer to receive requests for launching applications for execution on the computer. (*See e.g.*, EX1005, ¶¶0076 (describing how touchscreen 106 displays auxiliary input options specific to a software application that is running on the computer, and in some instances only when that application has "input focus"), 0078-0079, 0098.) For instance, relating to the icon mode features, Gillespie states:

> Icons 420 and 422 represent **commands to select pop-up applications** on the touch screen. Icon 420 **selects an application launcher**. Icon 422 selects a calculator or numeric keypad. Like icons 416 and 418, icons 420 and 422 may be made sensitive to finger taps only when the touch screen is in the activated state.

(EX1005, ¶0056.) Gillespie also describes application launcher features where touchscreen 106 provides icons that allow the notebook to receive requests to launch an application.

> When the **user taps the finger on one of icons 1102**, image 1100 disappears and is replaced by the original touch screen image, and the **selected application software is launched**. Typically, **this application would be a conventional software application such as a word processor running on the main display of the computer**, but some of icons 1102 may represent system commands (such as shutting down the computer), other tools (such as another pop-up application on the touch screen), or **links to additional application launcher screens**. The user can also tap on icon 1104 to exit the application launcher screen without invoking any application.

(*Id.*, ¶0096.) (*See also id.*, ¶0097 ("Pop-up screens such as the application launcher of FIG. 11 may be invoked by any of various **well-known means for invoking applications**, such as a **keyboard key**, an icon like icon 420 or comer tap region like region 410 of FIG. 4, or **the "Start" menu of Microsoft Windows®**."), ¶0098 (pop-up screens "may be implemented as regular applications as viewed by the operating system, creating touch screen images "using the same mechanisms that other applications would use to create an auxiliary touch screen image" and alternatively "pop-up screens like that of FIG. 11 could be implemented specially within the touch screen driver software, or they could be implemented in the touch screen controller hardware such as controller 216 of FIG. 2.").) (*See also id*., ¶¶0076 (describing how touchscreen 106 displays auxiliary input options specific to a software application that is running on the computer, and in some instances only when that application has "input focus") , 0078-0079, EX1006, ¶¶0006-0008, 0045 (user-selected menu item "AB" activates application), 0038-0050, 0051 (event-driven application activation), 0057, 0081 (user-activated mail check); §§IX.B.2.ii).)

192. Consistent with such teachings and the state of art knowledge at the time, a person of ordinary skill in the art would have been motivated to configure

the Gillespie-Yook notebook to receive first input that indicates and initiates execution of another application for display in the second display 102b (**"receiving first input indicating a request to launch a second application**" and "**launching the second application**"). A person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to leverage the multiple display features discussed above for limitation 1.a to facilitate the launching and display of a second application that can be simultaneously displayed with the first application on the split-display implemented in the modified notebook. (*See* §§IX.B.1, IX.B.2.i-ii.) A person of ordinary skill in the art would have appreciated that providing such features in the Gillespie-Yook notebook would have been a foreseeable, predictable, and apparent implementation of the teachings offered by Yook in context of Gillespie.

193. Such a skilled person would have had the skilled and knowledge to consider and implement such features in the Gillespie-Yook, and would have done so with a reasonable expectation of success. Especially because such modification would have included the application of known technologies and techniques that were within the level of skill of such a skilled person at the time, as demonstrated by Gillespie and Yook's teachings and suggestions. Accordingly, such a skilled

person would have understood that the modification would have predictably result in the modified notebook receiving a "**first input indicating a request to launch a second application**" and "**launching the second application**" for display in display 102b, similar to explained above and below for claim 1.

iv) [1.d] "in response to launching the second application:"

(1) [1.d.1] "displaying, by the second application, a second image on the second display; and changing the focus from the first image to the second image;"

194. In my opinion, Gillespie-Yook discloses and/or suggests these to **limitations 1.d** and **1.d.1**.

195. For the reasons that I explained above for limitations 1.pre-1.c, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to display, by the newly launched application, an image for the second application on the second display 102b, and change the focus from the first image of the first application to the image for the second application to use of the second application in a manner consistent with conventional computer application operations and the features disclosed by Gillespie and Yook. (EX1005, ¶¶0077-0078; EX1011, ¶¶0077-0091, 0094-0112.) Such person of ordinary skill in the art would have understood that consistent with

the teachings of Gillespie and Yook, when the user switches use from one application to another in the Gillespie-Yook notebook, the input focus would have likewise switched to the other application (e.g., second application). (EX1005, ¶¶0076-0077, 0123; §§IX.B.1-IX.B.2.iii.) Thus, the Gillespie-Yook combination discloses/suggests "**in response to launching the second application**" "**displaying, by the second application, a second image on the second display; and changing the focus from the first image to the second image**," as recited in limitations 1.d-1.d.1.

(2) [1.d.2] "stopping display of input options in the first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first display; and"

196. In my opinion, Gillespie-Yook discloses and/or suggests this **limitation 1.d.2**.

197. As I discussed above, Gillespie describes that the "input options" provided in the "configuration area" of touchscreen 106 may be "tied to a particular application" having "input focus." (EX1005, ¶0087; *id.*, ¶¶0076-0086, 0091-0092, 0095-0098). Consistent with such features, a person of ordinary skill in the art would have been motivated to configure the above-discussed Gillespie-

Yook notebook to provide the same functionalities. Accordingly, in my opinion, a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to, in response to launching the second application, stop the display of the first configuration area input options in touchscreen 106 for the first application (*see e.g.*, my opinions above for limitations 1.a discussing first application/configuration area features associated with Word, PowerPoint, Adobe, music player, game application, etc. examples), as the second application is launched, displayed, and in focus. Consistent with Gillespie's teachings that I explained above, with the second application in focus, the notebook would provide input options in a second configuration area displayed in touchscreen 106 that corresponds with the newly launched second application. A person of ordinary skill in the art would have recognized and appreciated that at that time, "**input is allowed from the first display**" of the Gillespie-Yook notebook because the user would have been allowed to access and otherwise provide input for the application presented in first display 102a as desired, consistent with that taught by Gillespie-Yook and discussed above for limitation 1.a.3. (*See above* §IX.B.2.ii.) Therefore, for the reasons I explained above, it is my opinion that the Gillespie-Yook combination discloses or suggests "**stopping display of input options in the first**

configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first display" as recited in limitation 1.d.2.

