

FORM PTO-1390 (Modified) (REV 11-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER <b>5035,133US</b>	
<b>TRANSMITTAL LETTER TO THE UNITED STATES</b> <b>DESIGNATED/ELECTED OFFICE (DO/EO/US)</b> <b>CONCERNING A FILING UNDER 35 U.S.C. 371</b>				U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR 1.5) <b>10/343333</b>	
INTERNATIONAL APPLICATION NO. <b>PCT/GB01/03387</b>		INTERNATIONAL FILING DATE <b>July 27, 2001</b>		PRIORITY DATE CLAIMED <b>July 28, 2000</b>	
TITLE OF INVENTION <b>COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS</b>					
APPLICANT(S) FOR DO/EO/US <b>Matthieu Kennedy MARTYN</b>					
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Surcharge of <b>\$130.00</b> for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				<b>\$0.00</b>	
<b>CLAIMS</b>	<b>NUMBER FILED</b>	<b>NUMBER EXTRA</b>	<b>RATE</b>		
Total claims	23 - 20 =	3	x \$18.00	<b>\$54.00</b>	
Independent claims	2 - 3 =	0	x \$80.00	<b>\$0.00</b>	
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>				<b>\$0.00</b>	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				<b>\$954.00</b>	
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				<b>Amount to be refunded</b>	<b>\$</b>
				<b>charged</b>	<b>\$</b>
<p>a. <input checked="" type="checkbox"/> A check in the amount of <b>\$954.00</b> to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <b>23-3040</b>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING: Information on this form may become public. Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038.</p>					
<p><b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b></p> <p>SEND ALL CORRESPONDENCE TO:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Richard C. Woodbridge, Esq. Woodbridge &amp; Associates, P.C. P.O. Box 592 Princeton, NJ 08542-0592</p> </div> <div style="margin-left: 200px;"> <p style="text-align: center;"><i>Richard C. Woodbridge</i> SIGNATURE</p> <p style="text-align: center;"><b>Richard C. Woodbridge</b> NAME</p> <p style="text-align: center;"><b>26,423</b> REGISTRATION NUMBER</p> <p style="text-align: center;"><i>Jan 28, 2003</i> DATE</p> </div>					

10/343333  
DT11 Rec'd PCT/PTO 28 JAN 2003

FILE NUMBER 5035-133US

"EXPRESS MAIL CERTIFICATE"

"Express Mail" Mailing Label Number: EV 044712424 US

Express Mail Corporate Account Number: X085783

Date of Deposit: Jan. 28, 2003

Title: **COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS**

INVENTOR: **Matthieu Kennedy Martyn**


Type of Documents:

1. PCT National Phase Transmittal Letter (x2) together with our check for \$954.00;
2. Preliminary Amendment (6 pages);
3. PCT Published Application (11 pages and 1 page of drawings);
4. International Preliminary Examination Report (2 pages);
5. Form PCT/IPEA/402 (PCT Receipt of Demand) - (1 page);
6. Form PCT/IPEA/401 (PCT Demand) - (3 pages);
7. Form PCT/IB/308 (Communication of Intern'l Application) - (1 page);
8. PCT Search Report (4 pages);
9. Declaration and Power of Attorney (unsigned) - 3 pages;
10. One page of formal drawings;
11. This "Express Mail" Certificate; and;
12. Acknowledgment Post Card.

I hereby certify that the enclosed documents are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner of Patents and Trademarks, Patent and Trademark Office, Box 2327, Arlington, VA 22202-0327 - Att: Box PCT

Richard C. Woodbridge, Esq.

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"Express Mail" Mailing Label Number: EV 044712424 US

Express Mail Corporate Account Number: X085783

Date of Deposit: Jan. 28, 2003

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INVENTOR: **Matthieu Kennedy Martyn**


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Richard C. Woodbridge, Esq.

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PCT/GB01/03387

COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

5

**BACKGROUND TO THE INVENTION**

1. Field of the Invention

10 This invention relates to a computing device with an improved user interface for applications. The term 'computing device' refers to any kind of device which can process and display information. The invention has specific application to mobile telephones. The term 'mobile telephone' refers to any kind of mobile device with communications capabilities and includes radio (mobile) telephones, smart phones, communicators, PDAs and wireless information devices. It includes devices able to  
15 communicate using not only mobile radio such as GSM or UMTS, but also any other kind of wireless communications system, such as Bluetooth.

2. Description of the Prior Art

20 One of the problems facing the designers of computing devices with small screens is how to allow the user to navigate quickly and efficiently to access data and activate a desired function. Computing devices with small screens tend to need data and functionality divided into many layers or views: for example, the small display size of mobile telephones has conventionally meant that several hierarchies of functions have to be offered to a user. The interface can be thought of as having  
25 many layers, with the user having to first locate the correct top level function and then, within that function, progressively drill down (sometimes through 3 or more layers) to complete the required task. Where a mobile telephone includes several different applications (e.g. a message application, a contacts/address book application, a calendar application and a telephone application), then the user  
30 normally has to first of all locate, then start/open the required application and then may need to navigate to the required function (e.g. create a new contact entry) or cause the required stored data (e.g. display names beginning with the

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letter 'A') to be displayed. This process can seem slow, complex and difficult to learn, particularly to novice users.

5 Hence, with conventional user interfaces, a user may need to scroll around and switch views many times to find the right data/functionality. An effective user interface would ideally enable the user to readily and rapidly access the right data/functionality. Designing such an interface is however a complex human factors problem, especially for computing devices such as mobile telephones.

10 In some mobile telephones, a menu of several available options is displayed: the menu commands may then be divided into functional groups, with the most useful functional group at the top of the menu; the most useful command within that group is then placed at the top of group. In other devices, only one option is shown on the screen at any one time, making it harder for a user to appreciate the  
15 available options and therefore navigate effectively.

Some mobile telephones also offer limited shortcuts to get straight to a particular function. This usually involves memorising various keyboard input sequences, corresponding to different menu positions at different levels in the menu  
20 hierarchy. These shortcuts appeal only to a small number of expert users. Most mobile telephones also include idle screens (i.e. a display which is shown when the mobile telephone is switched on but not in use); these idle screens often carry alerting messages (e.g. "1 missed call").

25 On a more theoretical basis, a user interface typically has to demonstrate or make explicit the changing internal status of the mobile telephone as navigation proceeds. For example, to select or initiate a function (e.g. to open an address book function, enter a PIN security number or to alter the ring melody) a user has to understand (a) how to navigate to that function in order to select that function  
30 and (b) that the status of the telephone is such that the function can be selected or initiated. The technical problem of effectively enabling the user to understand this changing internal state has to date been inadequately addressed. The object of the



present invention is to provide an improved form of user interface which addresses this problem.

#### **SUMMARY OF THE PRESENT INVENTION**

5 According to a first aspect of the invention there is provided a computing device comprising a display screen, the computing device being able to display on the screen an application summary window, the summary window comprising a limited list of (i) common functions offered within an application and/or (ii) data stored in that application.

10 Hence, the present invention envisages, in one implementation, a 'snap-shot' view of an application in which the snap-shot view brings together, in one summary window, a limited list of common functions and commonly accessed stored data.

15 Preferably, where the summary window for a given application shows data or a function of interest, the user can directly select that data or function; this causes the application to open and the user to be presented with a screen in which the data or function of interest is prominent. This saves the user from navigating to the required application, opening it up, and then navigating within that application to enable the data of interest to be seen or a function of interest to be  
20 activated.

In another aspect, there is a computer program which when running on a computing device (such as a mobile telephone), enables the device to operate in  
25 accordance with the above aspects of the invention. The program may be an operating system.

#### **BRIEF DESCRIPTION OF THE FIGURES**

30 The invention will be described with reference to the accompanying Figures, in which:

Figures 1-3 are screen shots showing an implementation of the present invention.

#### DETAILED DESCRIPTION

5 The present invention offers, in one implementation, a snap-shot view which brings together, in one summary window, a limited list of common functions and commonly accessed stored data which itself can be reached directly from the main menu listing some or all applications. This yields many advantages in ease and speed of navigation, particularly on small screen devices. For example, a user can  
10 get to the summary window in just two steps – first, launch a main view which shows various applications; then, launch the appropriate summary window for the application of interest. This is far faster and easier than conventional navigation approaches. Once the summary window is launched, core data/functionality is displayed and can be accessed in more detail can typically be reached simply by  
15 selecting that data/functionality. Hence, only three steps may be needed from start up to reaching the required data/functionality; navigating from between each step is clear and straightforward.

As an example, the main view may be an Application Launcher for several  
20 applications such as 'Messages', 'Contacts', 'Calendar' and 'Phone'. The Application Launcher view is then presented as a standard scrolling list of application names with appropriate application icons next to them. The list is vertical and only one application is presented per line. Standard highlight functions apply in that when the Application Launcher view is opened the highlight defaults  
25 to the first item in the list of applications. This is shown in Figure 1, in which the screen display 1 includes a list of applications ('Messages'; 'Contacts'; 'Calendar'; and 'Phone'), including a highlighted 'Messages' at 2. Alternatively, the highlight may default to the middle item in the list of applications. At this point, the user may take conventional navigation steps, such as scrolling, to move the highlight  
30 and using the available select function to navigate to the required highlighted application.

The innovative summary window functionality can be accessed as follows: should the highlight rest on the name of an application in the App Launcher for a certain amount of time (say a 1.2 second timeout), the summary window (the "App Snapshot") drops down from the highlight bar. The App Snapshot for any given application is a window which includes commonly requested data associated with that application and links to common functionality in that application. The App Snapshot is shown at 3 in Figure 2; it includes the number of new messages ('0') and links to the two most common functions (as defined by the system designer, or selected by the user, or learned by the device) in the Messages application – 'Create Messages' and 'Enter chat room'. In Figure 3, a slightly longer App Snapshot is shown, indicating at 4 that there are '2 new SMS' messages and '1 Chat Ongoing'. Other selection processes could also be used (e.g. voice activation, softkey selection etc) to access the App Snapshot. For example, the App Snapshot may be 'called' or 'fired' by using a right scroll function (if the mobile telephone has 4-way scrolling capacity); a press and hold of the select function when an application name is highlighted; or using a right cursor key on a highlighted application name.

A highlight is available in the App Snapshot dropdown which may be scrolled in order to select a required item. When an item in the App Snapshot is selected (e.g. by being highlighted and then selected using a conventional selection technique such as pressing a right cursor), the device displays the relevant data in the application details view, or displays the relevant screen offering the relevant functionality. The required application may be automatically opened when the item in the App Snapshot is selected. The App Snapshot can therefore display data from an application and functions of that application without actually opening the application up; only once a user has selected an item in the App Snapshot associated with a given application does that application have to be opened. For example, when 'Create Messages' in an App Snapshot is selected, then the messaging application is opened up; that application does not however have to be opened up prior to that stage.

Although the term 'window' has been used to describe the drop down summary, the summary does not have to be presented within any kind of frame. Any manner of presenting the common functions offered within an application and/or data stored in that application will constitute a 'window' as such.

5

The App Snapshot dropdown may be dismissed in the following ways:

- If a timeout is used to call the App Snapshot, scrolling the highlight back to the relevant application name (i.e. back up to 'Messages' in **Figure 2** or **3**) removes the App Snapshot. Scrolling down through the App Snapshot and off the end moves the highlight to the next application in the list (i.e. to 'Contacts' if the Messages App Snapshot has been scrolled through).
- If scroll functions (e.g. right scroll) call the App Snapshot the opposite scroll function removes the snapshot.

10

15 When a user scrolls off the end of the App Snapshot, the main list from which the App Snapshot was opened de-compresses to regain the display estate that was taken up by the App Snapshot (i.e. the screen reverts to that shown **Figure 1**). If the user has scrolled up back to the application name (so that the highlight moves up), this application name stays where it was and the next main list item draws back up to abut it. If the user scrolls off the end of the App Snapshot, the highlight moves down to the next item in the main list and this item together with the highlight move up the screen to regain the App Snapshot estate (i.e. taking the place of the App Snapshot).

20

25 Another caveat regarding the main list is that when the App Snapshot opens, there will typically be one item in the main list above and below it to preserve context – (i.e. to reduce any feeling in the user of having been transported somewhere else in the UI. They have not gone anywhere yet; the App Snapshot is just showing where they could easily go to). Hence in **Figure 2**, the term 'Launcher' remains at the top of the screen, and the word 'Phone' and its associated icon remains at the bottom.

30

App Snapshots are not intended to replace notifications, but to complement them by providing non-intrusive reminders for the user, as well as rapid shortcuts to key application functionality.

5 The mobile telephone may be able to learn what functionality and/or stored data types are most likely to be of interest to a given user and which should therefore be included in a summary view to any given user. Alternatively, the user or system designer may define the kinds of functionality and/or stored data to be included in the App Snapshot for a given application. The constituency of the App Snapshot  
10 can therefore vary as determined by the user and/or system designer and/or the usage patterns of the user. The consistent goal however is for the App Snapshot to show only the most useful views and states.

15 Another possible feature is that the constituency of the App Snapshot may vary with the environment in which the mobile telephone finds itself. For example, if the telephone is Bluetooth enabled, then there may be a Bluetooth application which has associated with it a summary window which lists the other Bluetooth devices in the vicinity.

20 A further possible feature is that the constituency of the App Snapshot may vary with the actions of the user. For example, if the mobile telephone has an active Calendar application, and the user opens the App Snapshot for Contacts, then the Contacts App Snapshot may include contact information for parties in the previously or currently open Calendar application. But if the user opened the  
25 Contacts App Snapshot when the Phone application was current, then the Contacts App Snapshot may instead include contact information of the most called party, or a missed call party, or a party whose call the user is auto-replying to.

30 In a Messages view, when the highlight rests on a message entry, further information on that message becomes visible such as date and time it arrived and the first line/subject of the message. Rather than an App Snapshot opening here, the highlight expands to cover this extra information as well as the list item. It

does this here because the extra information displayed is not 'fireable' like App Snapshot items in the application switcher.

5 In the Contacts manager, the App Snapshot opens (using whatever mechanism is implemented) to display phone numbers and email addresses which may be 'fired' (i.e. a phone number is dialled, an email address is seeded into a new message). The Contacts manager can have a base view - a list of names of the people stored in a device. It opens to show usable contact details like phone numbers and email addresses for each contact so you can initiate communication from here rather than  
10 navigating further within the Contacts Manager application. For example, the contact John Smith would have a snapshot which expands to show his phone number and email address. A user can scroll to the email address and hit the select button - the display then changes to a new email form seeded with his email address and all the user need do is input some body text and hit a 'Do It' button.

15 The present invention can also be used in systems which do not have a concept of separate applications as such. Then, the snapshot views are then views of commonly used functions and/or data, selected by the system designer, user or through a machine learning process.

20 As explained above, the present invention is particularly useful for mobile telephones because of their user interface constraints. However, it may also be used in environments outside of mobile telephony. For example, desktop and laptop PCs may also benefit from the present invention. The present invention  
25 may therefore be used in any computing environment, including both keyboard and keyboard-less devices.

**CLAIMS**

1. A computing device comprising a display screen, the computing device being able to display on the screen an application summary window, the summary window comprising a limited list of (i) common functions offered within an application and/or (ii) data stored in that application.  
5
2. The computing device of Claim 1 in which selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.  
10
3. The computing device of Claim 1 or 2 in which an application launcher lists the names and/or icons of several applications and selecting a name or icon causes the summary window for that application to be opened.  
15
4. The computing device of any preceding claim in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.  
20
5. The computing device of any preceding claim in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.
- 25 6. The computing device of any preceding claim in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.
- 30 7. The computing device of any preceding claim in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

8. The computing device of any preceding claim in which opening a summary window for a given application does not result in that application being opened.
- 5 9. The computing device of any preceding claim in which the summary window is a frame which includes the name of the associated application.
10. A computing device as claimed in any preceding claim, being a mobile telephone.
- 10 11. A computing device as claimed in any preceding claim 1 – 9, being a PC.
12. A computer program which, when running on a computing device, causes the computing device to operate as a computing device as claimed in Claim 1 – 11.
- 15 13. The computer program of Claim 12, being an operating system program.

20



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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International Bureau



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- (51) International Patent Classification<sup>7</sup>: **G06F 3/00** Kennedy [GB/GB]; 61 Strahan Road, London E3 5DA (GB).
- (21) International Application Number: PCT/GB01/03387
- (22) International Filing Date: 27 July 2001 (27.07.2001) (74) Agent: **ORIGIN LIMITED**; 52 Muswell Hill Road, London N10 3JR (GB).
- (25) Filing Language: English (81) Designated States (national): CN, JP, US.
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- (30) Priority Data: 0019459.7 28 July 2000 (28.07.2000) GB
- (71) Applicant (for all designated States except US): **SYMBIAN LIMITED** [GB/GB]; Sentinel House, 16 Harcourt Street, London W1H 1DS (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MARTYN, Matthieu**
- Published:**  
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



(54) Title: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

WO 02/10893 A2



3

(57) Abstract: The present invention offers a snap-shot view which brings together, in one summary window, a limited list of common functions and commonly accessed stored data which itself can be reached directly from the main menu listing some or all applications. This yields many advantages in ease and speed of navigation, particularly on small screen devices.

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1/1

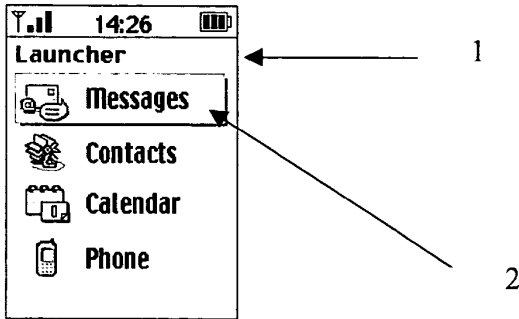


Figure 1

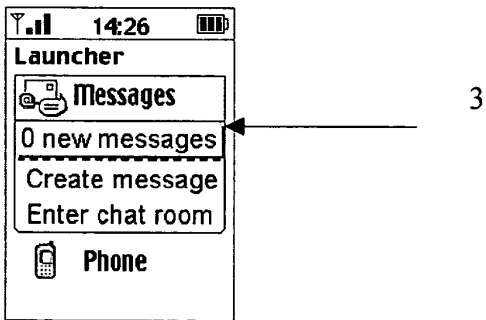


Figure 2

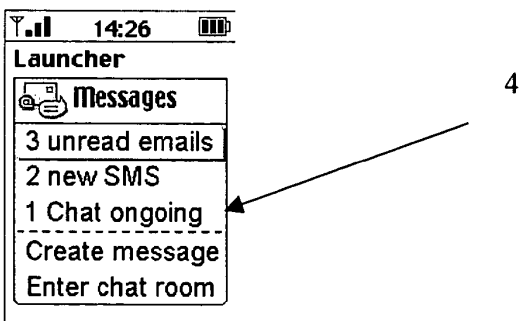


Figure 3

### Declaration and Power of Attorney For Patent Application English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor) if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

#### COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

The specification of which

(check one)

- is attached hereto.
- was filed on **JULY 27, 2001** as United States Application No. or PCT International Application Number **PCT/GB01/03387** and was amended on \_\_\_\_\_ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

<u>0019459.7</u> (Number)	<u>GB</u> (Country)	<u>28 July 2000</u> (Day/Month/Year Filed)	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

\_\_\_\_\_  
(Application Serial No.)                      \_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Application Serial No.)                      \_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Application Serial No.)                      \_\_\_\_\_  
(Filing Date)

I hereby claim the benefit under 35 U.S.C. Section 120 of any United States application(s), or Section 365© of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C.F.R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

\_\_\_\_\_  
(Application Serial No.)                      \_\_\_\_\_  
(Filing Date)                      \_\_\_\_\_  
(Status)  
(patented, pending, abandoned)

\_\_\_\_\_  
(Application Serial No.)                      \_\_\_\_\_  
(Filing Date)                      \_\_\_\_\_  
(Status)  
(patented, pending, abandoned)

\_\_\_\_\_  
(Application Serial No.)                      \_\_\_\_\_  
(Filing Date)                      \_\_\_\_\_  
(Status)  
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further 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 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

<b>Richard C. Woodbridge</b>	<b>26,423</b>
<b>Stuart H. Nissim</b>	<b>33,541</b>
<b>Thomas J. Onka</b>	<b>42,053</b>
<b>Roy Rosser</b>	<b>P53,533</b>

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**Princeton, NJ 08542-0592**

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**Richard C. Woodbridge – 609-924-3773**

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Citizenship <b>British</b>	
Post Office Address <b>61 Strahan Road, London E3 5DA, GB</b>	

Full name of second inventor, if any	
Second inventor's signature	Date
Residence	
Citizenship	
Post Office Address	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

---

APPLICANTS	Matthieu Kennedy MARTYN
TITLE	COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS
FILING DATE	Herewith
INTERNATIONAL APPLICATION NO.	PCT/GB01/03387
INTERNATIONAL FILING DATE	27 July 2001
PRIORITY DATE	28 July 2000

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ASSISTANT COMMISSIONER OF PATENTS  
WASHINGTON, D.C. 20231

**PRELIMINARY AMENDMENT**

Dear Sir:

Preliminary to a first office action on the merits of this US national phase application, please amend the specification as follows:

**In the Specification:**

page 1, below the title Please insert:

- CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the priority of PCT Application No. PCT/GB01/03387 filed July 27, 2001 and British application GB 0019459.7 filed July 28, 2000. -

page 1, line 6

Please delete "BACKGROUND TO THE INVETION" and insert:

- BACKGROUND OF THE INVENTION -

**In the Claims:**

Please cancel claims 1 through 13. Please add claims 14 - 36. There are 23 claims pending in this application.

- 14. A computing device comprising a display screen, the computing device being able to display on the screen an application summary window, in which the summary window displays a limited list of several common functions offered within an application, any item in the list being selectable to initiate the respective function, the limited list being a sub-set of all of the functions offered by a given application but not being scrollable to reveal additional functions outside of the sub-set.
- 15. The computing device of Claim 14 in which selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.
- 16. The computing device of Claim 14 in which an application launcher lists the names and/or icons of several applications and selecting a name or icon causes the summary window for that application to be opened.
- 17. The computing device of Claim 14 in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.
- 18. The computing device of Claim 14 in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.