(3) [1.d.3] "displaying input options for the second application in the second configurable area, wherein input is allowed from the second configurable area and the second display."

198. In my opinion, Gillespie-Yook discloses and/or suggests this **limitation 1.d.3**.

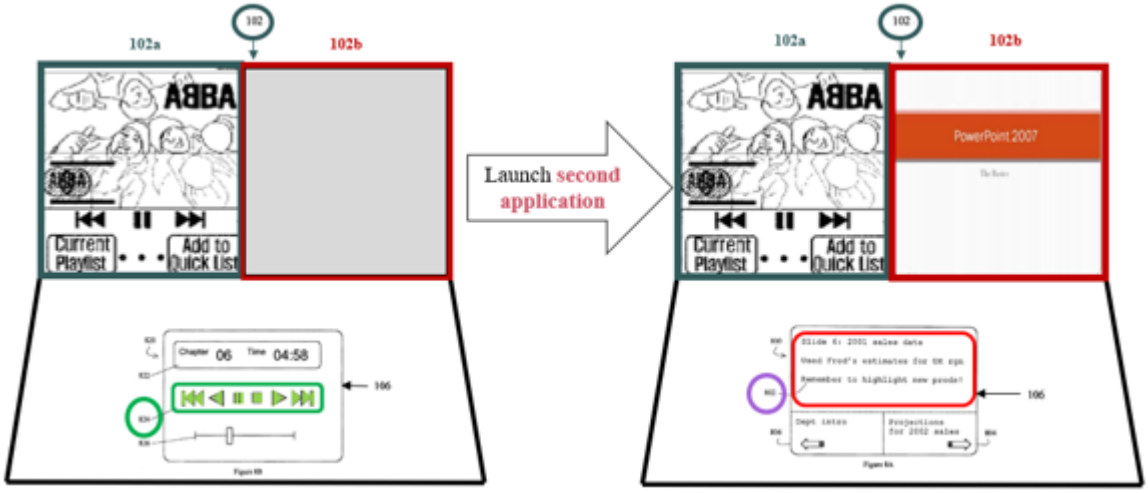
199. For reasons similar to those I explained above for limitation 1.d.2, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to provide input options in touchscreen 106 that are tied to the application having input focus. (EX1005, ¶0087, 0076-0086, 0091-0092, 0095-0098; §IX.B.2.iv(2).) Thus, for similar reasons, a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to, in response to launching the second application, display in touchscreen 106 second configuration input options (*e.g.*, menu, controls, etc.) associated with the newly launched second application that is in focus and displayed in display 102b. (*Id.*) Such features would have been consistent with Gillespie's operations as to how touchscreen 106 operates, and thus would have

been a predictable implementation to the Gillespie-Yook notebook that I discuss above for claim 1.

200. A person of ordinary skill in the art would have appreciated that as a result of such implemented features, the modified Gillespie notebook would have allowed input from the area in touchscreen 106 providing the second input options (e.g., control/menu/input options) for the in focus second application, consistent with the features taught by Gillespie in context of Yook's teachings. (EX1005, ¶¶0008-0009, 0077-0099.) Likewise, a person of ordinary skill in the art would have recognized that the Gillespie-Yook notebook would have also allowed input from second display 102b to allow the user to use the second application consistent with its conventional operations, such as manipulating content or using features provided the application software as presented in second display 102b. Such operations would have been consistent with conventional application use at the time and with Gillespie's and Yook's teachings.

201. Therefore, the Gillespie-Yook combination discloses/suggests "**displaying input options for the second application in the second configurable area, wherein input is allowed from the second configurable area and the second display**" as recited in limitation 1.d.3.

202. Below are exemplary demonstratives that provide non-limiting examples of the Gillespie-Yook notebook as modified providing such features recited in claim 1.

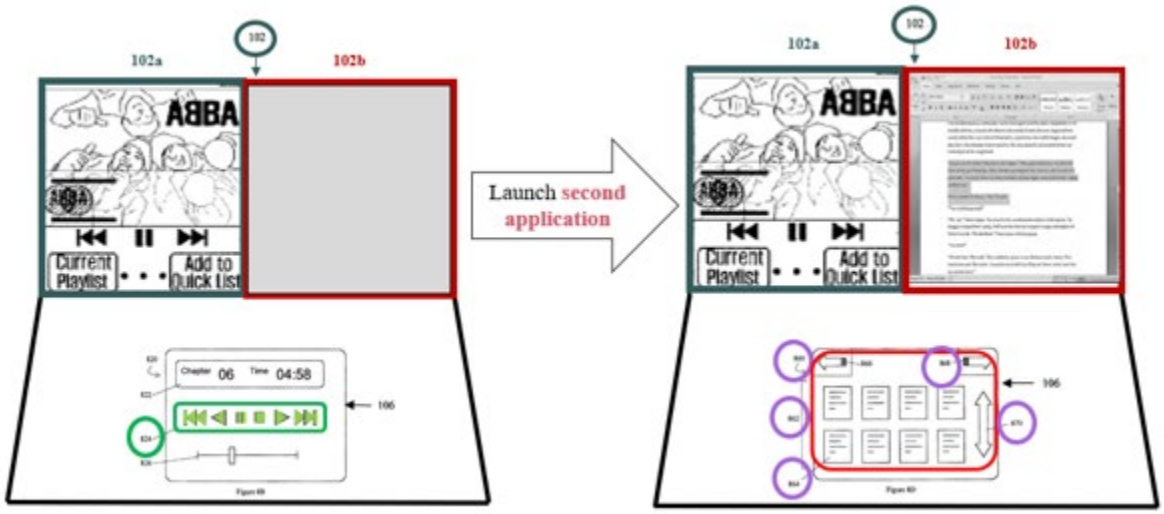


First image: Music/CD player image
First application: Music/CD player
First display: 102a
First configurable area: 834
Input options: FF/RW/Stop/…

Second application: PowerPoint
Second image: PowerPoint image
Second display: 102b
Second configurable area: 802
input options: right-click menu options via 802

Demonstrative G

(*See* EX1005, FIGS. 8A-8B, ¶¶0077-0078 ("tapping on region 802 would simulate a right mouse button click"), 0079-0080; EX1011, FIG. 7a.)

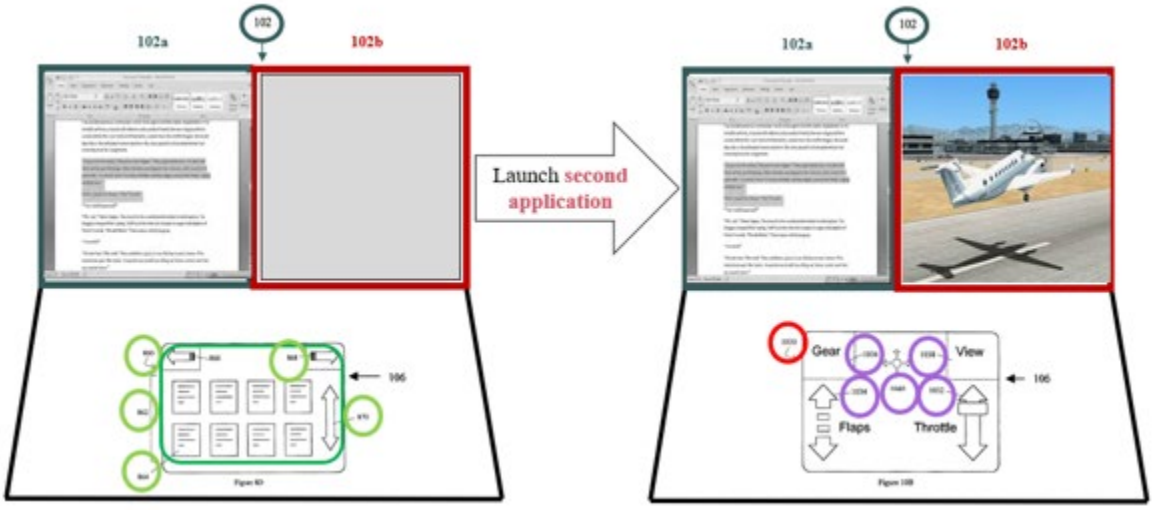


First image: Music/CD player image
First application: Music/CD player
First display: 102a
First configurable area: 834
Input options: FF/RW/Stop/Pause/Play/…

Second application: Word
Second image: Word image
Second display: 102b
Second configurable area: 860
Input options: 862/864/866/868/870

Demonstrative H

(*See* EX1005, FIGS. 8B, 8D, ¶¶0077-0078, 0093; EX1011, FIG. 7a.)



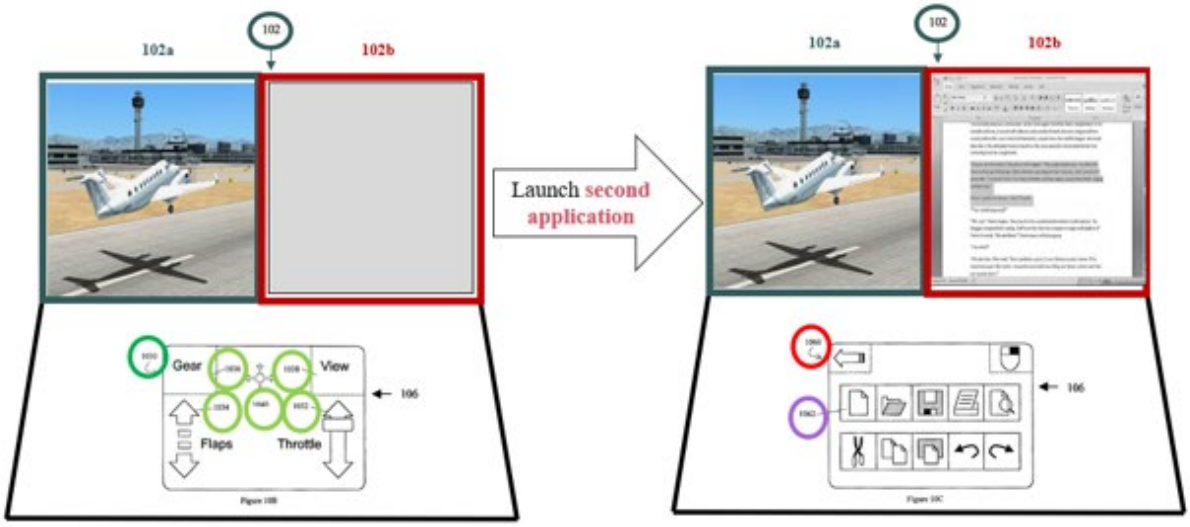
First application: Word

First image: Word image
First display: 102a
First configurable area: 860
Input options: 862/864/866/868/870

Second application: Game (flight simulator)
Second image: Simulator image
Second display: 102b
Second configurable area: 1030
input options: 1032-1040

Demonstrative I

(*See* EX1005, FIGS. 8D, 10B, ¶¶0082, 0091-0092.)