19. The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.
20. The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.
21. The computing device of Claim 14 in which opening a summary window for a given application does not result in that application being opened.
22. The computing device of Claim 14 in which the summary window is a frame which includes the name of the associated application.
23. The computing device of Claim 14 in which the summary window further display a list of data stored in that application.
24. The computing device of Claim 14, being a mobile telephone.
25. The computing device of Claim 14, being a PC.
26. A computer program which, when running on a computing device, causes the computing device to display on a screen of the device an application summary window, in which the summary window displays a limited list of several common functions offered within an application, any item in the list being selectable to initiate the respective function, the limited list being a sub-set of all of the functions offered by a given application but not being scrollable to reveal additional functions outside of the sub-set.
27. The computer program of Claim 26, being an operating system program.



28. The computer program of Claim 26 operable such that selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.
29. The computer program of Claim 26 operable to cause the screen to display an application launcher which lists the names and/or icons of several applications, wherein selecting a name or icon causes the summary window for that application to be opened.
30. The computer program of Claim 26 in which the kinds of content of a summary window for a given application can be selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.
31. The computer program of Claim 26 which enables a user to define what functionality and/or stored data types are of interest to that user for the summary window for an application.
32. The computer program of Claim 26 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.
33. The computer program of Claim 26 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.
34. The computer program of Claim 26 in which opening a summary window for a given application does not result in that application being opened.

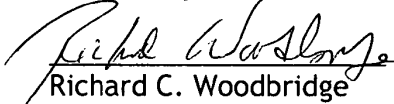
35. The computer program of Claim 26 in which the summary window is a frame which includes the name of the associated application.
36. The computer program of Claim 26 in which the summary window further displays a list of data stored in that application. --

**REMARKS**

This application is a National Stage filing of PCT application PCT/GB01/03387 filed July 27, 2001. The U.S. Patent Office is hereby requested to examine the application based upon the substitute specification and claims. Original claims 1 -13 have been deleted and replaced with claims 14 - 36 to eliminate the multiple dependencies and to place them in proper US format. If the patent examiner has any questions or comments, he is respectfully requested to contact applicant's attorney at the telephone number indicated below so that additional amendments may be added as required.

Respectfully submitted,

Matthieu Kennedy MARTYN

By   
Richard C. Woodbridge  
Attorney for Applicant  
Reg. No. 26,423

Woodbridge & Associates, P.C.  
P.O. Box 592  
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Tel (609) 924-3773  
Fax (609) 924-1811

cc: Peter Langley, Esq.  
origin

Marked Up Version of Specification

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the priority of PCT Application No. PCT/GB01/03387 filed July 27, 2001 and British application GB 0019459.7 filed July 28, 2000.

BACKGROUND OF THE INVENTION

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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International Bureau



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7 February 2002 (07.02.2002)

PCT

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- (21) International Application Number: PCT/GB01/03387
- (22) International Filing Date: 27 July 2001 (27.07.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0019459.7 28 July 2000 (28.07.2000) GB
- (71) Applicant (for all designated States except US): **SYMBIAN LIMITED** [GB/GB]; Sentinel House, 16 Harcourt Street, London W1H 1DS (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MARTYN, Matthieu**,
- (74) Agent: **ORIGIN LIMITED**; 52 Muswell Hill Road, London N10 3JR (GB).
- (81) Designated States (national): CN, JP, US.
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- Published: — with international search report
- (88) Date of publication of the international search report: 28 November 2002

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



(54) Title: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

WO 02/010893 A3



(57) Abstract: The present invention offers a snap-shot view which brings together, in one summary window, a limited list of common functions and commonly accessed stored data which itself can be reached directly from the main menu listing some or all applications. This yields many advantages in ease and speed of navigation, particularly on small screen devices.

3

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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 01/03387

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G06F3/033

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 844 553 A (PHILIPS ELECTRONICS NV) 27 May 1998 (1998-05-27) column 2, line 33 -column 3, line 2 column 3, line 45 - line 49 column 6, line 8 -column 9, line 5 figures 4-6	1-13
X	EP 0 607 731 A (IBM) 27 July 1994 (1994-07-27) column 3, line 6 -column 4, line 32 figures 2,3	1-9, 11-13
	--- -/--	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*G\* document member of the same patent family

Date of the actual completion of the international search

30 July 2002

Date of mailing of the international search report

06/08/2002

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Rydman, J

INTERNATIONAL SEARCH REPORT

International Application No  
 PCI/GB 01/03387

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"REORGANIZATION MENU HIERARCHY TO BEST FIT THE INDIVIDUAL USER" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 37, no. 2B, 1 February 1994 (1994-02-01), pages 349-350, XP000433874 ISSN: 0018-8689 page 349, paragraph 5 ---	1-4,8,9, 12,13
X	GB 2 335 822 A (NOKIA MOBILE PHONES LTD) 29 September 1999 (1999-09-29) page 10, line 7 -page 16, line 3 figures 4,5 ---	1-3,6-13
X	EP 0 891 066 A (NOKIA MOBILE PHONES LTD) 13 January 1999 (1999-01-13) abstract -----	1,12,13

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

LGE0003443

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/GB 01/03387

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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- (71) Applicant (for all designated States except US): **SYMBIAN LIMITED** [GB/GB]; Sentinel House, 16 Harcourt Street, London W1H 1DS (GB).  
*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MARTYN, Matthieu,**



(54) Title: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

WO 02/10893 A2



3

(57) Abstract: The present invention offers a snap-shot view which brings together, in one summary window, a limited list of common functions and commonly accessed stored data which itself can be reached directly from the main menu listing some or all applications. This yields many advantages in ease and speed of navigation, particularly on small screen devices.

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## COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

5

### BACKGROUND TO THE INVENTION

#### 1. Field of the Invention

This invention relates to a computing device with an improved user interface for applications. The term 'computing device' refers to any kind of device which can process and display information. The invention has specific application to mobile telephones. The term 'mobile telephone' refers to any kind of mobile device with communications capabilities and includes radio (mobile) telephones, smart phones, communicators, PDAs and wireless information devices. It includes devices able to communicate using not only mobile radio such as GSM or UMTS, but also any other kind of wireless communications system, such as Bluetooth.

#### 2. Description of the Prior Art

One of the problems facing the designers of computing devices with small screens is how to allow the user to navigate quickly and efficiently to access data and activate a desired function. Computing devices with small screens tend to need data and functionality divided into many layers or views: for example, the small display size of mobile telephones has conventionally meant that several hierarchies of functions have to be offered to a user. The interface can be thought of as having many layers, with the user having to first locate the correct top level function and then, within that function, progressively drill down (sometimes through 3 or more layers) to complete the required task. Where a mobile telephone includes several different applications (e.g. a message application, a contacts/address book application, a calendar application and a telephone application), then the user normally has to first of all locate, then start/open the required application and then may need to navigate to the required function (e.g. create a new contact entry) or cause the required stored data (e.g. display names beginning with the

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letter 'A') to be displayed. This process can seem slow, complex and difficult to learn, particularly to novice users.

5 Hence, with conventional user interfaces, a user may need to scroll around and switch views many times to find the right data/functionality. An effective user interface would ideally enable the user to readily and rapidly access the right data/functionality. Designing such an interface is however a complex human factors problem, especially for computing devices such as mobile telephones.

10 In some mobile telephones, a menu of several available options is displayed: the menu commands may then be divided into functional groups, with the most useful functional group at the top of the menu; the most useful command within that group is then placed at the top of group. In other devices, only one option is shown on the screen at any one time, making it harder for a user to appreciate the  
15 available options and therefore navigate effectively.

Some mobile telephones also offer limited shortcuts to get straight to a particular function. This usually involves memorising various keyboard input sequences, corresponding to different menu positions at different levels in the menu  
20 hierarchy. These shortcuts appeal only to a small number of expert users. Most mobile telephones also include idle screens (i.e. a display which is shown when the mobile telephone is switched on but not in use); these idle screens often carry alerting messages (e.g. "1 missed call").

25 On a more theoretical basis, a user interface typically has to demonstrate or make explicit the changing internal status of the mobile telephone as navigation proceeds. For example, to select or initiate a function (e.g. to open an address book function, enter a PIN security number or to alter the ring melody) a user has to understand (a) how to navigate to that function in order to select that function  
30 and (b) that the status of the telephone is such that the function can be selected or initiated. The technical problem of effectively enabling the user to understand this changing internal state has to date been inadequately addressed. The object of the

present invention is to provide an improved form of user interface which addresses this problem.

#### **SUMMARY OF THE PRESENT INVENTION**

5 According to a first aspect of the invention there is provided a computing device comprising a display screen, the computing device being able to display on the screen an application summary window, the summary window comprising a limited list of (i) common functions offered within an application and/or (ii) data stored in that application.

10

Hence, the present invention envisages, in one implementation, a 'snap-shot' view of an application in which the snap-shot view brings together, in one summary window, a limited list of common functions and commonly accessed stored data.

15 Preferably, where the summary window for a given application shows data or a function of interest, the user can directly select that data or function; this causes the application to open and the user to be presented with a screen in which the data or function of interest is prominent. This saves the user from navigating to the required application, opening it up, and then navigating within that application to enable the data of interest to be seen or a function of interest to be  
20 activated.

In another aspect, there is a computer program which when running on a computing device (such as a mobile telephone), enables the device to operate in  
25 accordance with the above aspects of the invention. The program may be an operating system.

#### **BRIEF DESCRIPTION OF THE FIGURES**

30

The invention will be described with reference to the accompanying Figures, in which:

Figures 1-3 are screen shots showing an implementation of the present invention.

#### DETAILED DESCRIPTION

5 The present invention offers, in one implementation, a snap-shot view which brings together, in one summary window, a limited list of common functions and commonly accessed stored data which itself can be reached directly from the main menu listing some or all applications. This yields many advantages in ease and speed of navigation, particularly on small screen devices. For example, a user can  
10 get to the summary window in just two steps – first, launch a main view which shows various applications; then, launch the appropriate summary window for the application of interest. This is far faster and easier than conventional navigation approaches. Once the summary window is launched, core data/functionality is displayed and can be accessed in more detail can typically be reached simply by  
15 selecting that data/functionality. Hence, only three steps may be needed from start up to reaching the required data/functionality; navigating from between each step is clear and straightforward.

As an example, the main view may be an Application Launcher for several  
20 applications such as ‘Messages’, ‘Contacts’, ‘Calendar’ and ‘Phone’. The Application Launcher view is then presented as a standard scrolling list of application names with appropriate application icons next to them. The list is vertical and only one application is presented per line. Standard highlight functions apply in that when the Application Launcher view is opened the highlight defaults  
25 to the first item in the list of applications. This is shown in **Figure 1**, in which the screen display 1 includes a list of applications (‘Messages’, ‘Contacts’, ‘Calendar’, and ‘Phone’), including a highlighted ‘Messages’ at 2. Alternatively, the highlight may default to the middle item in the list of applications. At this point, the user may take conventional navigation steps, such as scrolling, to move the highlight  
30 and using the available select function to navigate to the required highlighted application.

The innovative summary window functionality can be accessed as follows: should the highlight rest on the name of an application in the App Launcher for a certain amount of time (say a 1.2 second timeout), the summary window (the "App Snapshot") drops down from the highlight bar. The App Snapshot for any given application is a window which includes commonly requested data associated with that application and links to common functionality in that application. The App Snapshot is shown at 3 in Figure 2; it includes the number of new messages ('0') and links to the two most common functions (as defined by the system designer, or selected by the user, or learned by the device) in the Messages application – 'Create Messages' and 'Enter chat room'. In Figure 3, a slightly longer App Snapshot is shown, indicating at 4 that there are '2 new SMS' messages and '1 Chat Ongoing'. Other selection processes could also be used (e.g. voice activation, softkey selection etc) to access the App Snapshot. For example, the App Snapshot may be 'called' or 'fired' by using a right scroll function (if the mobile telephone has 4-way scrolling capacity); a press and hold of the select function when an application name is highlighted; or using a right cursor key on a highlighted application name.

A highlight is available in the App Snapshot dropdown which may be scrolled in order to select a required item. When an item in the App Snapshot is selected (e.g. by being highlighted and then selected using a conventional selection technique such as pressing a right cursor), the device displays the relevant data in the application details view, or displays the relevant screen offering the relevant functionality. The required application may be automatically opened when the item in the App Snapshot is selected. The App Snapshot can therefore display data from an application and functions of that application without actually opening the application up: only once a user has selected an item in the App Snapshot associated with a given application does that application have to be opened. For example, when 'Create Messages' in an App Snapshot is selected, then the messaging application is opened up; that application does not however have to be opened up prior to that stage.

Although the term 'window' has been used to describe the drop down summary, the summary does not have to be presented within any kind of frame. Any manner of presenting the common functions offered within an application and/or data stored in that application will constitute a 'window' as such.

5

The App Snapshot dropdown may be dismissed in the following ways:

- If a timeout is used to call the App Snapshot, scrolling the highlight back to the relevant application name (i.e. back up to 'Messages' in **Figure 2** or **3**) removes the App Snapshot. Scrolling down through the App Snapshot and off the end moves the highlight to the next application in the list (i.e. to 'Contacts' if the Messages App Snapshot has been scrolled through).
- If scroll functions (e.g. right scroll) call the App Snapshot the opposite scroll function removes the snapshot.

10

15 When a user scrolls off the end of the App Snapshot, the main list from which the App Snapshot was opened de-compresses to regain the display estate that was taken up by the App Snapshot (i.e. the screen reverts to that shown **Figure 1**). If the user has scrolled up back to the application name (so that the highlight moves up), this application name stays where it was and the next main list item draws back up to abut it. If the user scrolls off the end of the App Snapshot, the highlight moves down to the next item in the main list and this item together with the highlight move up the screen to regain the App Snapshot estate (i.e. taking the place of the App Snapshot).

20

25 Another caveat regarding the main list is that when the App Snapshot opens, there will typically be one item in the main list above and below it to preserve context – (i.e. to reduce any feeling in the user of having been transported somewhere else in the UI. They have not gone anywhere yet; the App Snapshot is just showing where they could easily go to). Hence in **Figure 2**, the term 'Launcher' remains at the top of the screen, and the word 'Phone' and its associated icon remains at the bottom.

30

App Snapshots are not intended to replace notifications, but to complement them by providing non-intrusive reminders for the user, as well as rapid shortcuts to key application functionality.

5 The mobile telephone may be able to learn what functionality and/or stored data types are most likely to be of interest to a given user and which should therefore be included in a summary view to any given user. Alternatively, the user or system designer may define the kinds of functionality and/or stored data to be included in the App Snapshot for a given application. The constituency of the App Snapshot  
10 can therefore vary as determined by the user and/or system designer and/or the usage patterns of the user. The consistent goal however is for the App Snapshot to show only the most useful views and states.

Another possible feature is that the constituency of the App Snapshot may vary  
15 with the environment in which the mobile telephone finds itself. For example, if the telephone is Bluetooth enabled, then there may be a Bluetooth application which has associated with it a summary window which lists the other Bluetooth devices in the vicinity.

20 A further possible feature is that the constituency of the App Snapshot may vary with the actions of the user. For example, if the mobile telephone has an active Calendar application, and the user opens the App Snapshot for Contacts, then the Contacts App Snapshot may include contact information for parties in the previously or currently open Calendar application. But if the user opened the  
25 Contacts App Snapshot when the Phone application was current, then the Contacts App Snapshot may instead include contact information of the most called party, or a missed call party, or a party whose call the user is auto-replying to.

30 In a Messages view, when the highlight rests on a message entry, further information on that message becomes visible such as date and time it arrived and the first line/subject of the message. Rather than an App Snapshot opening here, the highlight expands to cover this extra information as well as the list item. It

does this here because the extra information displayed is not 'fireable' like App Snapshot items in the application switcher.

5 In the Contacts manager, the App Snapshot opens (using whatever mechanism is implemented) to display phone numbers and email addresses which may be 'fired' (i.e. a phone number is dialled, an email address is seeded into a new message). The Contacts manager can have a base view - a list of names of the people stored in a device. It opens to show usable contact details like phone numbers and email addresses for each contact so you can initiate communication from here rather than  
10 navigating further within the Contacts Manager application. For example, the contact John Smith would have a snapshot which expands to show his phone number and email address. A user can scroll to the email address and hit the select button - the display then changes to a new email form seeded with his email address and all the user need do is input some body text and hit a 'Do It' button.

15 The present invention can also be used in systems which do not have a concept of separate applications as such. Then, the snapshot views are then views of commonly used functions and/or data, selected by the system designer, user or through a machine learning process.

20 As explained above, the present invention is particularly useful for mobile telephones because of their user interface constraints. However, it may also be used in environments outside of mobile telephony. For example, desktop and laptop PCs may also benefit from the present invention. The present invention  
25 may therefore be used in any computing environment, including both keyboard and keyboard-less devices.



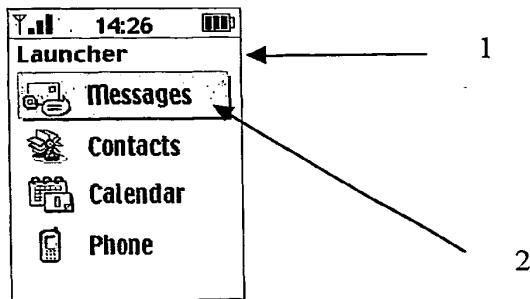
## CLAIMS

1. A computing device comprising a display screen, the computing device being able to display on the screen an application summary window, the summary window comprising a limited list of (i) common functions offered within an application and/or (ii) data stored in that application.  
5
2. The computing device of Claim 1 in which selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.  
10
3. The computing device of Claim 1 or 2 in which an application launcher lists the names and/or icons of several applications and selecting a name or icon causes the summary window for that application to be opened.  
15
4. The computing device of any preceding claim in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.  
20
5. The computing device of any preceding claim in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.
- 25 6. The computing device of any preceding claim in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.
- 30 7. The computing device of any preceding claim in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

8. The computing device of any preceding claim in which opening a summary window for a given application does not result in that application being opened.
- 5 9. The computing device of any preceding claim in which the summary window is a frame which includes the name of the associated application.
10. A computing device as claimed in any preceding claim, being a mobile telephone.
- 10 11. A computing device as claimed in any preceding claim 1 – 9, being a PC.
12. A computer program which, when running on a computing device, causes the  
15 computing device to operate as a computing device as claimed in Claim 1 – 11.
13. The computer program of Claim 12, being an operating system program.

20

1/1



5 Figure 1

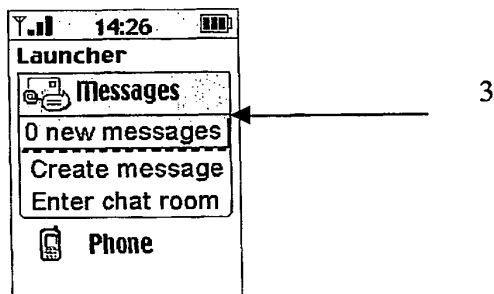


Figure 2

10

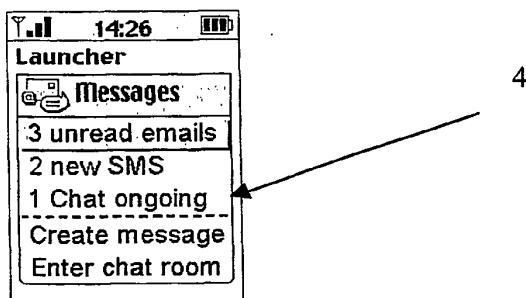


Figure 3

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference ---	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 01/ 03387	International filing date (day/month/year) 27/07/2001	(Earliest) Priority Date (day/month/year) 28/07/2000
Applicant  SYMBIAN LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.  
 It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

contained in the international application in written form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2.  **Certain claims were found unsearchable** (See Box I).

3.  **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.  
 the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.  
 the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 2

as suggested by the applicant.  None of the figures.  
 because the applicant failed to suggest a figure.  
 because this figure better characterizes the invention.

Form PCT/ISA/210 (first sheet) (July 1998)

LGE0003457

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

NOTIFICATION OF RECEIPT OF DEMAND BY COMPETENT INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

(PCT Rules 59.3(e) and 61.1(b), first sentence and Administrative Instructions, Section 601(a))

To:  <b>ORIGIN LIMITED</b> 52 Muswell Hill Road London N10 3JR GRANDE BRETAGNE		Date of mailing (day/month/year)	<b>1 5. 03. 02</b>
Applicant's or agent's file reference <b>Appln Snapshot PCT</b>		<b>IMPORTANT NOTIFICATION</b>	
International application No. <b>PCT/GB 01/ 03387</b>	International filing date (day/month/year) <b>27/07/2001</b>	Priority date (day/month/year) <b>28/07/2000</b>	
Applicant  <b>SYMBIAN LIMITED et al.</b>			

1. The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

27/02/2002

2. This date of receipt is:

the actual date of receipt of the demand by this Authority (Rule 61.1(b)).


the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).

the date on which this Authority has, in response to the invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.

3.  **ATTENTION:** That date of receipt is **AFTER** the expiration of 19 months from the priority date. Consequently, the election(s) made in the demand does (do) not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22). For details, see the *PCT Applicant's Guide, Volume II*.