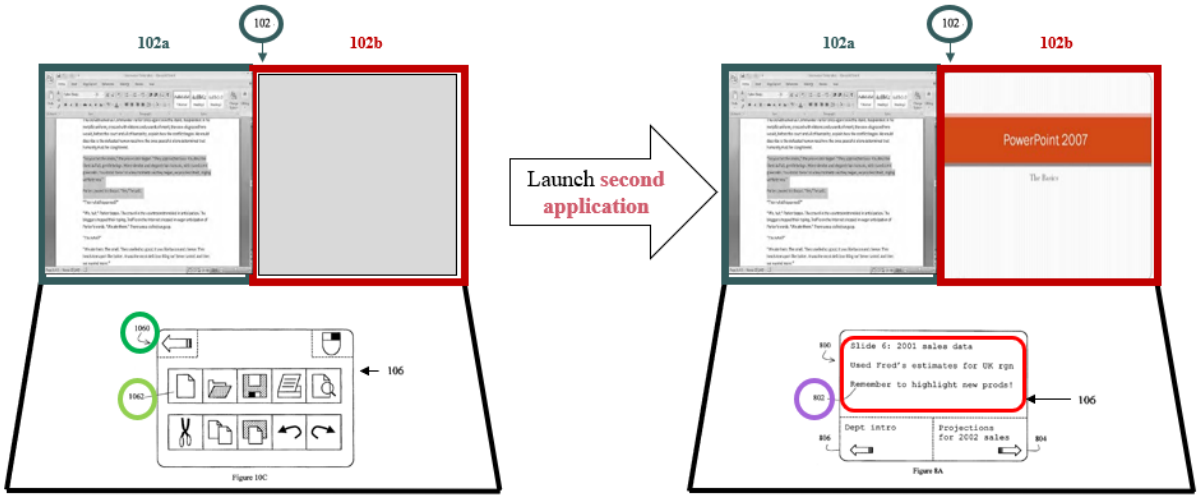


First application: Game (flight simulator)
First image: Simulator image
First display: 102a
First configurable area: 1030
Input options: 1032-1040

Second application: Word
Second image: Word image
Second display: 102b
Second configurable area: 1060
input options: 1062

Demonstrative J

(*See* EX1005, FIGS. 10B-10C, ¶¶0091-0093.)

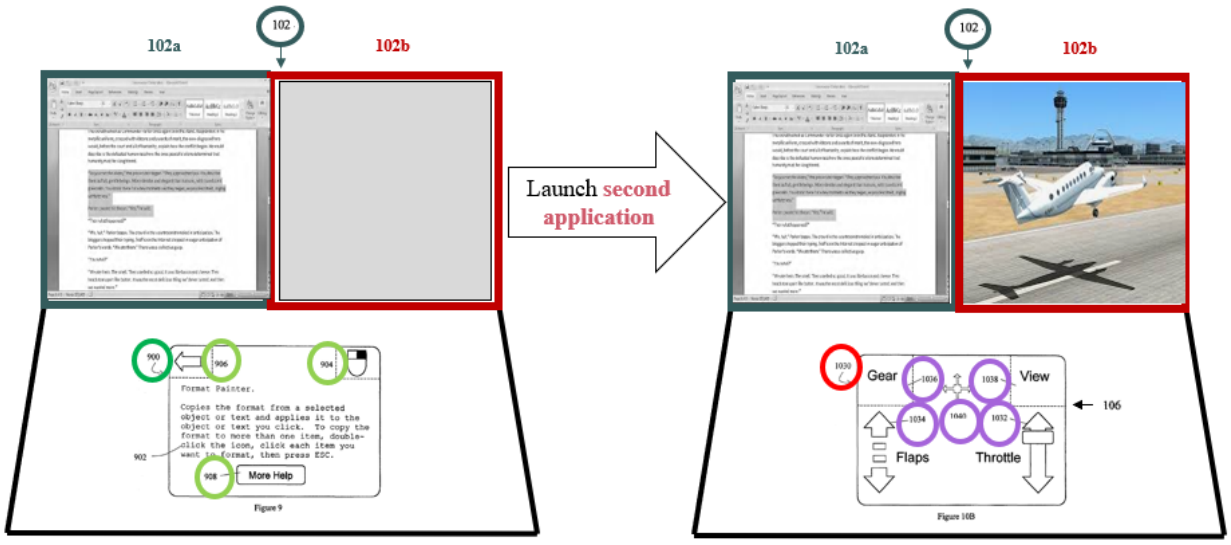


First application: Word
First image: Word image
First display: 102a
First configurable area: 1060
Input options: 1062

Second application: PowerPoint
Second image: PowerPoint image
Second display: 102b
Second configurable area: 802
input options: right-click menu options via 802

Demonstrative K

(*See* EX1005, FIGS. 8A, 10C, ¶¶0077-0078, 0093.)



First application: Word

First image: Word image
First display: 102a
First configurable area: 900
Input options: 904/906/908

Second application: Game (flight simulator)
Second image: Simulator image
Second display: 102b
Second configurable area: 1030
Input options: 1032-1040

Demonstrative L

(*See* EX1005, FIGS. 9, 10B, ¶¶0077-0078, 0085, 0091-0092.)

203. In my opinion, a person of ordinary skill in the art would have appreciated and understood that the Gillespie-Yook notebook would have been configured to implement many different combinations of first and second applications (and associated configurable areas), consistent with the features discussed by Gillespie-Yook as disclosed above. Those combinations are not

limited to the above demonstratives. For example, Gillespie describes features that provide a configurable area with input options for different applications (and thus not specifically tied to particular application). (*See e.g.*, EX1005, ¶¶0104-105, FIG. 14 (providing Chinese/Japanese handwriting input recognition, which can be presented on display 106 for different applications intended for such input).)

3. Claim 4 "The method of claim 1, further comprising: wherein the first image is a first open window of the first application and the second image is a second open window of the second application."

204. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations for reasons explained for claim 1. (§§IX.B.1-B.2.)

205. As I explained above for claim 1 (§§IX.B.1-B.2), Gillespie discloses implementing known Microsoft Windows software and corresponding application windows. (EX1005, ¶¶0066-0067, 0076 (applications windows on the main display screen are given the focus"), 0087, 0097, 0123 (application window).) Yook also discloses application windows as each application has a rectangular functional view area providing content/image associated with music playback or content/options associated with message composition, different from the rest of the screen. (EX1006, FIGS. 3-13, ¶¶0038-0041, 0043-0112, EX1001, 5:25-28 (describing "window").) Consistent with such features, and for reasons similar to

those I discussed above for modifying the Gillespie notebook in view of Yook, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to provide similar window features where the application images are presented in window format like that known in the art and consistent with Gillespie and Yook. A person of ordinary skill in the art would have had a reasonable expectation of success in implementing such features given the use of windows for displaying application images was widely known, and demonstrated by Gillespie and Yook. (EX1019, 20-21; EX1016, FIGS. 2A-4B, 6:48-67, 7:24-8:57, 12:13-13:33.) Accordingly, such a modification would have been a predictable application of known technologies and techniques within the capabilities and knowledge of such a skilled person at the time.

206. Therefore, for such reasons the Gillespie-Yook combination discloses "**the first image is a first open window of the first application and the second image is a second open window of the second application**," as recited in claim 4. (§§IX.B.1-B.2, *e.g.*, IX.B.2.ii (Demonstratives A-F), IX.B.2.iv (Demonstratives G-L).)

4. Claim 5 "The method of claim 1, further comprising: receiving second input indicating that in response to receiving the first input, the second application

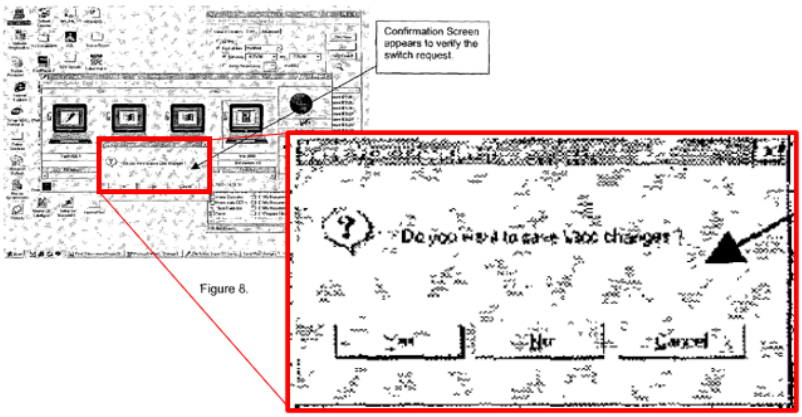
should be launched and the focus should be placed on the second image displayed by the second application."

207. Gillespie-Yook discloses and/or suggests these limitations. (§§IX.A.1-A.4.)

208. My analysis presented above for limitations 1.b-1.d demonstrates how the Gillespie-Yook combination discloses or suggests, in response to receiving the first input indicating the second application be launched, launching the second application and shifting focus to the second image by the second application. (§§IX.B.2.iii-iv.) A person of ordinary skill in the art would have appreciated that although Gillespie-Yook does not expressly disclose features for verifying the request to launch the second application, there were foreseeable reasons for considering and implementing such features in the Gillespie-Yook notebook. In fact, among the known options available in the art at the time, a person of ordinary skill in the art would have been aware of and capable of implementing conventional confirmation dialog features to verify when a user intends to launch another application.

209. Among the known options available in the art at the time, a person of ordinary skill in the art would have been aware of and capable of implementing conventional confirmation input features to verify a user requested action, such as

when a user intends to launch another application. (*See e.g.*, EX1012 FIG. 6, ¶0088 (describing a system providing a user-verifiable trusted path that performs verification processes including "receiving an input from a user indicative of confirmation to execute [a] trusted executable" where the "human confirmation in this step may be confirmation to execute the trusted executable" when proper hypervisor/driver shim measurements are confirmed or alternatively, "the human confirmation in this step may be confirmation to override a situation in which the measurements … does not correspond with the policies … but in which the user still wants to execute the trusted executable"), FIG. 16, ¶0138 ("Step 1610 includes **receiving an input from a human user indicative of confirmation to execute the trusted executable** 312"), claim 28 (same); EX1015, 13:9-23, FIGS 8-9 (below) (confirmation boxes to confirm request to switch OS environment and shut down current running OS).)



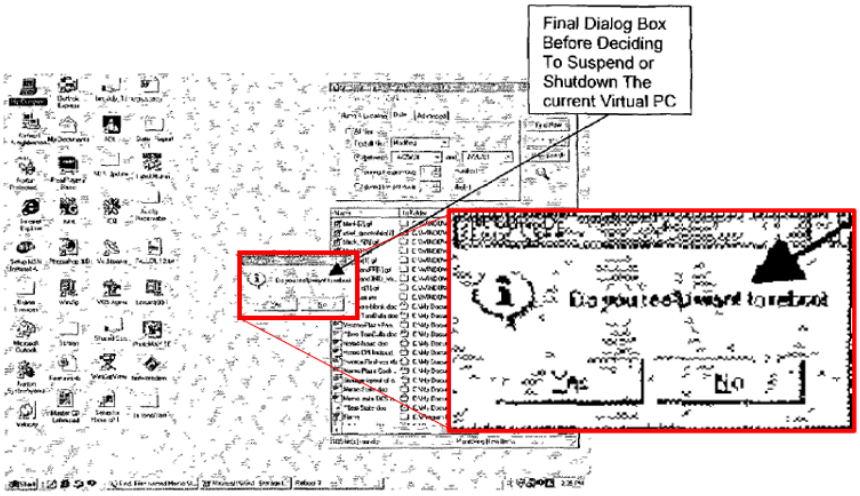


Figure 9

(*See also* EX1008, 160 ("OK" confirmation to confirm settings); EX1009, 21, 23 ("OK" confirmation dialog confirm actions).)[11]

[11] Exhibits 1008-1009, 1012, 1015 are referenced to demonstrate a person of ordinary skill in the art's state of art knowledge at the time.