(If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

Name and mailing address of the IPEA/   European Patent Office D-80298 Munich Tel. (+ 49-89) 2399-0, Tx: 523656 epmu d Fax: (+ 49-89) 2399-4465	Authorized officer  <b>CHAVONAND F H</b>  Tel. (+ 49-89) 2399-2390
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Form PCT/IPEA/402 (July 1998) P20452 (12/03/2002)

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**ATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

**(Rationalised Report according to the Notice of the President of the EPO published in the OJ11/2001)**

Applicant's or agent's file reference <b>Appln Snapshot PCT</b>	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/GB 01/ 03387</b>	International filing date (day/month/year) <b>27/07/2001</b>	Priority date (day/month/year) <b>28/07/2000</b>
International Patent Classification (IPC) or national classification and IPC <b>G06F3/00</b>		
Applicant <b>SYMBIAN LIMITED et al.</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This **REPORT** consists of a total of   2   sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consists of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand <b>27/02/2002</b>	Date of completion of this report <b>07/11/2002</b>
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0, Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer <b>NESSMANN C A</b>  Tel. (+49-89) 2399 2828



Form PCT/IPEA/409 (cover sheet) P20476 (October 2002)

LGE0003459

**I. Basis of the report**

The basis of this international preliminary examination is the application as originally filed.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability**

In light of the documents cited in the international search report, it is considered that the invention as defined in at least some of the claims does not appear to meet the criteria mentioned in Article 33(1) PCT, i.e. does not appear to be novel and/or to involve an inventive step (see international search report, in particular the documents cited X and/or Y and corresponding claim references).

ATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTICE INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

To: ORIGIN LIMITED 52 Muswell Hill Road London N10 3JR ROYAUME-UNI	RECEIVED 15 February 2002
--	------------------------------

Date of mailing (day/month/year) 07 February 2002 (07.02.02)		
Applicant's or agent's file reference <i>Application Snapshot (PCT)</i>		
International application No. PCT/GB01/03387	International filing date (day/month/year) 27 July 2001 (27.07.01)	Priority date (day/month/year) 28 July 2000 (28.07.00)
Applicant SYMBIAN LIMITED et al		

**IMPORTANT NOTICE**

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this notice:  
**US**

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:  
**CN,EP,JP**

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this notice is a copy of the international application as published by the International Bureau on 07 February 2002 (07.02.02) under No. WO 02/10893

**REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)**

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a **demand for international preliminary examination** must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

**REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))**

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and the PCT Applicant's Guide, Volume II.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  J. Zahra
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.91.11

Form PCT/IB/308 (April 2001)

4631685

LGE0003461



20/343333

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ \_\_\_\_\_

**PCT**

**CHAPTER II**

**DEMAND**

under Article 31 of the Patent Cooperation Treaty:  
 The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty.

For International Preliminary Examining Authority use only

Identification of IPEA	Date of receipt of DEMAND
------------------------	---------------------------

<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>		Applicant's or agent's file reference <b>Appln Snapshot PCT</b>
International application No. <b>PCT/GB01/03387</b>	International filing date (day/month/year) <b>27 July 2001 (27.07.01)</b>	(Earliest) Priority date (day/month/year) <b>28 July 2000 (28.07.00)</b>
Title of invention <b>Computing device with improved user interface for applications</b>		
<b>Box No. II APPLICANT(S)</b>		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  <b>Symbian Limited Sentinel House 16 Harcourt Street London W1H 1DS  GB</b>		Telephone No.:  Facsimile No.:  Teleprinter No.:
State (i.e. country) of nationality: <b>GB</b>	State (i.e. country) of residence: <b>GB</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) <b>Martyn, Matthieu Kennedy 61 Strahan Road London E3 5DA GB</b>		
State (i.e. country) of nationality: <b>GB</b>	State (i.e. country) of residence: <b>GB</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)		
State (i.e. country) of nationality:	State (i.e. country) of residence:	
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.		

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The following person is  agent  common representative  
 and  has been appointed earlier and represents the applicant(s) also for international preliminary examination.  
 is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.  
 is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)</i>  Origin Limited 52 Muswell Hill Road London N10 3JR GB	Telephone No.: +44-208-444-2148
	Facsimile No.: +44-208-444-4137
	Teleprinter No.:

Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No. IV STATEMENT CONCERNING AMENDMENTS**

The applicant wishes the international Preliminary Examining Authority\*

(i)  to start the international preliminary examination on the basis of the international application as originally filed.  
 (ii)  to take into account the amendments under Article 34 of  
 the description (amendments attached).  
 the claims (amendments attached).  
 the drawings (amendments attached).  
  
 (iii)  to take into account any amendments of the claims under Article 19 filed with the International Bureau (a copy is attached).  
 (iv)  to disregard any amendments of the claims made under Article 19 and to consider them as reversed.  
 (v)  to postpone the start of the international preliminary examination until the expiration of 20 months from the priority date unless that Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

**Box No. V ELECTION OF STATES**

The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)* except .....

*(If the applicant does not wish to elect certain eligible States, the name(s) or country code(s) of those States must be indicated above.)*

**Box No. VI CHECK LIST**

The demand is accompanied by the following documents for the purposes of international preliminary examination:		For International Preliminary Examining Authority use only	
1. amendments under Article 34		received	not received
description	: sheets	<input type="checkbox"/>	<input type="checkbox"/>
claims	: sheets	<input type="checkbox"/>	<input type="checkbox"/>
drawings	: sheets	<input type="checkbox"/>	<input type="checkbox"/>
2. letter accompanying amendments under Article 34	: sheets	<input type="checkbox"/>	<input type="checkbox"/>
3. copy of amendments under Article 19	: sheets	<input type="checkbox"/>	<input type="checkbox"/>
4. copy of statement under Article 19	: sheets	<input type="checkbox"/>	<input type="checkbox"/>
5. other (specify):	: sheets	<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

1. <input type="checkbox"/> separate signed power of attorney	4. <input checked="" type="checkbox"/> fee calculation sheet
2. <input type="checkbox"/> copy of general power of attorney	5. <input type="checkbox"/> other (specify):
3. <input type="checkbox"/> statement explaining lack of signature	

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

*Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).*

ORIGIN LIMITED  
(PETER LANGLEY; DIRECTOR)

For International Preliminary Examining Authority use only

- Date of actual receipt of DEMAND:
- Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):
- The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.
  The applicant has been informed accordingly.
- The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.
- Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

For International Bureau use only

Demand received from IPEA on:

10/343333

PATENT APPLICATION SERIAL NO. \_\_\_\_\_

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE  
FEE RECORD SHEET

02/04/2003 GFREY1 00000128 10343333

01 FC:1613	900.00	OP
02 FC:1615	54.00	OP

PTO-1556  
(5/87)

\*U.S. Government Printing Office: 2002 — 489-267/68033

LGE0003465

PATENT APPLICATION FEE DETERMINATION RECORD

Effective January 1, 2003

Application or Docket Number

10/343333

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	23 minus 20 = *	3
INDEPENDENT CLAIMS	2 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

\* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total *	Minus **	=
	Independent *	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total *	Minus **	=
	Independent *	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total *	Minus **	=
	Independent *	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	
X\$ 9=	
X42=	
+140=	
TOTAL	

RATE	FEE
BASIC FEE	900
X\$18=	54
X84=	
+280=	
TOTAL	954

SMALL ENTITY TYPE

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	-
X84=	
+280=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

**MULTIPLE DEPENDENT CLAIM  
FEE CALCULATION SHEET  
(FOR USE WITH FORM PTO-875)**

SERIAL NO.                      FILING DATE                     

APPLICANT(S) 10/343333

CLAIMS

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT	
	IND.	DEP.	IND.	DEP.	IND.	DEP.
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TOTAL IND.						
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TOTAL CLAIMS						

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	IND.	DEP.	IND.	DEP.	IND.	DEP.
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98						
99						
100						
TOTAL IND.						
TOTAL DEP.						
TOTAL CLAIMS						

\* MAY BE USED FOR ADDITIONAL CLAIMS OR AMENDMENTS

<b>TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT</b> (Under 37 CFR 1.97(b) or 1.97(c))			Docket No. 5035-133US	
In Re Application Of: <b>Martyn Matthieu Kennedy</b>				
APR 02 2003				
Serial No. 10/343,333	Filing Date January 28, 2003	Examiner	Group Art Unit	
Title: <b>COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS</b>				
Address to: <b>Assistant Commissioner for Patents</b> <b>Washington, D.C. 20231</b>				
<b>37 CFR 1.97(b)</b>				
1. <input checked="" type="checkbox"/> The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.				
<b>37 CFR 1.97(c)</b>				
2. <input type="checkbox"/> The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:				
<input type="checkbox"/> the statement specified in 37 CFR 1.97(e);				
<b>OR</b>				
<input type="checkbox"/> the fee set forth in 37 CFR 1.17(p).				

P10A/REV02

LGE0003468

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
5035-133US

In Re Application: **Martyn Matthieu Kennedy**

APR 02 2003

Serial No.  
10/343,333

Filing Date  
January 28, 2003

Examiner

Group-Art Unit

**COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS**

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- A check in the amount of \_\_\_\_\_ is attached.
- The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 23-3040 as described below. A duplicate copy of this sheet is enclosed.
- Charge the amount of \_\_\_\_\_
- Credit any overpayment.
- Charge any additional fee required.

**Certificate of Transmission by Facsimile\***

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (F

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(Date)

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Signature

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Typed or Printed Name of Person Signing Certificate

**Certificate of Mailing by First Class Mail**

I certify that this document and fee is being deposited Mar 27, 2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

\_\_\_\_\_  
Signature of Person Mailing Correspondence

Richard C. Woodbridge

\_\_\_\_\_  
Typed or Printed Name of Person Mailing Certificate

\*This certificate may only be used if paying by deposit account.

\_\_\_\_\_  
Signature

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609-924-1811 fax

Dated: Mar 27, 2003

cc: Origin

P10A/REV02

LGE0003469



**INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

APR 02 2003



ATTY DOCKET NO.  
5035-133US

SERIAL NO.  
10/343,333

FILING  
28 January 2003

GROUP

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
A		6,456,841B1	09/24/2002	Tomimori			
B		6,144,863	11/07/2000	Charron			

**FOREIGN PATENT DOCUMENTS**

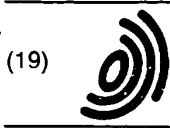
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
C		EP 0 891 066 A2	13/01/1999	European				
D		EP 0 844 553 A1	27/05/1998	European				
E		EP 0 607 731 A2	27/07/1994	European				
F		GB 2 335 822 A	25/03/1998	UK				

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	G	IBM Technical Disclosure Bulletin; Vol. 37; No. 02B; February 1994 "Reorganizing Menu Hierachy to Best Fit the Individual User"; Pages 349 - 350

EXAMINER	DATE CONSIDERED
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Eur päisches Patentamt  
 European Patent Office  
 Offi urop n des brev ts



(11) EP 0 891 066 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication: 13.01.1999 Bulletin 1999/02 (51) Int Cl.6: H04M 1/00, G06F 3/033

(21) Application number: 98660070.8

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(84) Designated Contracting States:  
 AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
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 Designated Extension States:  
 AL LT LV MK RO SI

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(30) Priority: 09.07.1997 FI 972908

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(54) Adaptable menu-controlled man-machine interface.

(57) In an electronic device, such as a mobile station equipped with a small display (41), a certain menu of the most used functions is used to control the device. In this menu, either the user collects the most often used functions ( $B_1 - B_N$ ) or the device selects the functions automatically ( $A_1 - A_N$ ), depending on which functions

the user uses most often. This menu is located high in the hierarchy of menus, so that opening the menu and selecting the functions included in it can be done quickly and easily. The functions can contain links to the functions which according to the frequency array (45e) are most often used after a certain function.

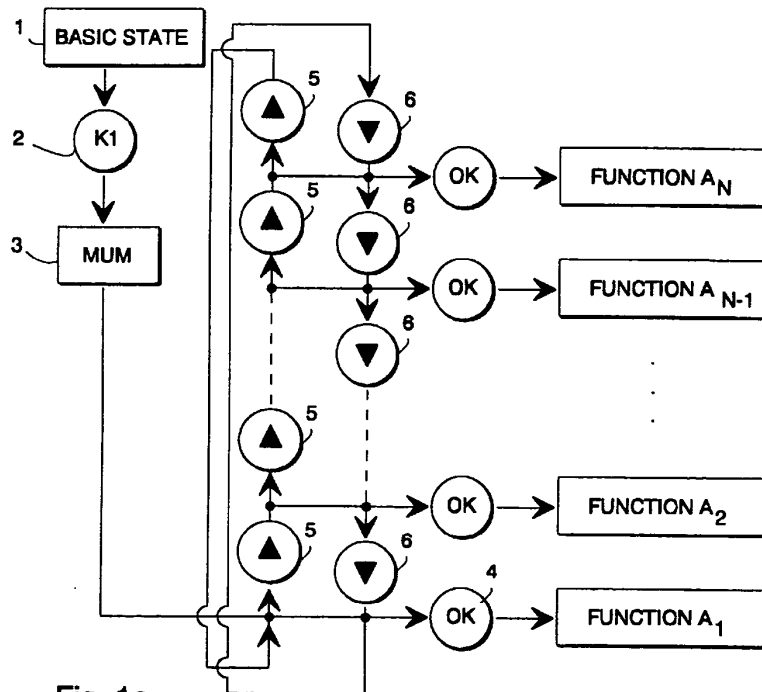


Fig. 1a

EP 0 891 066 A2

LGE0003471

**D**escription

The invention relates to the interface between a user and an electronic device, the so called man-machine interface in general, and to adapting a menu-based interface to the personal requirements of the user in particular. The most advantageous application of the invention is in mobile phones with a display, but it can also be used in other electronic devices.

Many modern electronic devices are designed as menu-controlled. In the following, a digital mobile station with a display is described by way of example, but with certain generalizations, the description also pertains to many other kinds of devices. Because the display of the mobile station is small, it can only display a very small menu with a limited number of options at a time. In order to implement a wide range of control possibilities, the menus are divided into several levels, forming a hierarchical tree structure. On the upper level, the user selects a certain group of functions, whereby a number of lower level operations belonging to the selected group is shown on the display. The most common way of expressing the selection is to use certain control and function keys. In this patent application, the entity formed by the display, menus and keys is called the Man Machine Interface (MMI).

A typical MMI of a mobile station and the tree structure of its menus is known, for example, from the operation manual of the Nokia 2110 mobile station published by Nokia Mobile Phones. The user can perform a large number of different selections controlling the operation of the mobile station by using three or four control keys. However, the large number of consecutive keystrokes needed is often a problem. As an example, we can imagine a situation in which the user wants to change the alarm sound from an ordinary alarm to a mere beep. The user presses the Menu key and then selects the option corresponding to the alarm sound by arrow keys. With a certain Start key, the user can display the various possibilities for the alarm sound, from which he selects the desired alternative by pressing the arrow keys. To confirm the selection, the OK and Exit keystrokes are still needed. Seven keystrokes, including all the four control keys, are needed to complete the entire procedure. Because of meetings or other occasions where a different telephone behaviour is required, the user may have to change the alarm sound several times during the day, in which case he may find the long series of keystrokes frustrating.

A few prior art solutions to the problem described above are known. For example, the user of the Nokia 2110 mobile station can memorize the numbers of the most frequently used menus and functions, whereby he can get the desired function on the display by pressing the Menu key and selecting the correct number with the numeric keys of the mobile station. However, this solution requires memorizing numbers with as much as five digits, which is not suitable for all users. The Motorola

Micro T.A.C 8400 has a corresponding system, in which the numbers of the nine functions regarded as the most common have only one digit, whereby the user selects the desired function by pressing a certain arrow key and one numeric key 1-9. Motorola's solution does not help a user who often needs a function which was not regarded as common by the manufacturer, who has therefore not added it to the quick selections. Besides, even memorizing one-digit numbers correctly is difficult for many users.

The patent application GB-2 293 951 discloses a mobile station and a menu system for using it, consisting of branches equipped with titles, subtitles, sub-subtitles and selections. The user can either browse a short menu, which contains only some of the titles, or a long menu, which contains all the titles. By using certain series of keystrokes, the user can also move titles from the short menu to the long menu or vice versa. In this solution, the user must be able to use complicated key commands of the mobile station.

The patent specification FI-89652 and a corresponding United States patent US-5 267 308 describe a telephone memo, in which the mobile station sorts the telephone numbers in an order according to the frequency of use. However, in order to start using the telephone memo, the user must use menu commands as usually, and so this solution does not make the problem of the present menu-based MMI any easier. Some methods for adapting menu-based interfaces to the user's requirements are known from software intended for personal computers. In many programs of the Microsoft company, a certain menu includes a list of recently accessed files, whereby the user can open the file by selecting its name from the menu. However, the frequently used function or file is not always the same as the one that was used last; if the user handles dozens of files a day, only a few of which are needed often, their names may be dropped from the list when the user accesses other files. It is also a known technique that the user can remove commands he regards as unnecessary from the program menus and add new commands based on self-made macros. However, the large display of a personal computer allows using large menus with many different alternatives, and thus the known solutions cannot as such be applied to devices such as mobile stations, which have a small display with a modest resolution. Even if the user of a mobile station can add the desired commands to a certain menu of the prior art kind, he would nevertheless either have to browse the menu with the function keys to find the desired option or remember the number of the option added, whereby no real advantage compared to the prior art would be achieved.

The object of this invention is to present a method by which the user can select the desired options by means of a menu-based MMI quickly and easily. It is also an object of the invention to present a method by which the quick use of a menu-based interface can be (\*) Registered trademark of the Motorola Company

modified to correspond to the different needs of the users. In addition, it is an object of the invention to present an electronic device, in which the control method according to the invention is used.

The objects of the invention are achieved by adding to the menu-based MMI a special menu of the often needed functions and by selecting the options of this menu according to the user's needs.

The method according to the invention is characterized in that as a response to the user's operation, certain options intended to be the most easily selected are collected to a certain menu.

The invention also relates to a man-machine interface for controlling the electronic device. The interface according to the invention is characterized in that it comprises a certain menu for showing the options which the user wants to be the most easily selected, whereby the options contained in the menu are determined on the basis of the user's operation.

According to the invention, a new menu branch is added on a suitable level of the branched, tree-like menu structure, preferably on the upmost level, for the most frequently used functions. Most advantageously, the new menu is located high up in the hierarchical menu structure, so that opening or displaying it does not require many keystrokes. Alternatively, it is possible to specify a certain simple key command, by which the user can always display the menu of the most frequently used functions regardless of the level on which the menu is located and which other part of the menu structure is displayed at the beginning. In the following, the menu of the frequently used functions is called the MUM (Most Used Menu) for shortness.

In order that the MUM would be useful for the user in all situations, the user must be able to influence the contents of the menu. A MUM according to the invention can either be updated automatically, whereby the mobile station or other device in question itself records the frequency of various operations and produces the selections corresponding to the most often used functions to the menu according to the invention, or the user can determine the contents of the menu by using key commands. Various compromises can also be formed of these two alternatives, whereby the user, for example, selects the functions contained in the menu. but the device arranges the menu so that the most often used function is always the first in the menu. The MMI can also include a function in which the user selects which procedure he wants to use for maintaining a MUM menu according to the invention.

In the embodiment of the invention in which the user selects the functions to be included in the menu according to the invention by key commands, the functions selected need not be the most often needed functions. The user can also place a rarely needed function in the MUM for it to be available as easily as possible when quick action is required.

In the following, the invention will be described in

more detail with reference to the exemplary embodiments and the appended drawings, in which

Figure 1a shows the proceeding of an embodiment of the method according to the invention as a state diagram,

Figure 1b shows the maintenance of the MUM in the case of Figure 1a,

Figure 2a shows the maintenance of the MUM in another case,

Figure 2b shows the proceeding of a second embodiment of the method according to the invention as a state diagram,

Figure 3 shows the proceeding of a third embodiment of the method according to the invention as a state diagram, and

Figure 4 shows a block diagram of a mobile station according to the invention.

In the figures, the same reference numbers are used for corresponding parts.

Figure 1a shows a state diagram, in which rectangles are used to depict the states of the controlled electronic device and circles to depict the key commands by which the state is changed. With regard to the invention, it does not matter in which state the user starts using the Most Used Menu. The text "basic state" used to describe state 1 in the figure means this starting state. At point 2, the user gives a certain key command K1, such as a long press of the Menu key. By this command, the device is switched to the MUM state 3, in which it shows the user the alternatives in the Most Used Menu. To advantage, the display of the device has a cursor or other pointer to indicate which of the menu alternatives has been selected. In state 3, the cursor indicates the first function of the MUM, which is here called function A<sub>1</sub>, and which the user can perform by pressing the OK key at point 4. The other functions of the menu from A<sub>2</sub> to A<sub>N</sub> require moving the cursor at the desired function by pressing the up and down arrow keys 5, 6 before pressing the OK key. Using the menu by the arrow and OK keys is a technique known as such. The invention does not limit the number of functions in the Most Used Menu.

Figure 1b shows the formation and maintenance of the Most Used Menu in the case that the device which is the object of the invention performs the procedures relating to the formation and maintenance automatically. Forming a user-specific menu for use according to the invention requires that a certain capacity is reserved for this in the memory of the device. In an embodiment in which the device updates the Most Used Menu automatically, the memory of the device must also contain an array which describes the frequency of the functions

performed through the menus. Always when the user selects a certain function from a menu, as in block 10, the device adds an entry to the frequency array at the function as in block 11 and updates the Most Used Menu, or fills it with the most used functions in the array, as in block 12. In this embodiment, the device only records the lowest level functions of the menus and not the menus or submenus, because otherwise the upper level menus would be automatically the most often used; they are used frequently when the user moves through them to the lower menu levels. The functions from  $A_1$  to  $A_N$  are here ordered according to the frequency of use.

For saving calculation capacity, filling the Most Used Menu, the operation of block 12, can be conditional so that it takes place only when as a result of an entry made in the frequency array, the observed frequency of use of a function in the array becomes higher than a certain threshold value, for instance three times a day. Operation according to block 12 can also take place at a specified time, whereby the device can update the Most Used Menu once in an hour, for example.

In an embodiment, in which the user determines the contents of the MUM manually, adding a certain operation to the array takes place according to Figure 2a, for instance. The user retrieves the text indicating the desired function according to block 20, in a well known manner. After this, the user gives a certain key command according to block 21, such as a long press of the OK key. The device can add the function to the MUM directly or ask the user to confirm this by pressing the OK key again, as in block 22. After the confirm command, the device adds the function to the MUM, as in block 23. In an embodiment based on manual maintenance, the function to be added to the MUM can be a function of the lowest level of the menus or a certain menu or submenu. The order of the functions  $B_1 - B_N$  is determined by which function the user wants to be the most easily accessible (with the fewest keystrokes) ( $B_1$ ), which the next easily accessible ( $B_2$ ) and so forth. From Figure 2b it can easily be seen how many keystrokes are required by each function.