210. In my opinion, a person of ordinary skill in the art would have thus been motivated to configure the Gillespie-Yook notebook to provide confirmation dialog features to verify a received request to launch another application prior to launching and changing focus to that application. A person of ordinary skill in the art would have recognized and appreciated the advantages and the benefits of conserving system resources that would have been used to launch, display, and allow use of a new application (*e.g.*, processing, memory, display, power, etc. resources). Such a skilled person would have also found benefit in ensuring a user's intent/preference for such actions by launching a new application only after a second input confirmation of a first input request was verified, consistent with that known in the art. Such features would confirm that the second application should be launched and that the focus should be placed on the second image subsequently displayed by the launched second application.

211. A person of ordinary skill in the art would have found such a modification a predictable application of known technologies/techniques that was in the capabilities and knowledge of such a skilled person at the time. As such, a person of ordinary skill in the art would have had a reasonable expectation of success in its implementation. Thus, for reasons above, a person of ordinary skill

in the art would have been motivated to modify the Gillespie-Yook notebook to provide features as discussed above, which would have predictably resulted in the notebook performing processes to allow "**receiving second input indicating that in response to receiving the first input, the second application should be launched and the focus should be placed on the second image displayed by the second application**" as recited in claim 5.

5. Claim 9 "The method of claim 1, wherein the first input is a tap gesture received by one of the first display, the second display, a first gesture capture region, or a second gesture capture region, wherein the first gesture capture region is separate from the first display and the second gesture capture region is separate from the second display, and wherein the first and second gesture capture regions are not capable of displaying images of applications."

212. In my opinion, Gillespie-Yook discloses and/or suggests these limitations.

213. For example, for reasons and teachings similar to that discussed above for claim 1 (§IX.B.1-B.2), it is my opinion that a person of ordinary skill in the art would have been motivated to configure the displays 102a and 102b in the Gillespie-Yook notebook to be touch sensitive displays that accepted touch inputs to select or manipulate content in one or more of the applications or other actions provided via those display 102a-102b. Such a skilled person would have

appreciated that such an implementation would have enhanced the input functionalities offered by the Gillespie-Yook notebook, such as providing another mechanism for a user to provide input to the computer device beyond conventional keyboard and mouse input mechanisms.

214. A person of ordinary skill in the art was aware of and knowledgeable of touch sensitive display technologies and their benefits with portable computing systems. (*See* state of art disclosures in: EX1013, FIGS. 7A, 8, 9(a), 10(a), 1:11-15, 4:31-52; EX1014, Abstract, FIGS. 1, 3(a)-4(c), 8(a)-8(c), 10-12, 16(a)-16(b), 19(a)-19(b), 1:58-3:37, 4:61-5:6, 11:31-48, 12:44-14:3, 16:30-17:23, 20:35-47; EX1005, ¶0006 ("[t]ouch screens are also well known in the art" and in "typical use, the main display screen of a computer is … implemented as a touch sensitive input device").) Further, as I explained (*see above* §IX.B.1), Yook discloses a portable computer (e.g., laptop) with multiple touch sensitive displays to facilitate user input for applications executed by the device. (*E.g.*, EX1011, Abstract, FIGS. 1-4E, ¶¶0006-0009, 0024-0026, 0030-0057.)

215. Based on the teachings of Yook-Gillespie, and the state of art knowledge at the time, a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to include touch sensitive

displays for displays 102a and 102b, which would have been used to receive touch input, such as tap gestures, from a user (e.g., finger taps on the screen of display 102a or 102b) to control, manipulate, initiate actions associated with applications executed by the notebook device. A person of ordinary skill in the art would have had a reasonable expectation of success in achieving such an implementation, especially because the use of touch sensitive displays was known as I demonstrated above and disclosed by Yook.

216. In my opinion, a person of ordinary skill in the art would not have been deterred in implementing such features even though Gillespie makes some comments about the use of a touchscreen as a main display. (EX1005, ¶0006.) First, a person of ordinary skill in the art would have understood that having touch sensitive displays 102a/102b would not require that to be the only way users could interface with the notebook (having keyboard/mouse input). Knowing this, would have mitigated any concerns a person of ordinary skill in the art may have had about user fatigue from everyday use suggested by Gillespie. In fact, it is my opinion that such a skilled person would have understood the Gillespie-Yook notebook would have benefited from having another way for a user to provide input, which would have complimented the touchscreen 106 features offered by Gillespie. Additionally,

while Gillespie suggested possible concerns over cost and size of main display touchscreens, a person of ordinary skill in the art at the relevant time (October 1, 2010 time frame) would have appreciated the advances in touch sensor technologies since 2002, which is when Gillespie was filed. (EX1005, Cover.) In fact, Yook (filed in early-2010) confirms a person of ordinary skill in the art had reasons and capabilities to implement touch functionality in portable computer displays, including notebooks and thus was not deterred by potential cost/size issues. (EX1011, Cover, ¶0116.) Thus, a person of ordinary skill in the art would have taken advantage of the available technologies and advances at the time (2010) to configure the Gillespie-Yook notebook in a manner that would have mitigated concerns regarding cost and size in implementing displays 102a/102b as touch sensitive displays.

217. My analysis above for limitations 1.b-1.c demonstrates how and why the Gillespie-Yook notebook would have been configured to receive the input request to launch the second application. (*See* §§IX.B.2.ii-iii.) For similar reasons, and those that I discussed immediately above, it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook to receive the first input for launching the second application via a tap

gesture received by touch sensitive display 102a ("first display). (*See e.g.*, EX1005, ¶¶0056, 0076, 0078-0079, 0096-0098; EX1011, ¶¶0006-0008,0038-0057.) Using the touch sensitive display 102a to initiate tasks, such as launching an application (*e.g.*, second application) would have been a foreseeable use of the touch sensitive display input features introduced by the above discussed modified Gillespie-Yook notebook. A person of ordinary skill in the art would have had the skills and capabilities to implement such features and thus had a reasonable expectation of success in implementing them.