One simple way by which the user can determine a certain place for a desired function in a manually maintained Most Used Menu, is using the numeric keys instead of or in addition to the OK key when the user accepts the desired function to the Most Used Menu. It can be assumed, for instance, that the user wants a certain function to appear as the second in the MUM (function  $B_2$  in Figure 2b). When the user selects this function according to Figure 2a, he gives a long press of the OK key at block 21 and presses the numeric key 2 at block 22. It is also possible to present a combined embodiment, in which the user selects which functions should be included in the MUM, but the terminal device determines the mutual order of the functions automatically so that the most frequently used of the functions selected by the user is the first in the MUM, the next frequently

used is the second and so forth.

In the preferred embodiment of the invention, removing functions from the MUM is done in the same way as adding functions, as shown in Figure 2a. The user retrieves the MUM to the display, moves the cursor at the function which he wants to remove, and gives a long press of the OK key. The device can remove the function from the MUM directly or at first ask the user to press the OK key again for confirmation. If the Most Used Menu is full, but the user tries to add one more function to it, the device can either notify that the menu is full and ask the user to remove a function, or it can automatically remove the last or least used function from the menu.

Figure 3 shows a combination of the embodiments described above. The functions from  $A_1$  to  $A_N$  are functions of the MUM, which the device has included in the MUM according to their frequency of use, like in the case of Figures 1a and 1b above. The functions from  $B_1$  to  $B_N$  have been added to the MUM manually by the user in the same way as in the case of Figures 2a and 2b. When the user has reached the MUM state 3, he can start function  $A_1$  by pressing the OK key or browse the list of A functions or B functions by pressing the arrow keys 5 and 6. Like in Figures 1a and 2b, the functions of the MUM form a loop-like list, which means that after pressing a certain arrow key consecutively as many times as there are functions in the MUM, the user is at the same point in the menu as before the keystrokes on the arrow key. There is no advantage in keeping a certain function in the MUM in more than one place. If, for instance, the user has selected function  $B_4$  in the MUM and uses it so often that the device includes it in the A functions, such as function  $A_2$ , it is advantageous to skip this function in the B group, whereby one press of the arrow key moves the cursor in the MUM directly from  $B_3$  to  $B_5$  or vice versa. It is also possible to present an embodiment as in Figure 3, in which the device does not include in the A functions any of the functions selected by the user manually in the MUM as a B function.

The functions of the Most Used Menu can also contain links to other functions, particularly in an embodiment in which the device automatically measures the frequency of occurrence of various functions. It is namely typical of certain situations that the user must make many consecutive changes of operation. For example, a mobile phone user who is leaving a meeting often wants to switch the sound alarm and key sounds on and the call transfer off. The most often used of these functions is switching the sound alarm, and thus it is likely to be included in the MUM with the highest priority. When the user accepts the switching on of the sound alarm by pressing the OK key, the mobile station detects that in a certain frequency array modelling the sequence of functions, the switching of the sound alarm is often followed by the switching of the key sounds. Thus the device automatically moves the cursor in the display to indicate the switching of the key sounds, whereby the user only needs to press the OK key again to select this func-

tion or press Ignore, if he does not want to switch the key sounds on.

In order to form a frequency array for modelling the linked function groups or the sequence of functions, the device continuously follows the functions selected by the user and saves information on which operations the user selects consecutively within a certain short period of time, for instance during one minute. It is then not expected that the user would select certain functions always in the same order. For example, the consecutive switching off of the key sounds and sound alarm and the activation of the call transfer in this order are statistically, as a function group, the same as the switching off of the sound alarm followed by the switching off of the key sounds and the activation of the call transfer in this order, within the specified period.

It is common that the user frequently needs functions of the ON-OFF type in his device, such as switching the call transfer on and off. Because the switching on is always at some next stage followed by switching off and vice versa, the user uses both of these functions equally often. Thus the Most Used Menu should have two alternatives with the same frequency: switching on and off. However, this is not practical, because when the call transfer is switched on, the only possible function is switching it off and vice versa. Therefore it is recommended to arrange the MUM according to the invention practically so that the device examines which of the ON-OFF states is in use and shows in the Most Used Menu only the alternative for changing the state. There can also be more than two mutually exclusive alternatives, that is, there may be the alternatives A, B, C and D available for a function, and only one of them, a function or a group of functions, is possible at a time.

Figure 4 shows a simplified block diagram of a mobile station. The microphone 40, the transmission block 46, the duplexing block 47, the reception block 43 and the speaker 49 can be of the prior art kind, as well as the display 41, in which the mobile station shows the user the function menus, among other things, and the keypad 42, by which the user gives the mobile station key commands. The control block 44 is preferably a well known microprocessor, which controls the operation of the mobile station by executing a program saved in the memory 45. The memory 45 can be an integral part of the mobile station, or it can be partly located in a separate storage medium, such as a SIM card (Subscriber Identity Module). The lower part of the Figure shows the contents of the memory 45 in more detail. The block 45a contains the names and/or other identification codes of the functions which form the Most Used Menu at a time. The block 45b is an array, which contains the values describing the frequency of use of each function. On the basis of the values contained in block 45b, the mobile station can maintain the MUM automatically. The block 45c contains information of mutually exclusive functions, of which it is practical to have only one or a certain smaller group at a time in the Most Used Menu. Using

the block 45 takes place so that always before showing the Most Used Menu or a part of in the display, the mobile station checks the functions of the MUM one by one by comparing them to the contents of the block 45c. If it appears for a function that in the present situation it is not possible or practical to show it in the MUM, it is left out of it for the time being.

Block 45d contains the whole menu structure, that is, all the functions of all the menus and information of their mutual relations (which functions belong to which menu etc.). This is the necessary basis that enables showing menus to users. Block 45e contains the links between consecutive operations, or in other words, information of the groups or chains of operations which the user often uses in connection with one another. The block 45e can be arranged in two parts (not shown in the figure) so that the first part only comprises those function groups which include functions used at least three times in connection with one another during the last two weeks, for example; these are mutually linked functions, whereby as a result of performing one of them, the mobile station immediately offers the user the next function of the same group. The second part can comprise those function groups which include functions used once or twice in connection with one another during the last two weeks; these groups are "candidates" for the first part, and they are moved to it if the detected frequency of use of the functions in connection with one another grows high enough. The block 45f contains, in a known manner, a program code by which the control block 44 controls the operation of the mobile station. Naturally, the memory 45 can also contain a lot of other information.

Many modern, portable communication devices provide various program applications which are not related to the actual use of the mobile station in the same way as the properties mentioned above, such as setting the sound alarm and the key sounds and using the call transfer. Examples of such applications include an internet connection, teleshopping, telebanking, calendar and games. The invention can also be applied in connection with the program applications, either so that commands relating to the applications are in the same Most Used Menu as the menu options relating to the normal use of the mobile station, or so that there are separate Most Used Menus for the program applications and the normal use properties. Combining into the same menu can take place directly, whereby all the functions and application commands are in the menu in an absolute order by the frequency of use or in an user-specified order, or, for example, ordered by the principle shown in Figure 2b, whereby pressing an "up" arrow key from the "topmost" function of the MUM (function A<sub>1</sub> in Figure 2b) is browsing towards the program applications, and pressing a "down" arrow key is browsing towards the functions related to the normal use properties.

The invention provides an advantage as compared to the prior art, because the number of keystrokes or

other commands required by the most frequent functions in controlling the electronic device is reduced. In addition, the degree of necessity and generality of the functions can be personally decided by each user. It is clear to a person skilled in the art that the key commands named above, such as pressing the Menu and OK keys, are used by way of example and do not limit the invention. Many different methods of giving commands are known in the technology of devices controlled by key commands, which methods can be applied in the case of the present invention. In addition, there are voice-controlled electronic devices, to which the invention can also be applied, whereby the opening of the Most Used Menu is performed by a certain speech command, and moving the cursor in the menu and selecting a certain option are performed by other speech commands.

#### Claims

1. A man-machine interface for controlling an electronic device, which interface comprises menus for showing alternative functions to the user, **characterized** in that it comprises a certain menu for showing the options ( $A_1 - A_N, B_1 - B_N$ ) which should be the most easily selected, whereby the options contained in said menu are determined on the basis of the user's operation.
2. A method for implementing the interaction between the electronic device and its user in an electronic device, in which method options are shown in the form of menus, **characterized** in that as a response to the user's operation, certain options intended to be the most easily selected ( $A_1 - A_N, B_1 - B_N$ ) are collected to a certain menu.
3. A method according to Claim 2, **characterized** in that said options intended to be the most easily selected are determined as a response to commands given by the user for selecting certain options (21, 22).
4. A method according to Claim 2, **characterized** in that said options intended to be the most easily selected are determined on the basis of how often the user selects each option (11).
5. A method according to Claim 3 or 4, **characterized** in that while the options intended to be the most easily selected comprise at least two mutually exclusive options, said menu shows only those of the mutually exclusive options which are possible to perform in the state of operation of the device at the moment.
6. A method according to any one of the Claims 2 to 5, **characterized** in that as a response to a com-

mand given by the user, which command corresponds to selecting a certain first option from said menu, the next option shown by the device is the one which on the basis of previous use is the most likely to follow said first option.

7. A mobile station arranged to show function options as a response to control commands, **characterized** in that it is equipped (45a) to specify a certain group of most often used functions and to display (41) these functions in a certain menu of the most used functions as a response to a certain first control command.
8. A mobile station according to Claim 7, **characterized** in that it is also equipped to perceive that certain functions are repeatedly used in connection with one another, and to form linked groups of these functions (45c), whereby as a response to the user's selection and execution of a function belonging to a linked function group, the mobile station offers the user another function belonging to the same linked function group.
9. A mobile station according to Claim 7, **characterized** in that in the case of mutually exclusive functions (45c), it shows in said menu of the most used functions only the functions that can be performed in the state of operation at the moment.

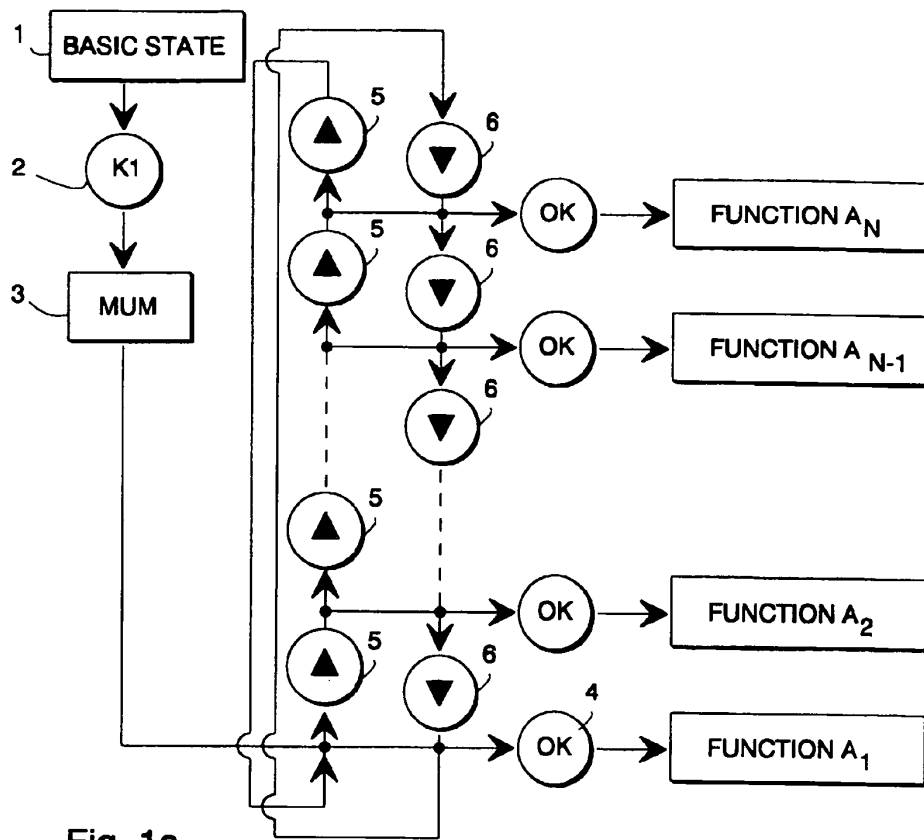


Fig. 1a

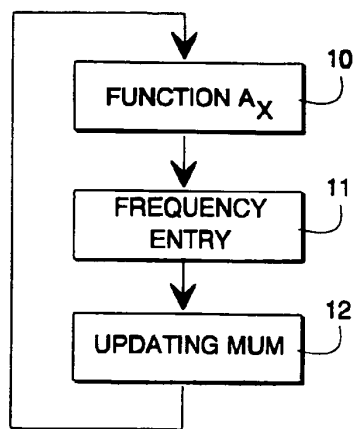


Fig. 1b



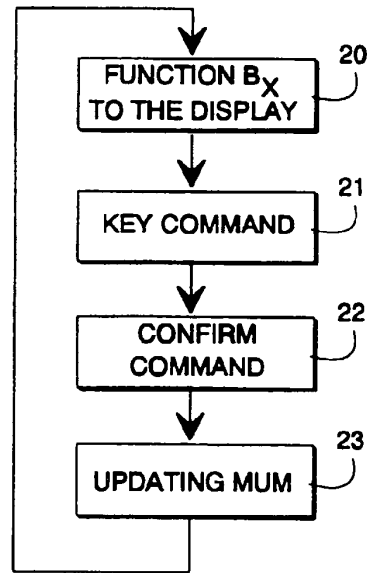


Fig. 2a

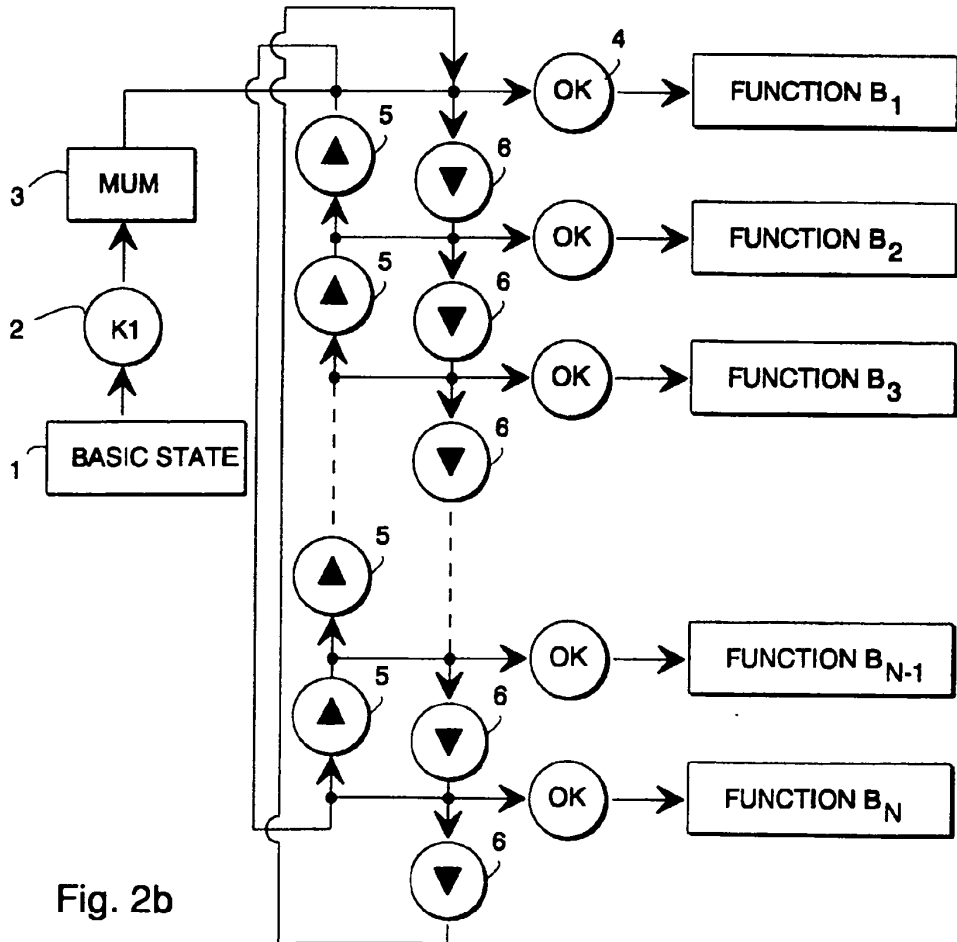


Fig. 2b

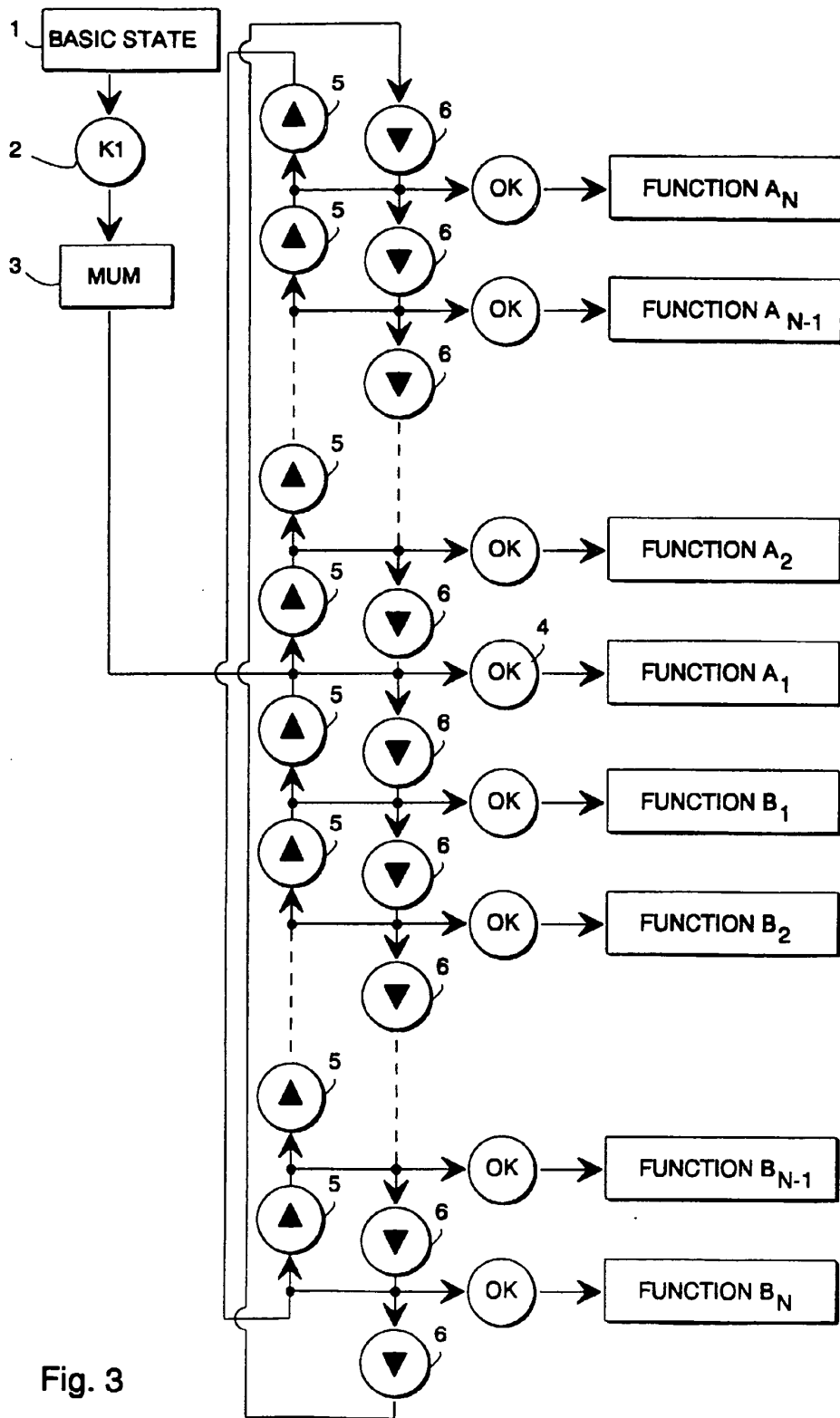


Fig. 3

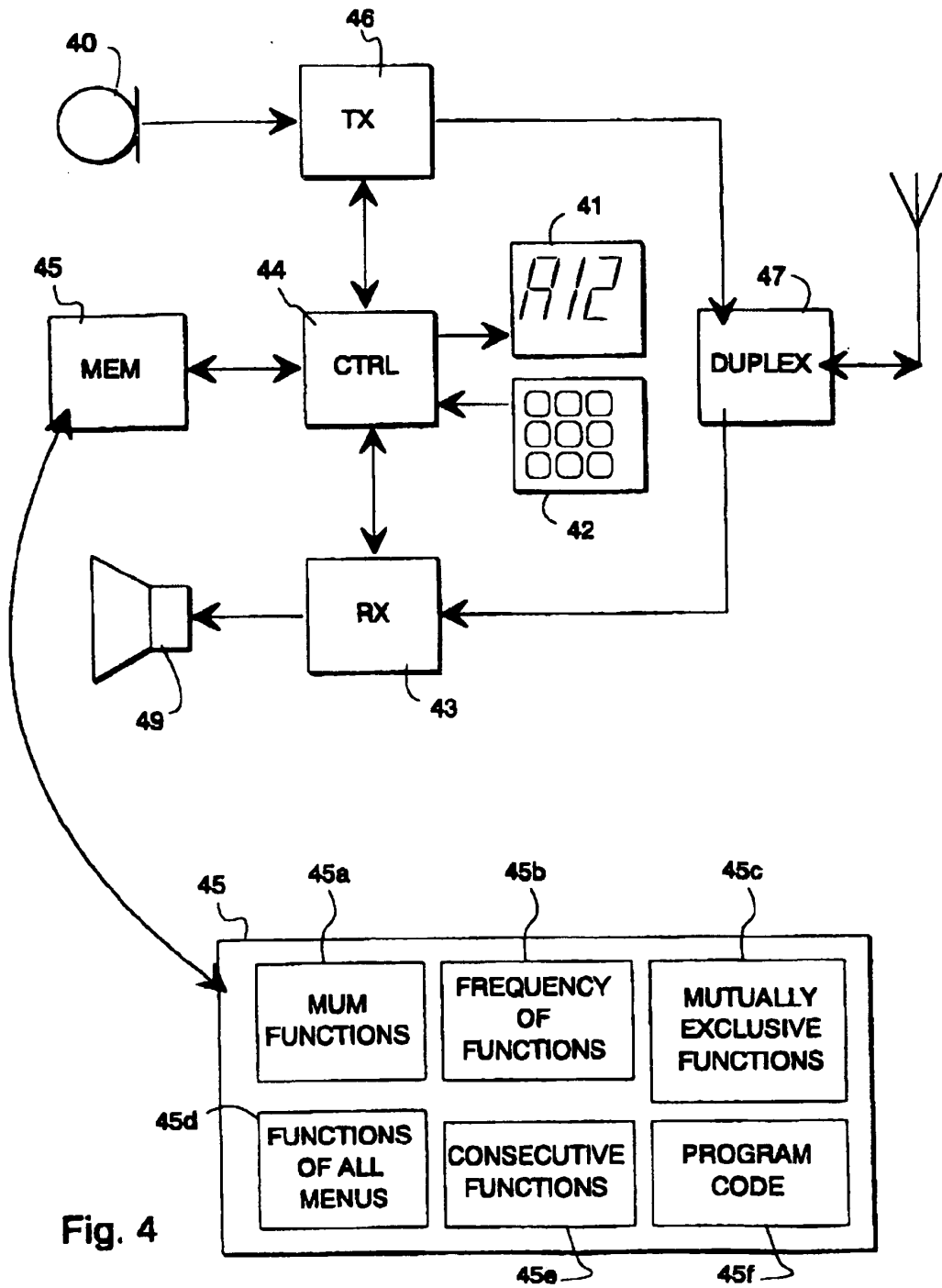


Fig. 4

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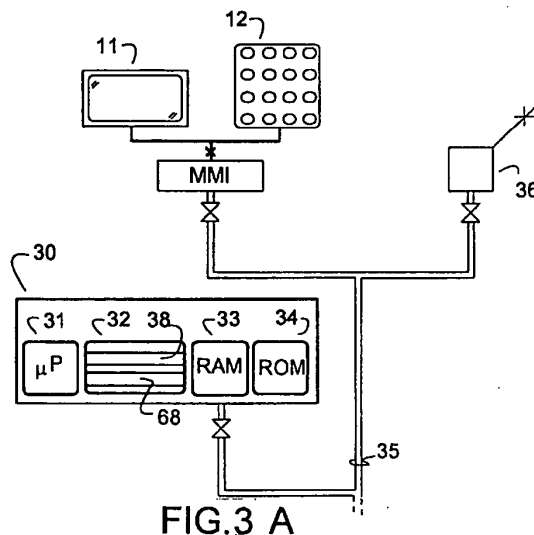
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(54) **Dispositif électronique à écran comportant un menu susceptible d'être personnalisé par un utilisateur**