218. Thus, for the reasons I discuss above, it is my opinion that the Gillespie-Yook combination discloses and/or suggests "the **first input is a tap gesture received by <u>one of</u> the first display …** " recited in claim 9.

6. Claim 10

i) **[10.pre] "A non-transitory computer readable medium storing computer executable instructions that when executed by at least one processor perform a method, comprising:"**

ii) **[10.a] "displaying a first image of a first application on a first display, wherein the first image is in focus wherein input is allowed from the first display, and wherein input is allowed from a second display;"**

iii) **[10.b] "receiving first input indicating a request to launch a second application, the input is received by one of the first display and the second display;"**

iv) **[10.c] "in response to receiving the first input, launching the second application;"**

v) **[10.d] "displaying, by the second application, a second image on the second display; and"**

vi) **[10.e] "changing focus from the first image to the second display, wherein input is allowed from the first display, and wherein input is allowed from the second display;"**

vii) **[10.f] "in response changing focus, stopping display of input options in a first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first display; and"**

viii) **[10.g] "in response changing focus, displaying input options for the second application in a second configurable area, wherein input is allowed from the second configurable area and the second display,"**

ix) [10.h] "wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application."

219. As shown in the table below, claim 10 recites limitations that track those in claims 1, 9, 17, and 20. In my opinion, the Gillespie-Yook combination as I discussed above to address claims 1, 9, 17, and 20, disclose and/or suggest claim 10. I incorporate in their entirety my opinions for those claims here to support my opinions for claim 10. Thus, Gillespie in view of Yook discloses and/or suggests the limitations of claim 10 for the reasons above for claims 1, 9, 17, and 20. (§§IX.B.1-B,2, IX.B.5, IX.B.8, IX.B.9.) The table below references the limitations that follow corresponding limitations in claim 10, and thus my opinions for those listed limitations are incorporated in their entirety to support my opinions regarding claim 10 here.

[10.pre]	*See* my analysis for limitation [17.c] (§IX.B.8.iv)
[10.a]	*See* my analysis for limitations [1.a] (§IX.B.2.ii); [17.a]-[17.b], [17.c.1] (§§IX.B.8.ii-iv.)
[10.b]	*See* my analysis for limitations [1.b] (§IX.B.2.iii); [9] (§IX.B.5); [17.c.2] (§IX.B.8.iv); [20] (§IX.B.9]
[10.c]	*See* my analysis for limitations [1.b]-[1.c] (§IX.B.2.iii); [9] (§IX.B.5); [17.c.3] (§IX.B.8.iv); [20] (§IX.B.9)
[10.d]	*See* my analysis for limitations [1.d.1] (§IX.B.2.iv); [17.c.4] (§IX.B.8.iv)
[10.e]	*See* my analysis for limitations [1.d.1]-[1.d.3] (§§IX.B.2.iv) [17.c.5-17.c.6] (§§IX.B.8.iv)
[10.f]	*See* my analysis for limitations [1.d.2] (§IX.B.2.iv); [17.c.5-17.c.6] (§§IX.B.8.iv)
[10.g]	*See* my analysis for limitations [1.d.1]-[1.d.3] (§§IX.B.2.iv); [17.c.5-17.c.6] (§§IX.B.8.iv)

7. Claim 16 "The non-transitory computer readable medium of claim 10, wherein the method further comprises: receiving second input indicating that in response to the first input, the focus should be changed to the second display."

220. In my opinion, the Gillespie-Yook combination discloses and/or suggests this limitation for the same reasons explained for claims 5 and 10. (§§IX.B.4, IX.B.6.)

8. Claim 17

i) [17.pre] "A communication device, comprising:"

221. To the extent limiting, Gillespie (including as modified in view of Yook as discussed below) discloses the preamble of claim 17. My analysis above for claim 1, and that below for the remaining limitations of claim 17, demonstrates how Gillespie (including as modified in the Gillespie-Yook combination) discloses "**a communication device**." (*See above* §IX.B.1-IX.B.2; *see below* §§IX.B.8.ii-IX.B.8.c.) For example, Gillespie's notebook 100 (configured to selectively control the display of software applications) includes conventional features known to laptop and related portable computer systems that communicate with other devices. (*See above* §IX.B.1; EX1005, FIG. 1, FIG. 8C, ¶0081 (discussing "Internet Web browsers," "web providers," and "Web pages" which necessarily required communications between notebook 100 and remote devices, such as a

web server or "web provider" providing web page content for display by notebook 100); ¶0051 (Web browsers), ¶¶0055, 0059 (e-mail, which likewise required communications with a remote mail server/source), ¶0096, FIG. 11 (mail).) A person of ordinary skill in the art would have understood Gillespie's notebook 100 (including as modified in the Gillespie-Yook combination I discuss below) is a "communication device" consistent with the '007 patent, which contemplates other types of communication devices beyond a cellular phone or smart device. (EX1001, FIGS. 1B-1J, 3:38-51, 4:3-11, 7:31-38.)

222. As I demonstrate below, Gillespie's notebook as modified in view of Yook's teachings would have been configured as a "communications device" comprising the features recited in the remaining limitations of claim 17. (*See below* §§IX.B.8.i-iv.)

ii) [17.a] "a first touch sensitive display and a first configurable area;"

iii) [17.b] "a second touch sensitive display and a second configurable area; and"

223. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations. My discussions/analysis above for claim limitations 1.a and 1.d demonstrates how the Gillespie-Yook combination discloses a "**first [] display** and a **first configurable area**" and a "**second [] display** and a **second configurable**

area," like that recited in limitations 17.a-17.b. (*See above* §§IX.B.2.ii, IX.B.2.iv.) (*See also* analysis relating to limitations 1.b-1.c in §IX.B.2.iii.)