(57) L'invention concerne un dispositif électronique à écran doté d'une mémoire (34) pour stocker un menu composé d'éléments susceptibles d'être paramétrés par un utilisateur, d'un dispositif d'affichage (11) pour afficher ledit menu à l'écran et d'un dispositif de personnalisation (31, 32) pour personnaliser l'affichage dudit menu. Il comporte un dispositif de verrouillage/déverrouillage (38) pour mettre en position verrouillé/déverrouillé des paramètres du menu, et un dispositif d'affichage/masquage (11, 30, 35) coopérant avec le dispositif de verrouillage/déverrouillage (38) pour afficher (resp. masquer) sélectivement les éléments de menu dont les paramètres sont mis en position "déverrouillé" (resp. "verrouillé").

Applications : téléphones portables et tous dispositifs à écrans dotés d'un menu.



EP 0 844 553 A1

## Description

L'invention concerne un appareil électronique à écran, comportant :

- une mémoire pour stocker un menu composé d'éléments de menu susceptibles d'être paramétrés par un utilisateur,
- un dispositif d'affichage pour afficher ledit menu à l'écran,
- un dispositif de personnalisation pour personnaliser l'affichage dudit menu.

Les appareils électroniques à écran actuels, notamment les téléphones fixes ou portables, offrent un choix de fonctions plus en plus grand à l'utilisateur. Par exemple, de nombreux radiotéléphones proposent des fonctions de messagerie vocale, transfert d'appel, réglage de nombreux paramètres tels que le niveau sonore, le type de sonnerie, l'activation d'un signal lumineux pour indiquer la décharge de la batterie, etc.

Cependant, la plupart des utilisateurs de ces appareils n'utilisent fréquemment qu'un très petit nombre seulement de leurs fonctions. D'une part, parce qu'il n'ont pas besoin de toutes les fonctions proposées ou que l'effort à fournir pour étudier la documentation de l'appareil leur semble relativement important par rapport au bénéfice qu'ils en attendent, d'autre part, parce que le prix d'abonnement à certaines de ces fonctions est jugé excessif. Ainsi, de nombreux utilisateurs s'abonnent au minimum de fonctions nécessaires à leur utilisation personnelle bien qu'elles apparaissent toutes au menu de leur appareil. Par conséquent, ces menus standards se sont révélés inadaptés à une utilisation quotidienne et efficace pour la plupart des utilisateurs.

Des recherches ont donc été faites dans le but de faciliter l'utilisation des menus de ces appareils destinés à un large public.

Un système de menu définissable par l'utilisateur est connu du brevet français publié sous le numéro 2731578. Il permet à l'utilisateur de créer son propre menu en sélectionnant dans un menu standard, les éléments dont il a le plus souvent besoin, pour les recopier dans un menu personnel. L'utilisateur pressé pourra donc accéder presque directement à la fonction qu'il recherche au moyen de son menu personnel.

Un tel système de menu, bien qu'il propose à l'utilisateur un menu de taille réduite donc plus vite exploitable présente néanmoins des inconvénients.

La création du menu personnel prévoyant de réserver dans la mémoire de l'appareil la place nécessaire au stockage dudit menu, constitue un premier inconvénient. En effet ces éléments, recopiés du menu standard, sont redondants et augmentent la quantité de mémoire nécessaire à l'implantation du menu. Or, la capacité de stockage des appareils de ce type étant limitée, la taille du menu personnel se trouve de ce fait également limitée. Enfin, et cela constitue un deuxième

inconvénient, la programmation de ce menu personnel n'est pas aisée pour un public non expérimenté qui recherche avant tout une utilisation simple de son appareil. De plus, en cas de prêt de l'appareil, son propriétaire peut retrouver son menu personnel modifié, et devoir le reprogrammer.

Un objet de la présente invention est de remédier dans une large mesure à ces inconvénients et de prévoir un appareil électronique à écran, comportant un système de menu susceptible d'être configuré selon les besoins de l'utilisateur, économique en terme de place mémoire et dont la manipulation est simple et rapide.

Pour cela, un appareil du genre mentionné dans le préambule est caractérisé en ce que ledit dispositif de personnalisation comporte :

- un dispositif de verrouillage/déverrouillage pour mettre en position verrouillé/déverrouillé des paramètres des éléments de menu,
- un dispositif d'affichage/masquage coopérant avec le dispositif de verrouillage/déverrouillage pour afficher (resp. masquer) sélectivement les éléments de menu dont les paramètres sont mis en position "déverrouillé" (resp. "verrouillé").

Selon une caractéristique importante de l'invention, un appareil du type mentionné ci-dessus, comportant de plus, un clavier muni d'un ensemble de touches, est remarquable en ce qu'il est prévu un premier mode d'utilisation dudit appareil, appelé mode manuel, dans lequel le dispositif de verrouillage/déverrouillage est commandé à partir d'au moins une touche dudit clavier.

Dans ce mode manuel, l'utilisateur configure lui-même le menu standard selon ses propres besoins à l'aide du clavier de son appareil.

Selon une autre caractéristique importante de l'invention, un appareil du type déjà mentionné est remarquable en ce qu'il est prévu un deuxième mode d'utilisation dudit appareil, appelé mode automatique, dans lequel un dispositif de comptage statistique du taux d'utilisation des éléments de menu coopère avec le dispositif de verrouillage/déverrouillage pour mettre automatiquement les paramètres desdits éléments de menu les plus (resp. moins) fréquemment utilisés en position "déverrouillé" (resp. "verrouillé").

Dans ce mode automatique, ledit menu est automatiquement configuré en fonction de la fréquence d'utilisation de chaque élément de menu. Ce dispositif de comptage peut avantageusement comporter des moyens de calcul utilisant une logique floue comme le décrit la demande de brevet français déposée le 6 mars 1996 par la demanderesse sous le numéro 9602813. Ainsi, un appareil du type déjà mentionné est caractérisé en ce que le dispositif de comptage statistique comporte :

- des moyens de modélisation du comportement de l'utilisateur lorsqu'il parcourt le menu,

- des moyens d'adaptation du menu pour tenir compte dudit comportement.

Selon l'invention, l'affectation d'un paramètre d'un élément du menu standard ainsi que la décision d'afficher ledit élément à l'écran sont effectués, en mode manuel, en une seule opération. En mode automatique, les éléments déjà paramétrés les moins souvent utilisés sont automatiquement supprimés à l'affichage du menu standard. Dans les deux modes, l'utilisateur dispose d'un menu raccourci, dans lequel il est plus facile de trouver la fonction qu'il utilise fréquemment.

Ce système de menu permet également d'optimiser l'utilisation de la mémoire puisqu'on ne fait pas de recopies. Les éléments à afficher sont sélectionnés en fonction : des choix de l'utilisateur en mode manuel, de la fréquence d'utilisation de ces éléments en mode automatique. De plus, l'invention permet, de façon très avantageuse, de restreindre le nombre d'éléments du menu afin d'interdire l'accès de certaines fonctions à un utilisateur occasionnel ou bien l'empêcher de modifier les paramètres verrouillés.

La description suivante, faite en regard des dessins ci-annexés, le tout donné à titre d'exemple non limitatif fera bien comprendre comment l'invention peut être réalisée.

La figure 1 représente un exemple d'appareil électronique à écran selon l'invention.

La figure 2 représente une vue de face de l'appareil représenté à la figure 1.

La figure 3 représente :

- en A, un schéma synoptique illustrant un circuit de l'appareil représenté à la figure 1,
- en B, une table de données illustrant à un instant donné le contenu de la mémoire 32 faisant partie du circuit représenté en A.

Les figures 4 et 5 représentent un organigramme illustrant le fonctionnement du système de menu personnalisé, dans deux configurations différentes.

La figure 6 représente en A et B deux tables de données illustrant le contenu de la mémoire 32 à deux instants différents.

L'appareil électronique représenté à la figure 1 est un radiotéléphone, mais le système de menu personnalisé peut être appliqué à tout autre appareil électronique doté d'un processeur, d'une mémoire, d'un système d'affichage et d'un clavier.

Le radiotéléphone représenté à la figure 1 comporte un boîtier 10 renfermant des circuits électroniques dont celui représenté à la figure 2, un écran 11, un clavier 12, un haut-parleur 13, un microphone 14, un dispositif d'émission/réception (non représenté) coopérant avec une antenne 15 pour échanger des signaux radioélectriques avec un site de base 16. Le clavier 12 comporte deux sortes de touches : des touches permanentes qui ont la même fonction quelque soit le contexte

de menu dans lequel on se trouve et des touches contextuelles dont la fonction dépend de l'élément de menu affiché. Cette fonction est affichée à l'écran au dessus de la touche à actionner.

Dans un mode de réalisation préféré de l'invention représenté à la figure 2, le clavier 12 comporte deux touches contextuelles 20 et 21 dont l'une, 20 a trois fonctions et l'autre, 21 deux. La touche 20 permet selon le contexte d'accéder au menu par la fonction MENU, de sortir d'un programme par la fonction SORTIE et d'invalider un choix par la fonction NON. La touche 21 permet de sélectionner un élément de menu par la fonction OK et de valider un choix par la fonction OUI. Les autres touches sont permanentes. Outre des touches alphanumériques 22, une touche de correction 23 et une touche de recomposition automatique du dernier numéro appelé 24, le clavier comporte une touche de direction 25 (une flèche vers le haut et une flèche vers le bas) qui permet de faire défiler les éléments de menu à l'écran 11. Les touches contextuelles OK, OUI et NON permettent également d'actionner un dispositif de verrouillage/déverrouillage représenté à la figure 3 pour mettre en position "verrouillé" ou "déverrouillé" le paramètre de l'élément de menu préalablement sélectionné à l'aide de la touche OK.

La figure 3 montre le fonctionnement des dispositifs de verrouillage/déverrouillage et d'affichage/masquage. Du point de vue matériel, ces dispositifs utilisent les mêmes composants électroniques, ce qui explique qu'ils soient représentés en A par un seul schéma. Celui-ci montre comment coopèrent l'organe de commande 30 et l'interface homme/machine MMI (Man Machine Interface) composée de l'écran 11 et du clavier 12, pour mettre en oeuvre lesdits dispositifs de personnalisation du menu.

L'organe de commande 30 est composé d'un processeur 31, d'une mémoire morte programmable électriquement effaçable 32, de type EEPROM (Electrically Erasable Programmable Read Only Memory), d'une mémoire vive à accès aléatoire 33 de type RAM (Random Access Memory) et d'une mémoire morte 34 de type ROM (Read Only Memory). Le programme principal de fonctionnement de l'appareil ainsi que les différents éléments de menu sont stockés en mémoire morte 34. La mémoire vive 33 est utilisée en parallèle avec la mémoire morte 34, pour positionner les variables utiles.

Les données paramétriques des éléments de menu sont stockés en EEPROM 32 pour être modifiées par l'utilisateur. Un réseau de bus 35 contient un bus d'interruptions pour transmettre les signaux du clavier 12 vers le processeur 31 et un bus série du type IIC (Inter Integrated Circuit) destiné aux signaux transitant entre le processeur 31, l'EEPROM 32 et l'écran 11. Le bus IIC dirige sélectivement les données venant du processeur 31 vers leur destinataire, EEPROM 32 ou écran 11, selon qu'elles doivent être mises en mémoire ou affichées. Par l'intermédiaire du réseau de bus de données

35, l'organe de commande 30 lit les signaux d'entrée du clavier 12 pour lire les données des différentes mémoires 32, 33 et 34, les afficher sur l'écran 11 et éventuellement écrire des données en EEPROM 32.

Un dispositif d'émission/réception 36 coopère avec les dispositifs précédemment décrits pour relier l'utilisateur au réseau de radiotéléphonie.

Les données de l'EEPROM 32, correspondant aux paramètres des éléments de menu que l'utilisateur peut modifier sont stockées dans une table 38 représentée en B à la figure 3. Ces paramètres sont référencés dans la colonne de gauche à l'aide d'un numéro. Un drapeau pouvant prendre quatre valeurs est associé à chaque paramètre numéroté et est mis à jour dans la colonne de droite par le processeur 31 en fonction des informations qu'il reçoit du clavier 11. Chaque drapeau émet un signal destiné au processeur 31 pour déclencher le dispositif d'affichage/masquage. Les quatre valeurs de drapeaux disponibles correspondent aux quatre états dans lesquels l'utilisateur peut placer les paramètres des éléments de son menu. En B sur la figure 3 :

- "Y" représente l'état "valide/verrouillé",
- "N" représente l'état "invalide/verrouillé",
- "y" représente l'état "valide/déverrouillé",
- "n" représente l'état "invalide/déverrouillé".

Les drapeaux "y" et "n" émettent un signal pour afficher à l'écran 11, les paramètres auxquels ils sont affectés. Sur l'exemple représenté, seuls les paramètres des deuxième et quatrième lignes de la table 38 seront affichés à l'écran 11.

Le fonctionnement en mode manuel du dispositif de personnalisation pour paramétrer des éléments du menu va maintenant être décrit depuis l'entrée des données au clavier 12 jusqu'à leur affichage à l'écran 11 en référence aux figures 2 et 3. La description s'appuiera sur des exemples générant des écritures dans la table 38 de la mémoire 32.

Selon un mode de réalisation préféré de l'invention, une pression de certaines touches du clavier 11, (les touches 20 et 21 représentées à la figure 2) déclenche une temporisation, synchronisée sur l'horloge interne du processeur 31, qui permet audit processeur 31 d'évaluer le temps de pression de ladite touche 20 ou 21 et d'émettre le signal adéquat pour exécuter la routine correspondant à la commande du clavier 11.

Par exemple, une longue (resp. courte) pression de la touche contextuelle OUI (touche 21) du clavier 12 indique au processeur 31 qu'il doit affecter le drapeau "Y" (resp. "y") dans la table 38, au paramètre correspondant à celui affiché à l'écran 11, pour le mettre en position "verrouillé" (resp. "déverrouillé"). De même, une longue (resp. courte) pression de la touche NON (touche 20) lui indique qu'il doit affecter le drapeau "N" (resp. "n") dans la table 38, au paramètre correspondant à celui affiché à l'écran 11, pour le mettre en position "verrouillé" (resp. "déverrouillé").

Comme indiqué ci-dessus, l'organe 30 commande également le dispositif d'affichage/masquage coopérant avec le dispositif de verrouillage/déverrouillage par le bus de données IIC, pour masquer (resp. afficher) à l'écran 11, les éléments de menu dont les paramètres sont verrouillés (resp. déverrouillés), c'est-à-dire affectés des drapeaux "Y" ou "N" (resp. "y" ou "n").

Les organigrammes des figures 4 et 5 illustrent sur un exemple de menu, le fonctionnement, en mode manuel, du dispositif de personnalisation.

L'exemple représenté à la figure 4 comporte des sous menus dont la liste des éléments est représentée par des pavés identifiés par des icônes symbolisant leur fonction. Les pavés 40, 50, 60, 70 et 80 désignent des sous menus comportant chacun plusieurs éléments à paramétrer. Le pavé 40 désigne le menu pour paramétrer les options de configuration de l'interface MMI. Le pavé 50 désigne le menu de choix du réseau de l'opérateur de radiotéléphonie. Le pavé 60 désigne le menu de contrôle d'appels permettant de visualiser des données statistiques, par exemple la durée moyenne d'un appel, etc. Le pavé 70 désigne le menu de sécurité permettant de limiter l'accès de son téléphone aux tiers, par exemple en exigeant un code secret pour passer des appels.

Les flèches  $\wedge$  et  $\vee$  de part et d'autre des traits fin continus indiquent que le processeur 31 affiche de façon séquentielle les éléments du menu lorsque l'utilisateur actionne la touche de direction 25 représentée à la figure 2. Les flèches en gras indiquent que l'élément de menu représenté par le pavé pointé, est sélectionné par la touche contextuelle OK du clavier 12. Les flèches en trait interrompu indiquent que le processeur 31 peut à tout moment revenir à l'élément d'entête de sous menu par la touche contextuelle SORTIE.

Selon l'élément 401 à 404 du menu 40, sélectionné par la touche OK du clavier, l'utilisateur peut choisir le type de sonnerie de son appareil (401) ou son volume (402), illuminer les touches du clavier (403) ou les rendre sonores lorsqu'on les presse (404). Sur l'exemple de la figure 4, l'élément 404 a été sélectionné. Pour simplifier, on considère que cet élément n'a qu'un paramètre. Le processeur 31 affiche alors un écran de menu représenté par le pavé de décision 500 pour proposer à l'utilisateur quatre possibilités "y", "n", "Y" et "N" pour paramétrer l'élément 404, correspondant aux quatre valeurs de drapeaux disponibles dans la table 38. Le processeur 31 affecte le drapeau "y" (resp. "n") lorsque la touche contextuelle OUI (resp. NON) est actionnée par une pression courte (flèche à une pointe), et le drapeau "Y" (resp. "N") lorsque la touche contextuelle OUI (resp. NON) est actionnée par une pression longue (flèche à double pointe).

S'il modifie souvent le paramètre de l'élément 404, l'utilisateur peut trouver commode de ne pas le verrouiller pour que ledit élément reste toujours visible au menu de son appareil. Dans ce cas il effectue une pression courte de la touche contextuelle OUI (resp. NON) pour commander au processeur 31 d'affecter le dra-

peau "y" (resp. "n") au paramètre de l'élément 404 dans la table 38 pour rendre sonore (resp. silencieux) le clavier de son téléphone en position "déverrouillé". Le drapeau "y" (resp. "n") génère alors un signal pour commander au processeur 31 d'actionner le dispositif d'affichage/masquage pour que le paramètre de l'élément 404 soit affiché au menu.

En revanche, si l'utilisateur modifie rarement ce paramètre ou souhaite empêcher un tiers de le modifier il peut le verrouiller pour qu'il ne figure pas au menu de l'appareil. Il effectue alors une pression longue de la touche contextuelle OUI (resp. NON) pour commander au processeur 31 d'affecter audit paramètre le drapeau "Y" (resp. "N") qui génère alors un signal commandant au processeur 31 d'actionner le dispositif d'affichage/masquage pour que ledit paramètre ne soit pas affiché au menu.

La figure 5 détaille les opérations du processeur 31 pour faire réapparaître au menu l'élément 404 et éventuellement le déverrouiller. Pour cela, le sous menu 40, dans lequel se trouve l'élément verrouillé 404 doit être préalablement sélectionné à l'aide du clavier, puis une longue pression de la touche OK, représentée par une flèche à double pointe en trait gras, suivie de courtes pressions des touches de défilement commande au processeur 31 d'afficher de façon séquentielle tous les éléments du menu standard parmi lesquels figure l'élément recherché. Le processus permettant ensuite d'activer/désactiver en position verrouillé/déverrouillé ledit élément est identique à celui décrit en référence à la figure 4. En revanche, une courte pression de la touche OK, lorsqu'un sous menu est sélectionné, permet d'afficher uniquement les éléments non verrouillés.