224. My analysis and disclosures addressed above for claim 9 demonstrates how and why a person of ordinary skill in the art would have been motivated to configure displays 102a/102b in the modified Gillespie-Yook notebook as "**touch sensitive**" displays to receive input via tap gestures. (*See above* §IX.B.5.) Therefore, for similar reasons that I explained for claim 9 (*id.*) and those I addressed above for limitations 1.a-1.d (§§IX.B.2.ii-IX.B.2.iv), a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook ("**communications device**") such that displays 102b/102c provide respectively a "**first touch sensitive display**" (limitation 17.a) and a "**second touch sensitive display**" (limitation 17.b). Accordingly, for the above reasons and those I explained above for claim 1 (*see* §IX.B.2.ii), the "configurable area(s)" disclosed by Gillespie-Yook notebook are each **an area capable of receiving input and has display or limited display capabilities and is not part of the first touch sensitive or second touch sensitive display that provides content** consistent the first interpretation I was asked to consider discussed in §VIII.A.1.

iv) [17.c] "a computer readable medium that stores computer executable instructions that, when executed by at least one processor, perform a method comprising:"

225. In my opinion, Gillespie in view of Yook discloses and/or suggests this limitation for reasons similar to those that I explained for limitations 1.pre, 17.pre, and the remaining claim 17 limitations that I addressed below. (*See above* §IX.B.2.i; §IX.B.9.i, *see below* §§IX.A.8.iv.)

226. Also, a person of ordinary skill in the art would have understood and recognized that Gillespie and Yook each discloses features consistent with the use of computer-readable media (memory) storing software and instructions and processor(s) for executing such software to perform processes consistent with their respective teachings. (*See* EX1005, ¶¶0066 ("[c]omputers intended for use with the Microsoft Windows® operating system …"), FIGS. 15B-16, ¶0109 (discussing hardware architecture implementing embodiment of FIG. 15A including a processor that "operates other devices [] such as the main display and hard drive"), ¶0119 (software architecture for touchscreen 106), claims 1, 10, 35, 70 (computing system having a processor running and operating system and a display, a graphical user interface…); EX1011, ¶0117 (disclosing the described methods "can be realized in … software or computer code than can be stored in a recording medium

… so that the methods described herein can be executed by such software using a general purpose computer, or a special processor" and "the computer, the processor … include memory components … that may store or receive software or computer code that when accessed and executed by the computer, processor … implement the processing methods described herein.").)

227. Based on such teachings, along with the disclosures and reasons that I explained above for limitations 17.pre to 17.b and claim 1 (§IX.B.2), it is my opinion that a person of ordinary skill in the art would have been motivated to configure the Gillespie-Yook notebook (described above for claim 1 and further below) to include a "**computer readable medium that stores computer executable instructions that, when executed by at least one processor, perform a method"** as recited in limitation 17.c, and addressed further below for the remaining limitations of claims 17 and 20. (*See above* §§IX.B.2, IX.B.8.i-iii; *see below* §§IX.B.8.iv, IX.B.9.) A person of ordinary skill in the art would have appreciated that such an implementation would have been a predicable application of known technologies and techniques (*e.g.*, program coding and execution) as contemplated by Gillespie and Yook, and would have predictably led to providing a program product with instructions that, when executed by the modified notebook

"device" discussed above, perform processes consistent with those discussed herein for claims 17 and 20.

(1) [17.c.1] "displaying a first image of a first application on the first touch sensitive display, wherein the first image is in focus, wherein input options for the first application are displayed in the first configurable area, wherein input is allowed from the first configurable area and the first touch sensitive display, wherein no input options are displayed in the second configurable area, wherein input is not allowed from the second configurable area, wherein input is allowed from the second touch sensitive display, wherein the first configurable area does not display content from an application, and wherein the second configurable area does not display content from an application;"

228. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations for the reasons explained for limitations 1.a and 17.pre-17.c. (*See* §§IX.B.1-IX.B.2.iii, IX.B.8.i-iv.)

(2) [17.c.2] "receiving first input on the first touch sensitive display or the second touch sensitive display indicating a request to launch a second application;"

(3) [17.c.3] "launching the second application;"

229. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations for the reasons explained for limitations 1.b-1.c and claim 9, and limitations 17.pre-17.c.1 (*See* §IX.B.2.iii, §IX.B.5, §§IX.B.9.i-IX.B.8.iv(1).)

(4) [17.c.4] "displaying, by the second application, a second image on the second touch sensitive display; and"

(5) [17.c.5] "changing the focus from the first touch sensitive display to the second touch sensitive display,"

230. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations for the reasons explained for limitations 1.d-1.d.1 and limitations 17.pre-17.c.3 (*See* §§IX.B.2.iv, IX.B.8.i-IX.B.8.iv(3).)

(6) [17.c.6] "wherein no input options are displayed in the first configurable area, wherein input is not allowed from the first configurable area, wherein input is allowed from the first touch sensitive display, wherein input options for the second application are displayed in the second configurable area, and wherein input is allowed from the second configurable area and the second touch sensitive display."

231. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations for the reasons explained for limitations 1.d.2-1.d.3 and limitations 17.pre-17.c.5 (*See* §§IX.B.2.iv, IX.B.8.i-IX.B.8.iv(5).)

9. Claim 20 "The device of claim 17, wherein the first input is a tap gesture received by one of the first touch sensitive display, the second touch sensitive display, a first gesture capture region, or a second gesture capture region, wherein the first gesture capture region is separate from the first touch sensitive display and the second gesture capture region is separate from the second touch sensitive display, and wherein the first and second gesture capture regions are not capable of displaying images of applications."

232. In my opinion, Gillespie in view of Yook discloses and/or suggests these limitations for the reasons explained for claims 9 and 17 (*see e.g.*, limitations 17.a-17.b (touch sensitive display). (§§IX.B.5, IX.B.8.)

X. CONCLUSION

233. I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: October 17, 2024 By:

Sandeep Chatterjee