Un mode de réalisation du dispositif de personnalisation du menu en mode automatique va maintenant être décrit.

La figure 6 illustre le fonctionnement du dispositif de comptage statistique du taux d'utilisation des différents éléments de menu coopérant avec le dispositif de verrouillage/déverrouillage (illustré par la table 38 à la figure 3) pour mettre automatiquement les paramètres desdits éléments de menu les plus (resp. moins) fréquemment utilisés en position "déverrouillé" (resp. "verrouillé"). Les données de l'EEPROM 32 correspondant auxdits paramètres sont stockées dans une table 68 et référencées dans la colonne de gauche comme dans la table 38 représentée en B à la figure 3.

Un compteur est associé à chaque paramètre de la table 68, également référencé dans la table 38 sous le même numéro. Il est positionné en standard à une valeur initiale maximum lors de la première mise sous tension de l'appareil et est initialisé périodiquement par le processeur 31. Entre deux initialisations successives, la valeur du compteur diminue d'une unité sous l'action du processeur 31, chaque fois que celui-ci reçoit du clavier 12, une commande pour modifier dans la table 38 la valeur du drapeau symbolisant l'état du paramètre associé audit compteur.

La mise hors tension de l'appareil coupant l'alimentation du processeur arrête donc tous les mécanismes synchronisés sur son horloge. En particulier, les compteurs sont gelés jusqu'à la prochaine mise sous tension de l'appareil. Si la valeur du compteur ne s'annule pas entre deux initialisations, le processeur 31 place son paramètre en position "verrouillé", c'est-à-dire qu'il affecte dans la table 38, le drapeau "Y" à la place du drapeau "y" ou le drapeau "N" à la place du drapeau "n". En revanche, si la valeur du compteur devient nulle, le processeur 31 place le paramètre associé en position "déverrouillé" en affectant dans la table 38, le drapeau "y" à la place du drapeau "Y" et le drapeau "n" à la place du drapeau "N". Si le bon drapeau est déjà positionné, le processeur 31 ne fait rien. On peut envisager que la valeur maximum du compteur ainsi que sa période d'initialisation puissent être déterminées par l'utilisateur à l'aide de son clavier.

Comme en mode manuel, le dispositif d'affichage/masquage est également mis en oeuvre en mode automatique par le processeur 31 pour masquer à l'écran les paramètres verrouillés.

Le contenu des tables 38 et 68 est illustré à deux instants t1 et t2, respectivement en A et B, sur un exemple de cinq paramètres d'éléments de menu. L'horloge du processeur 31 constituant la référence temporelle, les instants t1 et t2 sont espacés d'un seul top d'horloge. Une initialisation des compteurs se produit à l'instant t2.

A l'instant t1, précédant juste ladite initialisation, les compteurs des trois premiers paramètres des tables 38 et 68 sont à une valeur non nulle tandis que ceux des deux derniers sont à zéro. Les trois premiers paramètres ont donc été moins souvent modifiés par l'utilisateur que les deux derniers.

A l'instant t2, tous les compteurs de la table 68 sont initialisés à la valeur maximum, prise égale à 100 dans l'exemple illustré à la figure. Le processeur 31 place donc le paramètre de la deuxième ligne de la table 38 dont le compteur indique de rares modifications, en position "verrouillé" ("Y" remplace "y"), et celui de la cinquième ligne dont le compteur indique des modifications fréquentes, en position "déverrouillé" ("y" remplace "Y"). En revanche, il laisse les autres paramètres dans l'état qu'ils avaient à l'instant t1 qui correspond à leur fréquence réelle d'utilisation.

Ainsi, on a décrit un appareil électronique à écran comportant un menu destiné à être facilement personnalisé pour s'adapter à l'usage quotidien ou occasionnel de tous types d'utilisateurs.

Bien entendu, l'invention n'est pas limitée aux modes de réalisations qui viennent d'être décrits et représentés. D'autres variantes de réalisation de l'invention apparaîtront à l'homme ou la femme de l'art par exemple en ce qui concerne le fonctionnement du clavier, de l'affichage ou du dispositif de verrouillage/déverrouillage. En particulier, le dispositif de comptage statistique du taux d'utilisation des éléments



de menu pour mettre en oeuvre le mode automatique peut être modifié pour prendre en compte d'autres données notamment concernant le comportement de l'utilisateur lorsqu'il parcourt le menu. Toutes ces variantes ne sortant pas du cadre de l'invention.

appareil est un radiotéléphone.

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### Revendications

1. Appareil électronique à écran, comportant :
  - une mémoire pour stocker un menu composé d'éléments de menu susceptibles d'être paramétrés par un utilisateur,
  - un dispositif d'affichage pour afficher ledit menu à l'écran,
  - un dispositif de personnalisation pour personnaliser l'affichage dudit menu, caractérisé en ce que ledit dispositif de personnalisation comporte :
    - un dispositif de verrouillage/déverrouillage pour mettre en position verrouillé/déverrouillé des paramètres des éléments de menu,
    - un dispositif d'affichage/masquage coopérant avec le dispositif de verrouillage/déverrouillage pour afficher (resp. masquer) sélectivement les éléments de menu dont les paramètres sont mis en position "déverrouillé" (resp. "verrouillé").
2. Appareil selon la revendication 1 comportant, de plus, un clavier muni d'un ensemble de touches, caractérisé en ce qu'il est prévu un premier mode d'utilisation dudit appareil, appelé mode manuel, dans lequel le dispositif de verrouillage/déverrouillage est commandé à partir d'au moins une touche dudit clavier.
3. Appareil selon l'une des revendications 1 ou 2, caractérisé en ce qu'il est prévu un deuxième mode d'utilisation dudit appareil, appelé mode automatique, dans lequel un dispositif de comptage statistique du taux d'utilisation des éléments de menu coopère avec le dispositif de verrouillage/déverrouillage pour mettre automatiquement les paramètres desdits éléments de menu les plus (resp. moins) fréquemment utilisés en position "déverrouillé" (resp. "verrouillé").
4. Appareil selon la revendication 3, caractérisé en ce que le dispositif de comptage statistique comporte :
  - des moyens de modélisation du comportement de l'utilisateur lorsqu'il parcourt le menu,
  - des moyens d'adaptation dudit menu pour tenir compte dudit comportement.
5. Appareil électronique à écran selon l'une des revendications 1 à 4, caractérisé en ce que ledit

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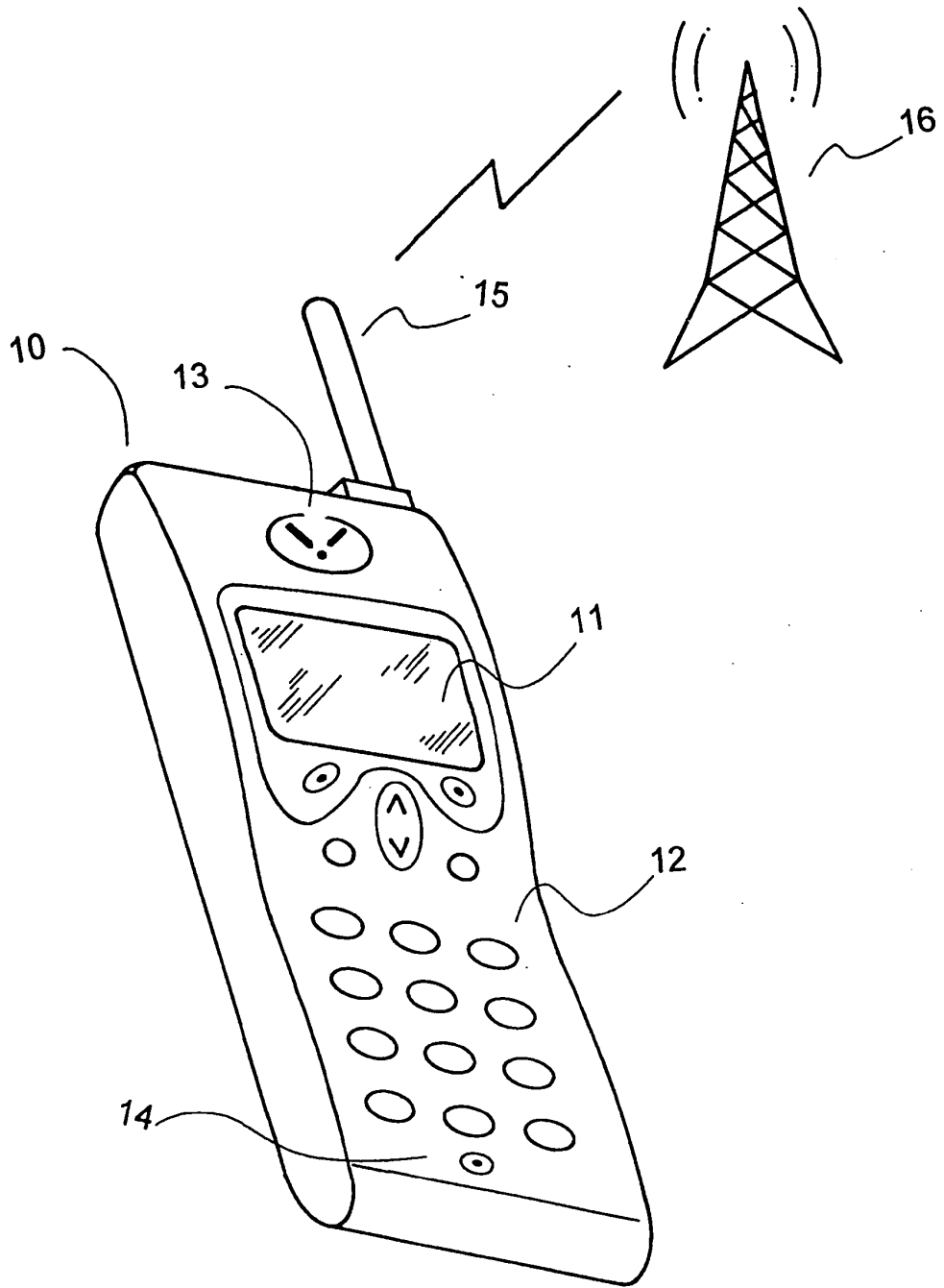


FIG.1

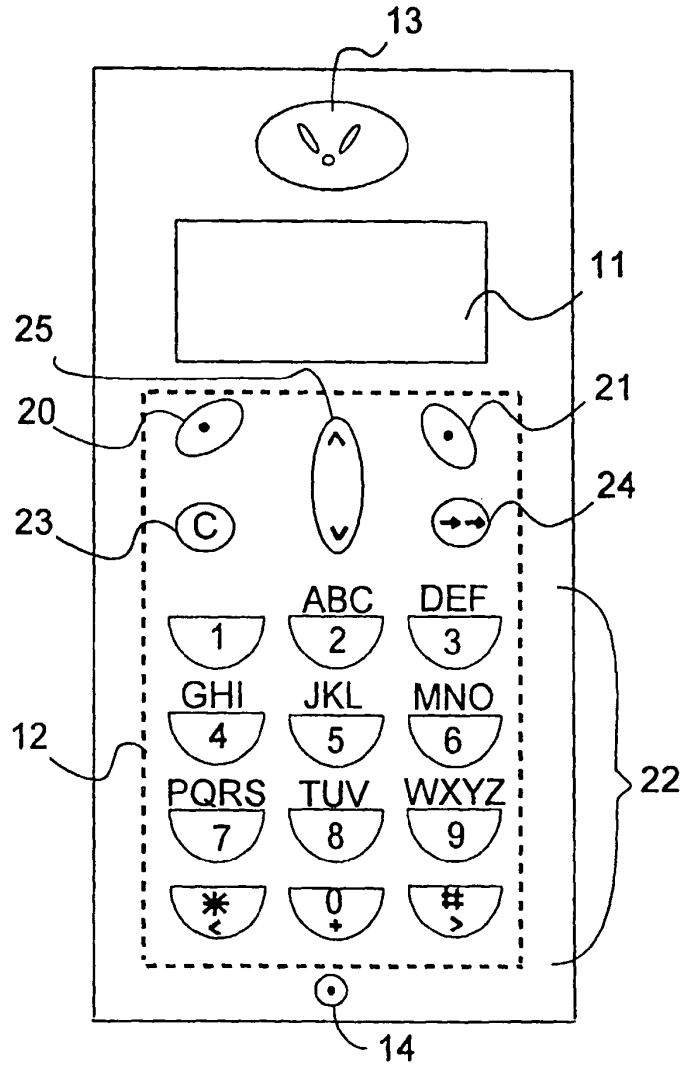
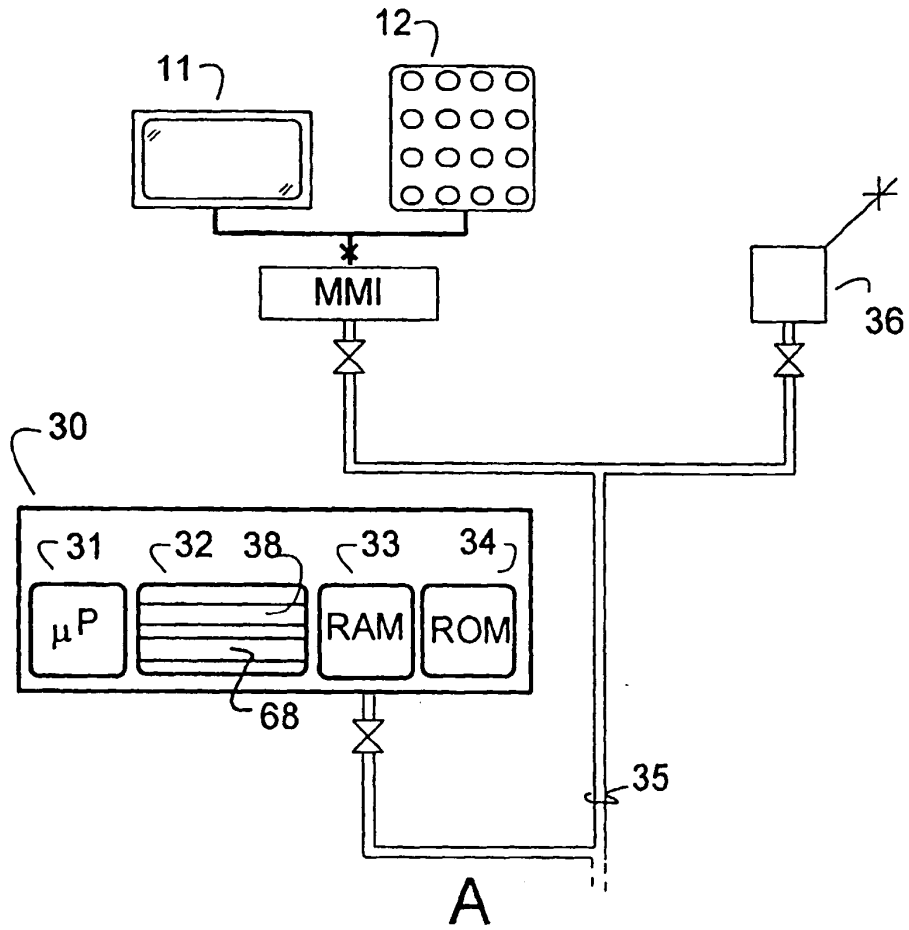


FIG.2



38

1	"Y"
2	"y"
3	"N"
4	"n"
5	"Y"

B

FIG.3

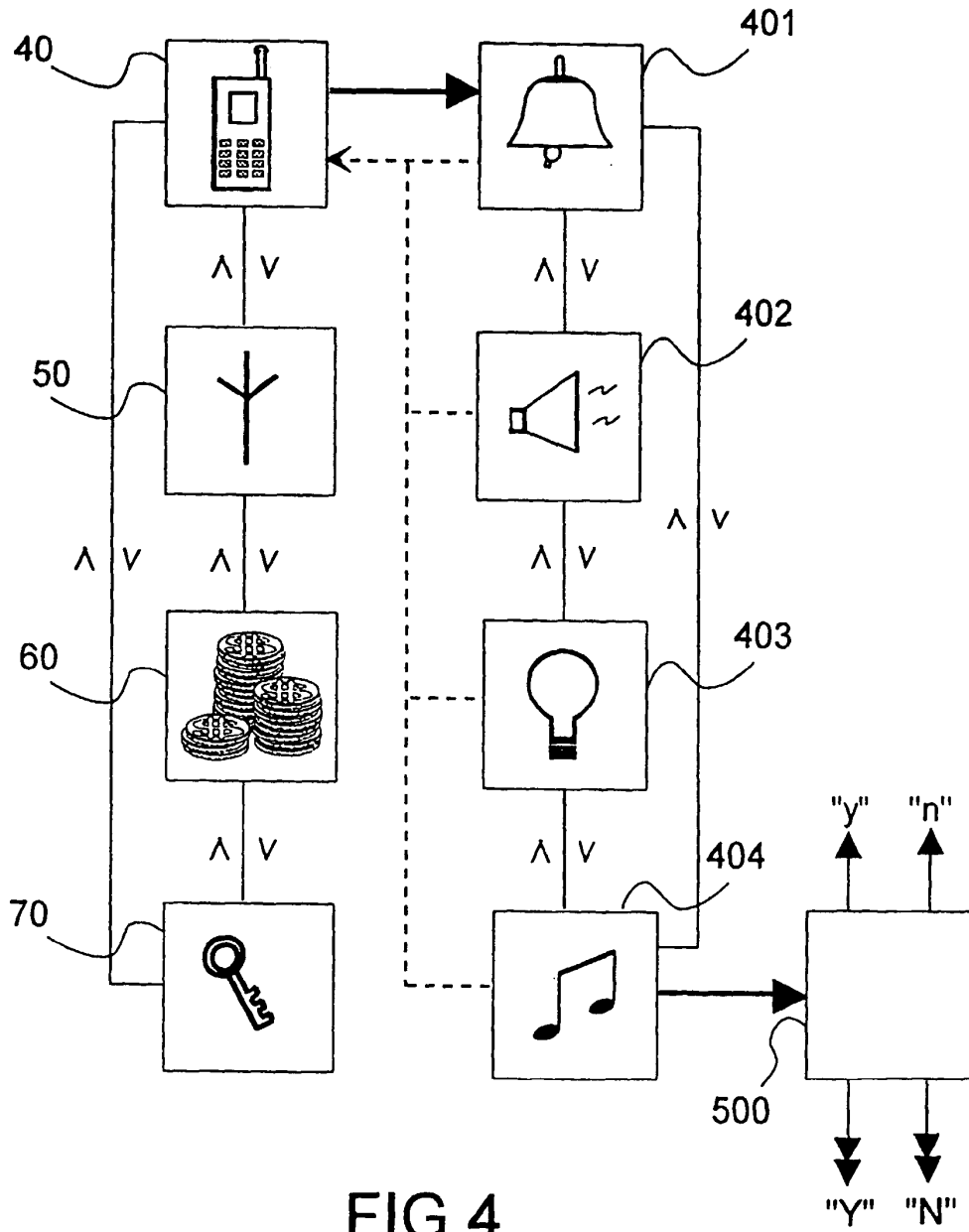


FIG. 4

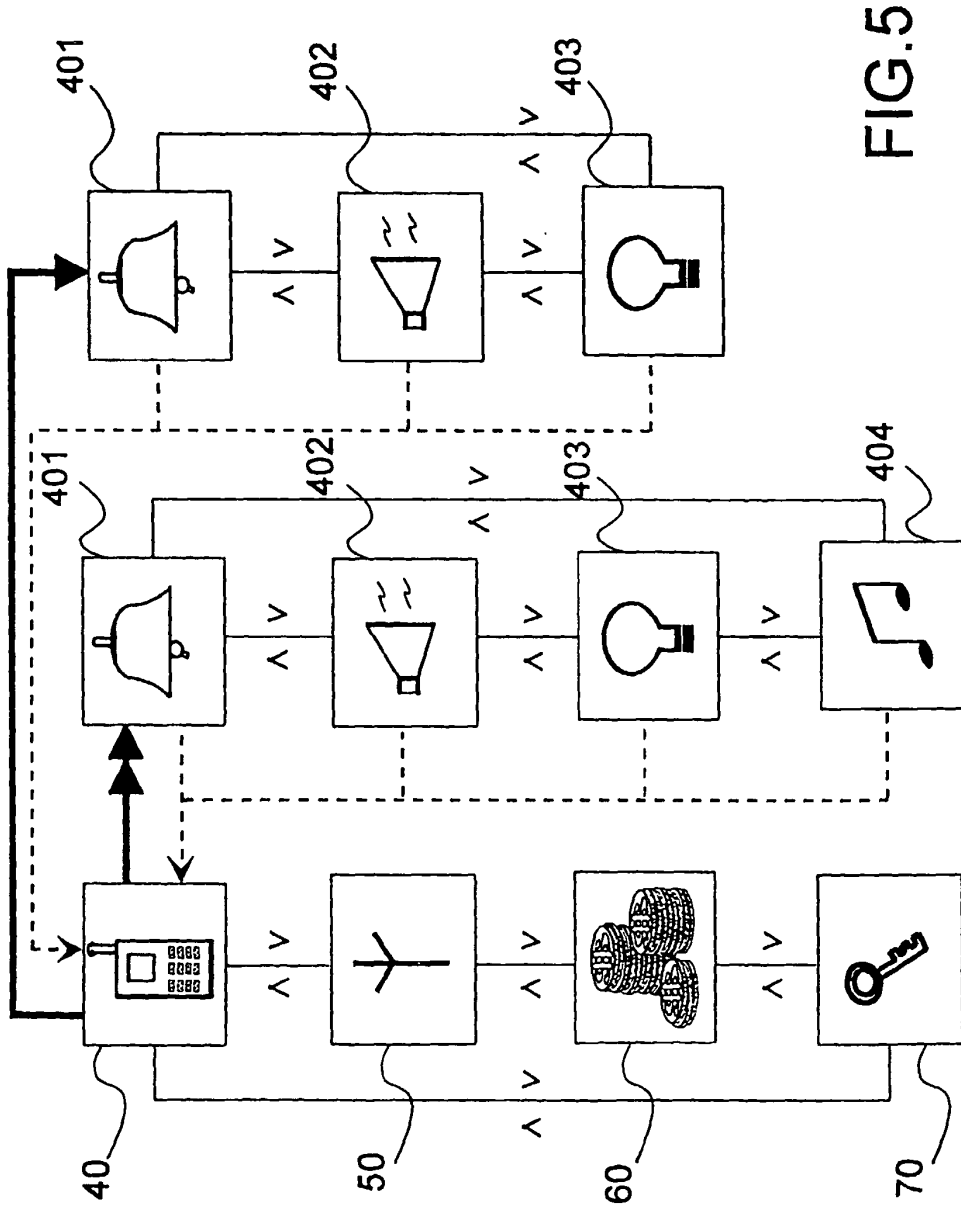


FIG.5

1	"Y"
2	"y"
3	"N"
4	"n"
5	"Y"

1	100
2	50
3	20
4	0
5	0

A

1	"Y"
2	"Y"
3	"N"
4	"n"
5	"y"

1	100
2	100
3	100
4	100
5	100

B

FIG.6



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RAPPORT DE RECHERCHE EUROPEENNE

Numéro de la demande  
EP 97 20 3650

DOCUMENTS CONSIDERES COMME PERTINENTS			
Catégorie	Citation du document avec indication, en cas de besoin, des parties pertinentes	Revendication concernée	CLASSEMENT DE LA DEMANDE (Int.Cl.6)
X	EP 0 607 731 A (IBM) 27 juillet 1994 * colonne 2, ligne 6 - ligne 14 * * colonne 7, ligne 13 - ligne 47; figures 4B,4E *	1-3	G06F3/023
X	EP 0 322 332 A (IBM) 28 juin 1989 * abrégé; revendications *	1,2	
X	GB 2 162 393 A (PLESSEY THE COMPANY PLC) 29 janvier 1986 * abrégé; figure *	1	
A,D	FR 2 731 578 A (MOTOROLA INC) 13 septembre 1996 * abrégé; revendications *	1,2,5	
A	"REORGANIZATION MENU HIERARCHY TO BEST FIT THE INDIVIDUAL USER" IBM TECHNICAL DISCLOSURE BULLETIN, vol. 37, no. 2B, 1 février 1994, page 349/350 XP000433874 * le document en entier *	1-4	
Le présent rapport a été établi pour toutes les revendications			
A	EP 0 579 501 A (INSTITUTE FOR PERSONALIZED INFORMATION ENVIRONMENT) 19 janvier 1994 * colonne 6, ligne 2 - ligne 54 * * colonne 8, ligne 8 - ligne 35; revendication 1 *	1,3,4	G06F
A	"MENU METHOD" IBM TECHNICAL DISCLOSURE BULLETIN, vol. 32, no. 1, 1 juin 1989, page 452/453 XP000121571 * le document en entier *	3	
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Lieu de la recherche		Date d'achèvement de la recherche	Examineur
BERLIN		9 janvier 1998	Durand, J
CATEGORIE DES DOCUMENTS CITES			
X : particulièrement pertinent à lui seul Y : particulièrement pertinent en combinaison avec un autre document de la même catégorie A : arrière-plan technologique O : divulgation non-écrite P : document intercalaire		T : théorie ou principe à la base de l'invention E : document de brevet antérieur, mais publié à la date de dépôt ou après cette date D : cité dans la demande L : cité pour d'autres raisons & : membre de la même famille, document correspondant	

EPO FORM 1503 03.82 (P04C02)

LGE0003493





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RAPPORT DE RECHERCHE EUROPEENNE

Numéro de la demande  
EP 97 20 3650

DOCUMENTS CONSIDERES COMME PERTINENTS			
Catégorie	Citation du document avec indication, en cas de besoin, des parties pertinentes	Revendication concernée	CLASSEMENT DE LA DEMANDE (Int.Cl.6)
A	US 5 201 067 A (GRUBE GARY W ET AL) 6 avril 1993 * colonne 5, ligne 30 - ligne 35; revendications 16,17 * -----	5	
			DOMAINES TECHNIQUES RECHERCHES (Int.Cl.6)
Le présent rapport a été établi pour toutes les revendications			
Lieu de la recherche BERLIN		Date d'achèvement de la recherche 9 janvier 1998	Examineur Durand, J
<b>CATEGORIE DES DOCUMENTS CITES</b> X : particulièrement pertinent à lui seul Y : particulièrement pertinent en combinaison avec un autre document de la même catégorie A : arrière-plan technologique O : divulgation non-écrite P : document intercalaire		T : théorie ou principe à la base de l'invention E : document de brevet antérieur, mais publié à la date de dépôt ou après cette date D : cité dans la demande L : cité pour d'autres raisons & : membre de la même famille, document correspondant	

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(54) **Method and system for automatic alteration of display of menu options.**

(57) A method and system for the automatic alteration of a display of multiple user selectable menu options. A counter is associated with each user selectable menu option. The counter associated with a user selectable menu option is then incremented in response to each selection by a user of the user selectable menu option. The display of the user selectable menu option is automatically altered in response to a state of the associated counter.

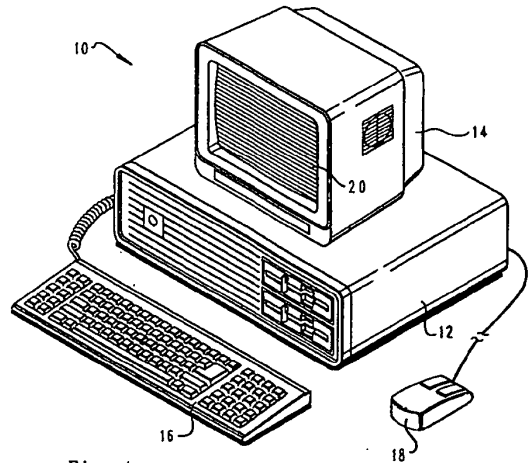


Fig. 1

EP 0 607 731 A2

Figure 10 - IBM Corp. Patent 75004, PARIS

LGE0003495

## BACKGROUND OF THE INVENTION

### 1. Technical Field:

The present invention relates in general to a method and system for the automatic alteration of a display of user selectable menu options within a data processing system and in particular to a method and system for the association of a counter with each user selectable menu option within a data processing system. Still more particularly, the present invention relates to a method and system within a data processing system for the incrementing of a counter associated with each user selectable menu option in response to each selection of the menu option by a user.

### 2. Description of the Related Art:

In known computer systems graphic menus are provided which include menu options that a user may select in order to perform various tasks such as creating or opening files, deleting files, or changing the format of a document. A user typically selects a menu by utilizing a mouse or other input device. Once a menu is selected menu options included within that menu are displayed. Often there are more menu options to be displayed than space within a computer display screen to display them. In these situations a portion of the menu options is displayed. The user is permitted to scroll through the options causing different portions of the menu options to be displayed until the user finds the desired menu option.

Some known systems permit a user to delete menu options which are not frequently used from future displays of the menu while others permit a user to predetermine which menu options will be displayed. In some of these systems a usage history is maintained and displayed to the user. A user may also change the display order of menus so that menus which contain more advanced menu options do not appear to the user who is utilizing the basic menu options.

It should therefore be apparent that a need exists for a method and system for automatically altering a display of user selectable menu options without a direct action by a user.

### SUMMARY OF THE INVENTION

It is therefore one object of the present invention to provide an improved method and system for the automatic alteration of a display of user selectable menu options within a data processing system.

It is another object of the present invention to provide an improved method and system for the association of a counter with each user selectable menu option within a data processing system.

It is yet another object of the present invention to

provide an improved method and system for the incrementing of a counter associated with a user selectable menu option in response to a user selection of the menu option within a data processing system.

The foregoing objects are achieved as is now described. A method and system are provided for the automatic alteration of a display of multiple user selectable menu options. A counter is associated with each user selectable menu option. The counter associated with a user selectable menu option is then increment- ed in response to each selection by a user of the user selectable menu option. The display of the user selectable menu option is automatically altered in response to a state of the associated counter.

The above as well as additional objects, features, and advantages of the present invention will become apparent in the following detailed written description.

### BRIEF DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself however, as well as a preferred mode of use, further objects and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

Figure 1 depicts a pictorial representation of a data processing system which may be utilized to implement the method and system of the present invention;

Figures 2 and 3 illustrate a display screen and two displayed menus which include user selectable menu options in accordance with the present invention;

Figures 4A - 4E together form a high level flow chart which illustrates an automatic alteration of a display of user selectable menu options in accordance with the present invention.

### DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

With reference now to the figures and in particular with reference to Figure 1, there is depicted a pictorial representation of a data processing system 10 which may be utilized in accordance with the method and system of the present invention. Data processing system 10 preferably includes a processor 12, preferably provided by utilizing an International Business Machines Personal System/2 or similar system. Data processing system 10 generally includes a video display device 14 including a display screen 20, keyboard 16, and a graphical data entry device such as a mouse 18. Video display device 14, keyboard 16, and mouse 18 may be utilized to allow user input to processor 12 and to provide user discernable mes-

sages. In a preferred embodiment of the present invention, processor 12 is suitably programmed to provide the automatic alteration of a display of menu options, and to implement the processes set forth in the logic flow chart included herein.

Referring to Figure 2, there is depicted display screen 20 and two displayed menus 22 and 24 which include user selectable menu options 26 - 44 in accordance with the present invention. A computer application may include multiple menus from which a user may choose in order to complete tasks. For example, a menu 22 of file utilities or menu options such as open 26, delete 28, print 30 or rename 32 may be provided. In addition, a menu 24 of format menu options may be provided such as line numbers 34, justification 36, tabs 38, fonts 40, line spacing 42, and page numbers 44.

For each menu, a counter is provided which counts the number of times a user selects the particular menu. Each time menu 22 is selected, its associated counter is incremented. Each time menu 24 is selected, its associated counter is incremented. A counter is also provided for each menu option within a menu. Each time open file 26 is selected, its associated counter is incremented. Each user has an associated set of counters. Each user has a counter for each menu and each menu option. Therefore, each user will have associated counters for menus 22 and 24 and for menu options 26 - 44.

A threshold is established for each menu for each user. If the menu option counter divided by the menu counter is less than the established threshold for the particular menu, the display of the menu option associated with the menu option counter is automatically altered. The same threshold may be established for all menus, or different thresholds may be established for each user. The display may be altered by deleting the menu option from the menu, dimming the intensity of the display of the menu option, changing the displayed color of the menu option, or any other manner of alteration. All menu options may be altered in the same manner such as by deleting them from the display, or menu options may be altered in a different manner such as by deleting those in one menu while dimming those in a different menu. In this manner, each user selection of a menu option is utilized in order to continuously and automatically update and alter the display without the need for the user to reconfigure the display. To those skilled in the art, it is apparent that when little used menu options are to be deleted, there could be another threshold such as a minimum menu counter threshold. For example, a minimum menu counter threshold could be set to 50 indicating that the menu must be utilized 50 times before options within that menu are deleted. Another approach is to define non-zero initial values for the menu option counter.

With reference now to Figure 3, there is depicted

display 20 and two displayed menus 22 and 24 which include an automatically altered display of user selectable menu options in accordance with the present invention. A user has utilized menu options within menu 22. Menu options 26, 28, and 30 have been utilized enough times so that the solution of the counters associated with those menu options divided by the counter associated with menu 22 is greater than the established threshold. Therefore, each of these menu options is displayed in an unaltered manner. However, the rename menu option 32 has not been selected enough times and the display is altered by dimming the intensity of the display.

A user has also utilized menu options within menu 24. Menu options 36, 38, 40, and 44 have been utilized enough times so that the solution of the counters associated with those menu options divided by the counter associated with menu 24 is greater than the established threshold. Therefore, each of these menu options is displayed in an unaltered manner. However, the line numbers menu option 34 and the line spacing menu option 42 have not been selected enough times and the display is altered by deleting these menu options from menu 24.

Some menus include menu options as well as submenus. These submenus may also include menu options as well as submenus. Some menus may have common submenus. In these situations there are multiple paths a user may take in order to arrive at the same submenu. It should be appreciated by those skilled in the art that in these situations each common submenu may have its own counter.

Referring now to Figures 4A - 4E, there is depicted a high level flow chart which illustrates an automatic alteration of a display of user selectable menu options in accordance with the present invention. The process starts as depicted at block 60 and thereafter passes to block 62 which illustrates the establishment of a counter for each menu for each user. For example, the menu counter could be initialized to the number of menu options the menu includes. Next the process passes to block 64 which illustrates the establishment of a counter for each menu option for each user. For example, each menu option counter could be initialized to "1". The process then passes to block 66 which illustrates a determination of whether or not the same threshold for each menu for each user should be utilized. If a determination is made that the same threshold for each menu for each user should be utilized, the process passes to block 68 which illustrates the establishment of the same threshold for each menu for each user. The process thereafter passes to block 70. Referring again to block 66, if a determination is made that the same threshold for each menu for each user should not be utilized, the process passes to block 72 which depicts the establishment of a threshold for each menu for each user. The process then again passes to block 70 which il-

illustrates a user selecting a menu. The process then passes to block 73 which depicts the incrementing of a menu counter for the user. The process next passes to block 76 as illustrated through block 74. Block 76 depicts the displaying of the selected menu.

Thereafter, block 78 illustrates a determination of whether or not a menu option counter divided by the menu counter is greater than the menu threshold for the user. If a determination is made that the menu option counter divided by the menu counter is greater than the menu threshold for the user, the process passes to block 80 which illustrates a determination of whether or not the hide flag is on. If a determination is made that the hide flag is not on, the process passes to block 82 which illustrates the displaying of the menu option. Thereafter, the process passes to block 84. Referring again to block 80, if a determination is made that the hide flag is on, the process passes to block 86 which illustrates the hiding of the menu option. Thereafter, the process again passes to block 84.

Referring again to block 78, if a determination is made that the menu option counter divided by the menu counter is not greater than the menu threshold for the user, the process passes to block 88 which illustrates a determination of whether or not the show flag is on. If a determination is made that the show flag is not on, the process again passes to block 86 which illustrates the hiding of the menu option. Referring again to block 88, if a determination is made that the show flag is on, the process passes to block 90 which depicts the displaying of the menu option. Thereafter, the process again passes to block 84 which illustrates a determination of whether or not this is the last menu option. If a determination is made that this is not the last menu option, the process passes to block 92 which depicts the getting of the next menu option. The process then again passes to block 78. Referring again to block 84, if a determination is made that this is the last menu option, the process passes to block 96 as depicted through block 94.

Block 96 illustrates a determination of whether or not the user has selected a menu option. If a determination is made that a user has selected a menu option, the process passes to block 98 which depicts the incrementing of the user's menu option counter for the selected menu option. Thereafter, the process passes to block 100 which illustrates going to the selected menu option. Next the process passes to block 102 which illustrates a determination of whether or not a user immediately exits the menu option utilizing the escape key or exit key. If a determination is made that a user does not immediately exit the menu option utilizing the escape key or exit key, the process passes to block 70 as depicted through block 104. Referring again to block 102, if a determination is made that a user does immediately exit the menu option utilizing the escape key, the process passes to block

106 which illustrates the decrementing of the user's menu option counter by two. It should be apparent that the user's menu option counter may be decremented by any value selected to more quickly remove that menu option from the display. The process then passes to block 70, again as depicted through block 104.

Referring again to block 96, if a determination is made that a user has not selected a menu option, the process passes to block 108 which illustrates a determination of whether or not a user has highlighted a menu option. If a determination is made that a user has not highlighted a menu option, the process passes to block 112 as illustrated through block 110. Block 112 depicts a determination of whether or not a user has clicked the right or middle button of a mouse. If a determination is made that a user has not clicked the right or middle button of a mouse, the process again passes to block 96 as illustrated through block 94. Referring again to block 112, if a determination is made that a user has clicked the right or middle button of a mouse, the process passes to block 114 which illustrates the popping up of a menu control window. Thereafter, the process passes to block 116 which depicts the getting of a user input. Next the process passes to block 118 which illustrates a determination of whether or not a user has selected the option of "showing all menu options." If a determination is made that the selected option is not the "show all menu options," the process passes to block 120 which depicts a determination of whether or not the selected option is the "resume normal menu options." If a determination is made that the selected option is not a "resume normal menu options," the process passes back to block 116.

Referring again to block 120, if a determination is made that the selected option is the "resume normal menu options," the process passes to block 122 which illustrates the restoring of the saved menu thresholds. Thereafter, the process passes to block 124 which depicts the toggling of the "resume normal menu options" to the "show all menu options." Next the process passes to block 126 which depicts the removal of the menu option window. The process thereafter passes to block 70 as illustrated through block 104.

Referring again to block 118, if a determination is made that the selected option is the "show all menu options," the process passes to block 128 which illustrates the saving of the current menu threshold. Thereafter, the process passes to block 130 which depicts the setting of the menu threshold to "display all." In order to display all, the menu threshold could be set to a negative value or a predetermined value indicative of the "display all" mode. Next the process passes to block 132 which illustrates the toggling of the "show all menu options" to the "resume normal menu options." Thereafter, the process passes to

block 134 which illustrates the removal of the menu control window. The process then passes to block 70 as illustrated through block 104.

Referring again to block 108, if a determination is made that a user has high-lighted a menu option, the process passes to block 137 as illustrated through block 136. Block 137 illustrates a determination of whether or not a user has clicked the right or middle mouse button on a highlighted menu option. If a determination is made that a user has not clicked a right or middle mouse button on a highlighted menu option, the process passes to block 96 as illustrated through block 94. Referring again to block 137, if a determination is made that a user has clicked a right or middle mouse button on a highlighted menu option, the process passes to block 138 which illustrates the popping up of a menu option show/hide window. Next the process passes to block 140 which illustrates the getting of a user input. The process then passes to block 142 which illustrates a determination of whether or not a selected option is the "always show menu option." If a determination is made that a selected option is the "always show menu option," the process passes to block 144 which illustrates the setting of the menu option show flag on. Thereafter, the process passes to block 146 which depicts the setting of the menu option hide flag off. Next, the process passes to block 148 which illustrates the removal of the menu option show/hide window. The process then again passes to block 70 as depicted through block 104.

Referring again to block 142, if a determination is made that the selected option is not the "always show menu option," the process passes to block 150 which depicts the determination of whether or not the selected option is the "always hide menu option." If a determination is made that the selected option is not the "always hide menu option," the process passes again to block 140. Referring again to block 150, if a determination is made that the selected option is the "always hide menu option," the process passes to block 152 which illustrates the setting of the menu option hide flag on. Thereafter, the process passes to block 154 which depicts the setting of the menu option show flag off. The process then passes to block 156 which illustrates the removal of the menu option show/hide window. Thereafter, the process again passes to block 70 as illustrated through block 104.

The "show all" function could be implemented utilizing other methods. For example, an additional push button may be provided with menus where choices have been deleted. The push button could display "show all" if choices have been deleted and then toggled to "hide unused" after the push button has been pressed.

While the invention has been particularly shown and described with reference to a preferred embodiment, it will be understood by those skilled in the art

that various changes in form and detail may be made therein without departing from the spirit and scope of the invention.

## Claims

1. A method in a data processing system having a plurality of displayed menus, each of said plurality of displayed menus including a plurality of user selectable menu options for automatically altering a display of said plurality of user selectable menu options, said method comprising the data processing implemented steps of:
  - associating a counter with each of said plurality of user selectable menu options;
  - incrementing said counter in response to each selection by a user of one of said plurality of user selectable menu options; and
  - automatically altering a display of each of said plurality of user selectable menu options in response to a state of said associated counter.
2. The method of claim 1 wherein said step of automatically altering a display comprises the step of automatically deleting from a display each of said plurality of user selectable menu options in response to a state of said associated counter.
3. The method of claim 1 wherein said step of automatically altering a display comprises the step of automatically altering a display color of each of said plurality of user selectable menu options in response to a state of said associated counter.
4. The method of claim 1 wherein said step of automatically altering a display comprises the step of automatically dimming the display intensity of each of said plurality of user selectable menu options in response to a state of said associated counter.
5. The method of claim 1 further comprising the step of restoring said altered display of each of said plurality of user selectable menu options to an original display of each of said plurality of user selectable menu options in response to a user selection.
6. The method of claim 1 further comprising the step of decrementing said counter in response to each deselection by a user of said one of said plurality of user selectable menu options immediately following said selection of said one of said plurality of user selectable menu options.
7. The method of claim 1 further comprising the steps of:

associating a second counter with each displayed menu; and

incrementing said second counter in response to each selection by a user of said each displayed menu.

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8. The method of claim 7 wherein said step of automatically altering a display of each of said plurality of user selectable menu options in response to a state of said associated counter further comprises the step of automatically altering a display of each of said plurality of user selectable menu options in response to said counter divided by said second counter being greater than a threshold.

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9. The method of claim 1 further comprising the step of setting said counter to a predetermined value.

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10. A data processing system having a plurality of displayed menus, each of said plurality of displayed menus including a plurality of user selectable menu options for automatically altering a display of said plurality of user selectable menu options, comprising means to carry out the method of any one of claims 1 to 9.

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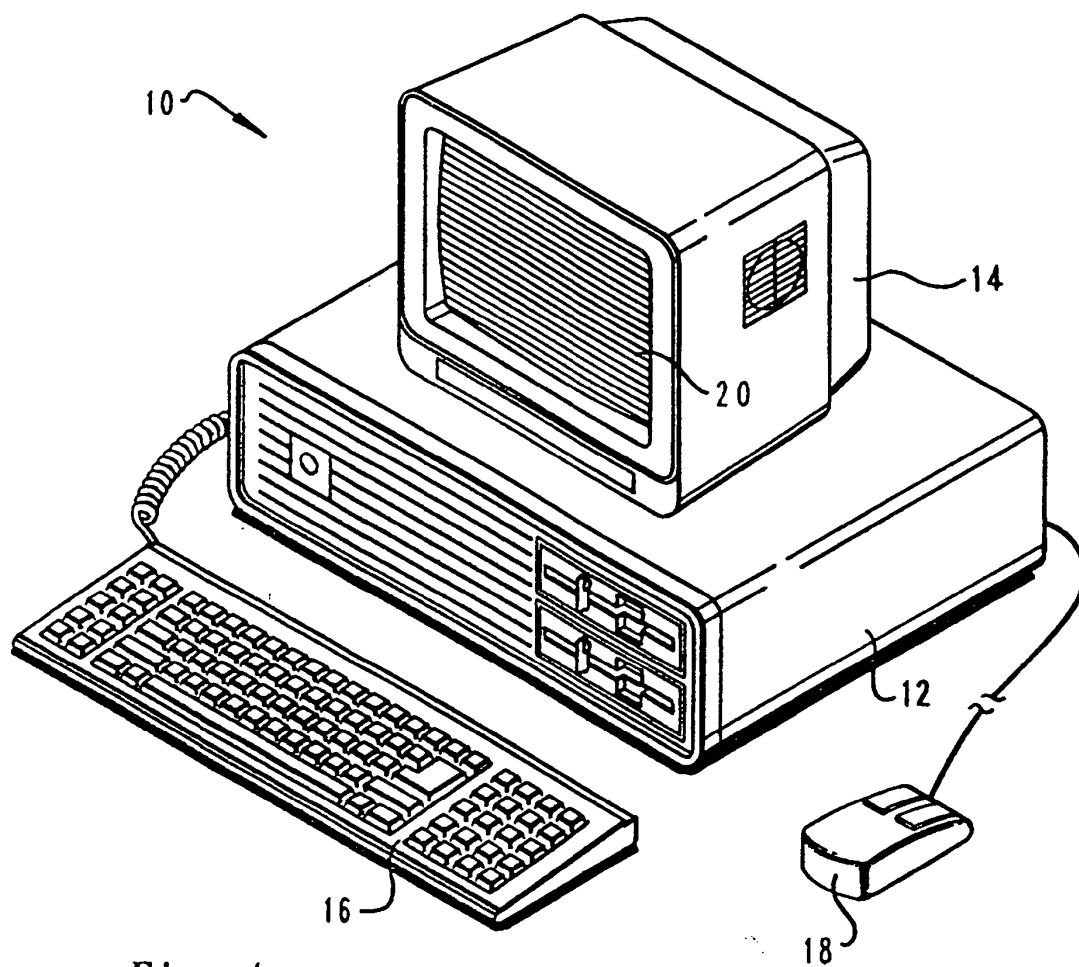
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*Fig. 1*



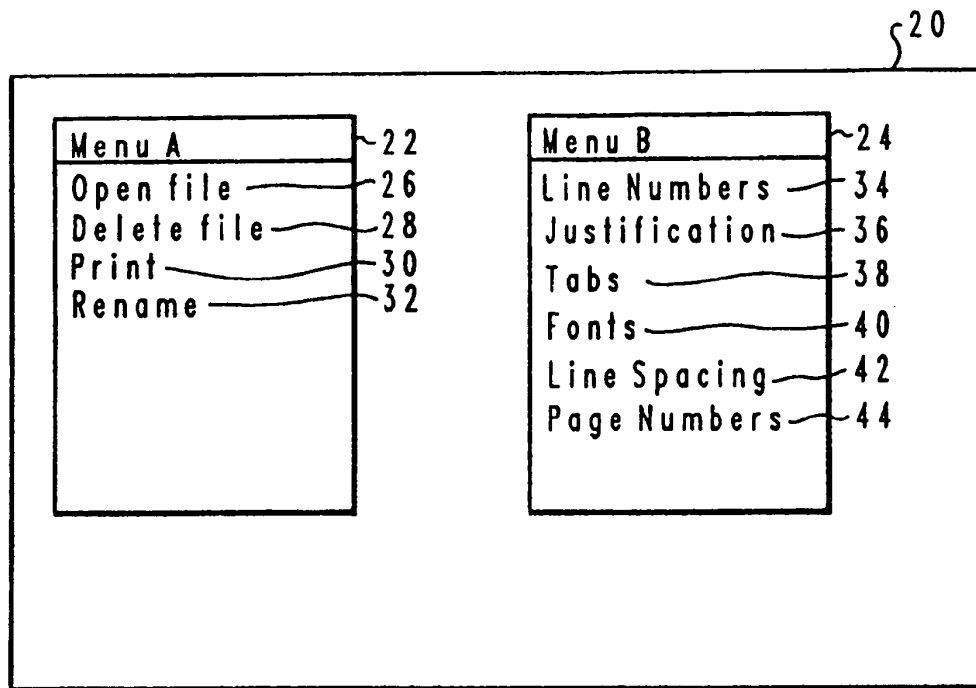


Fig. 2

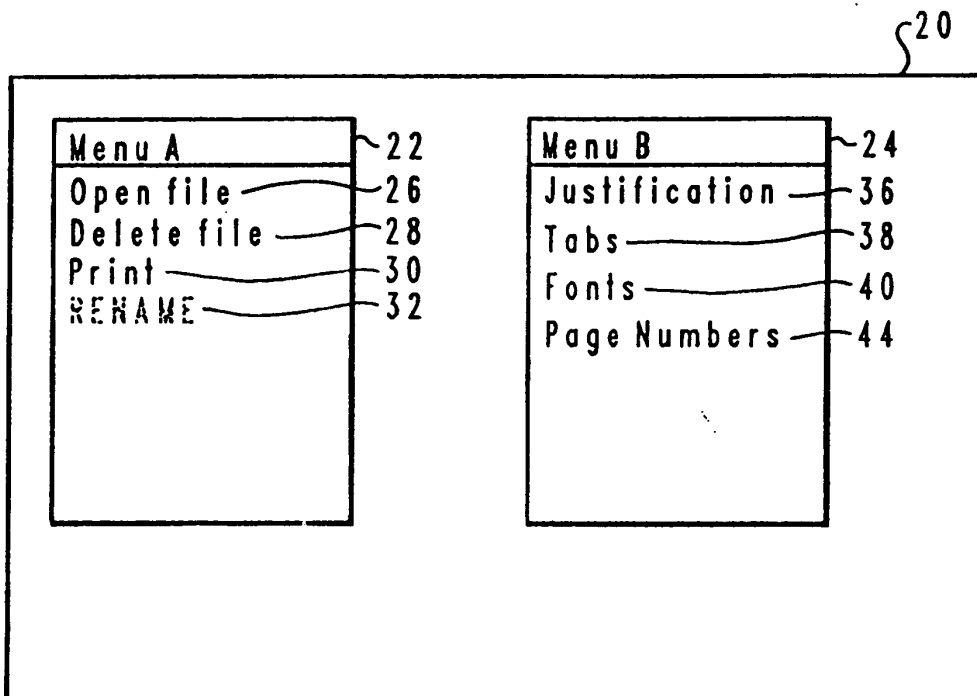


Fig. 3

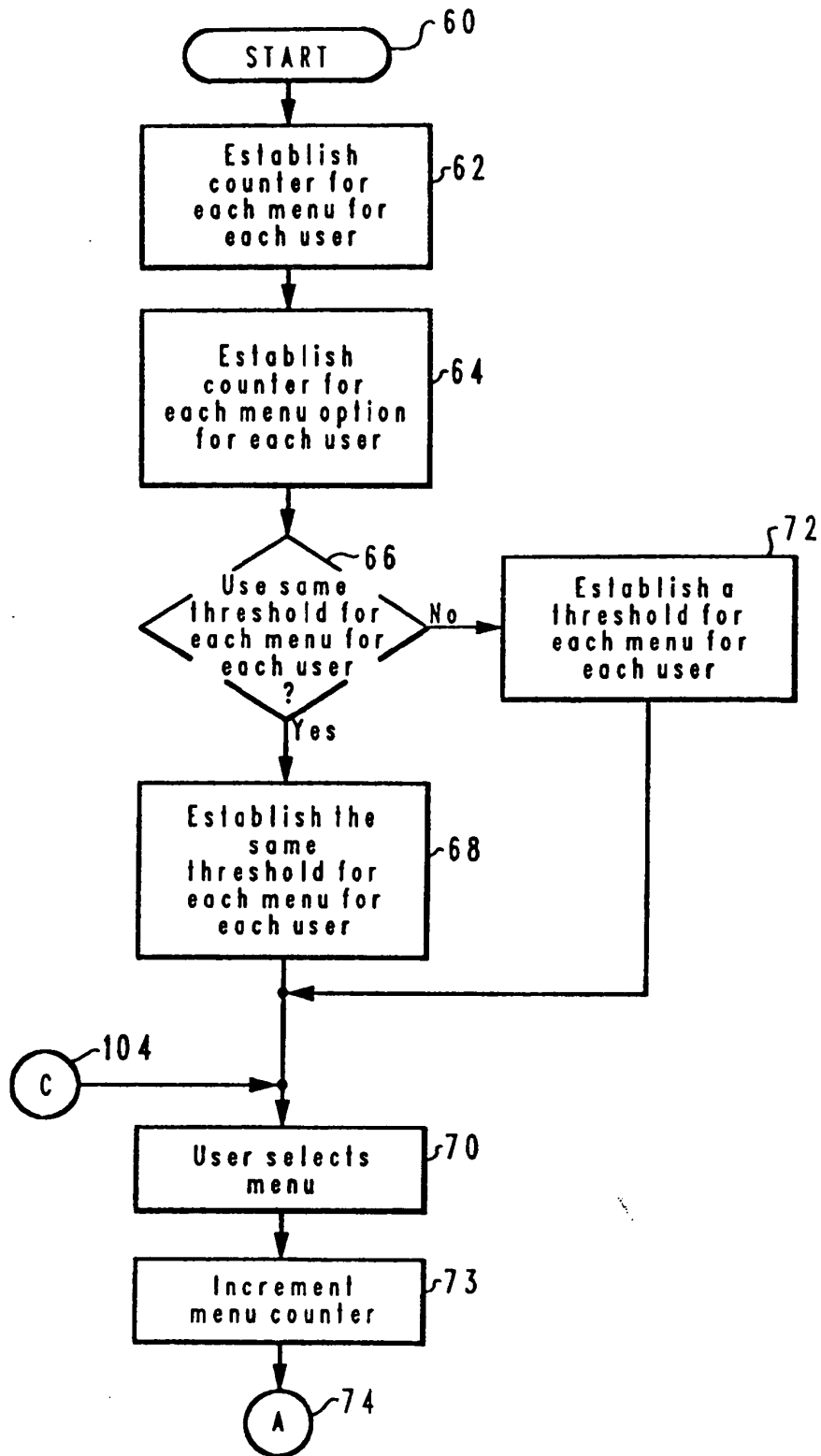


Fig. 4A

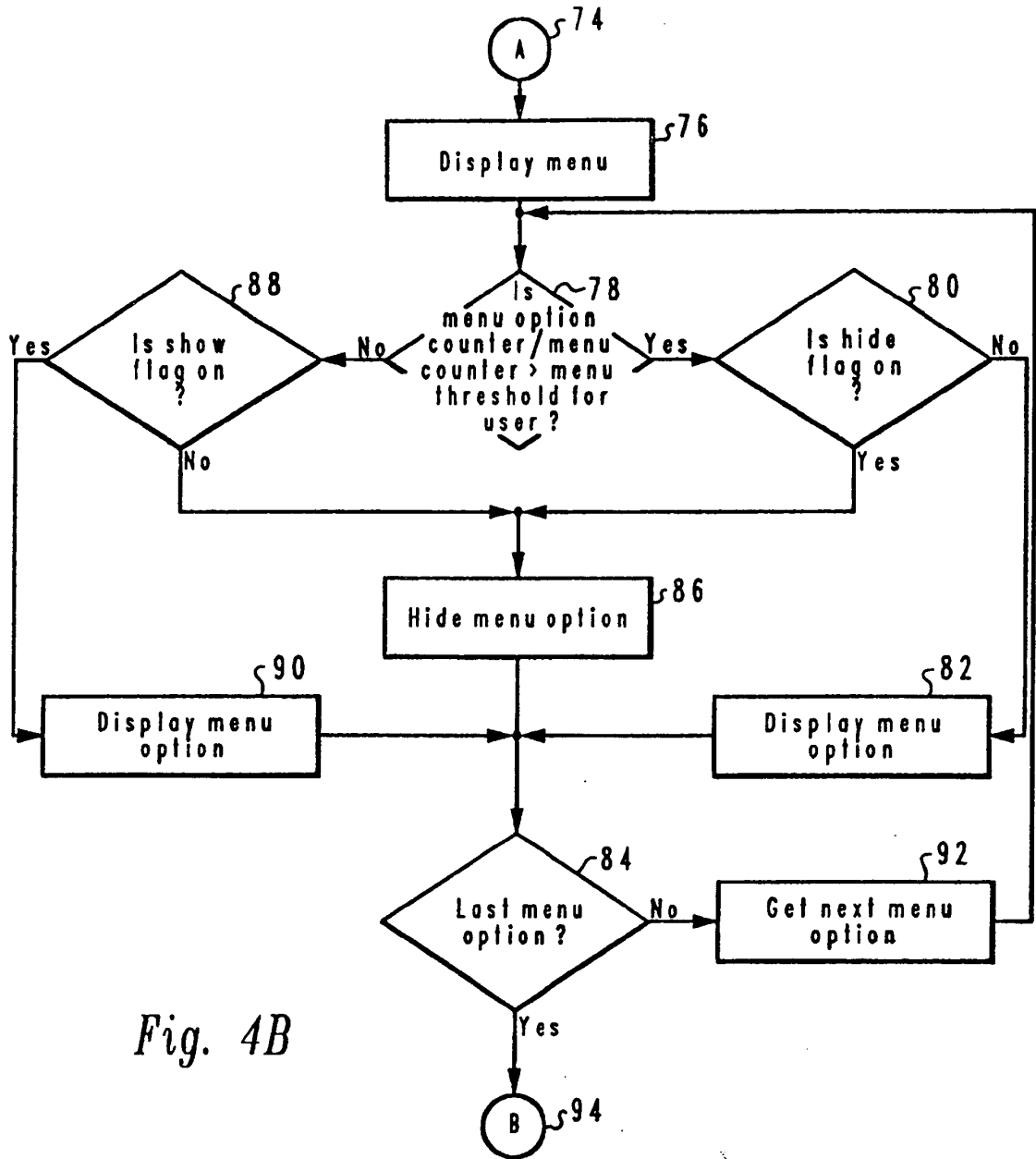


Fig. 4B

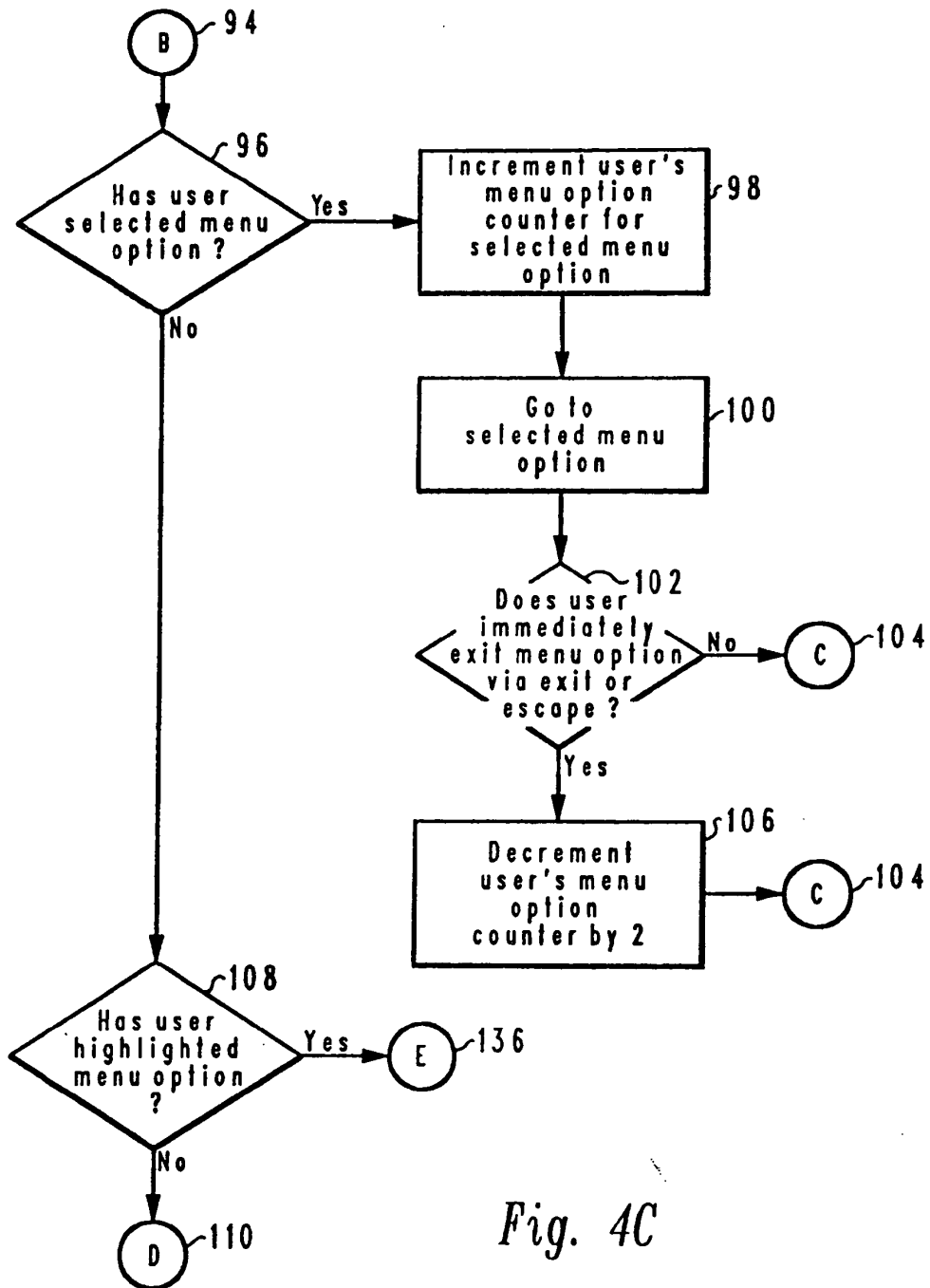


Fig. 4C

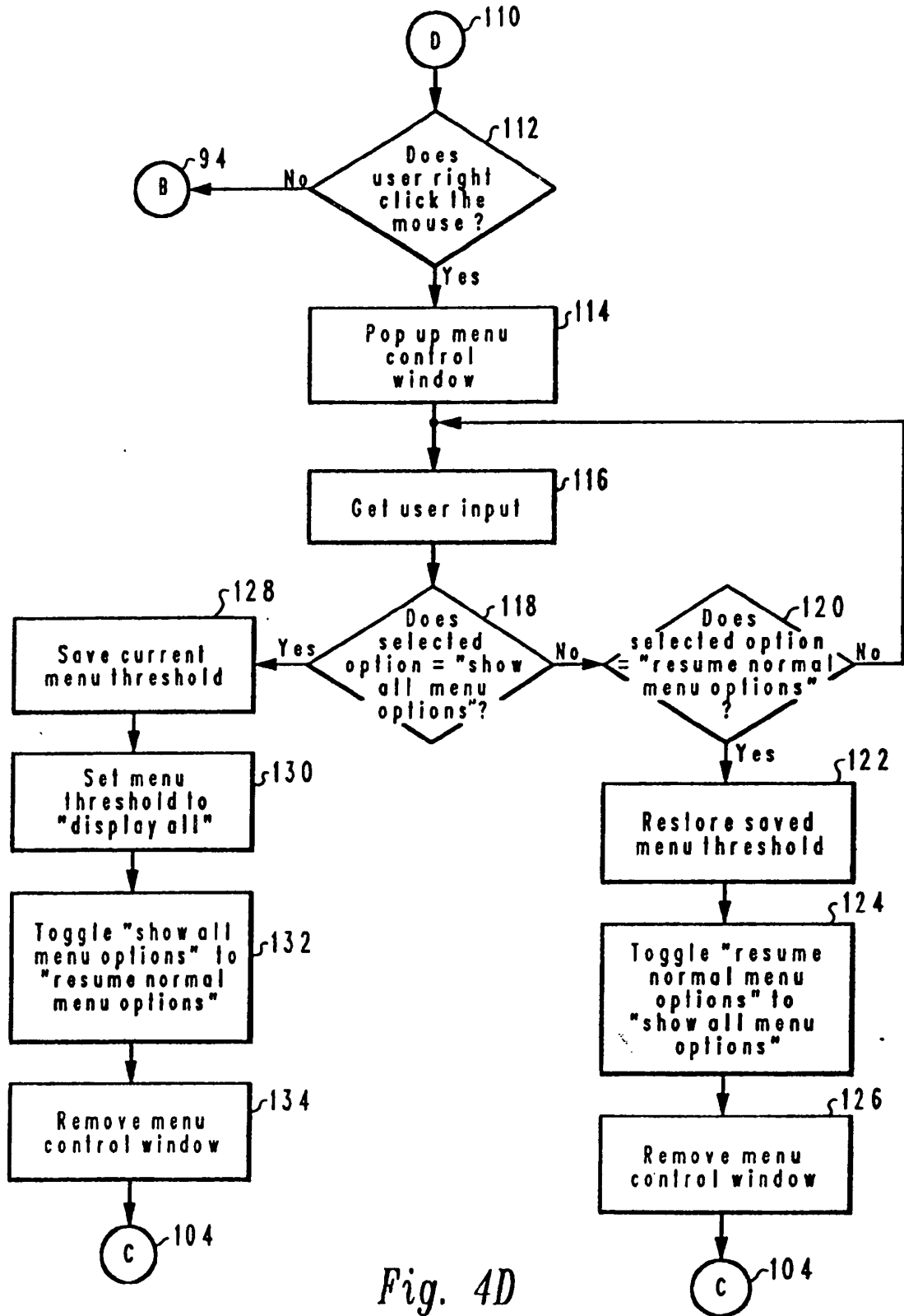


Fig. 4D

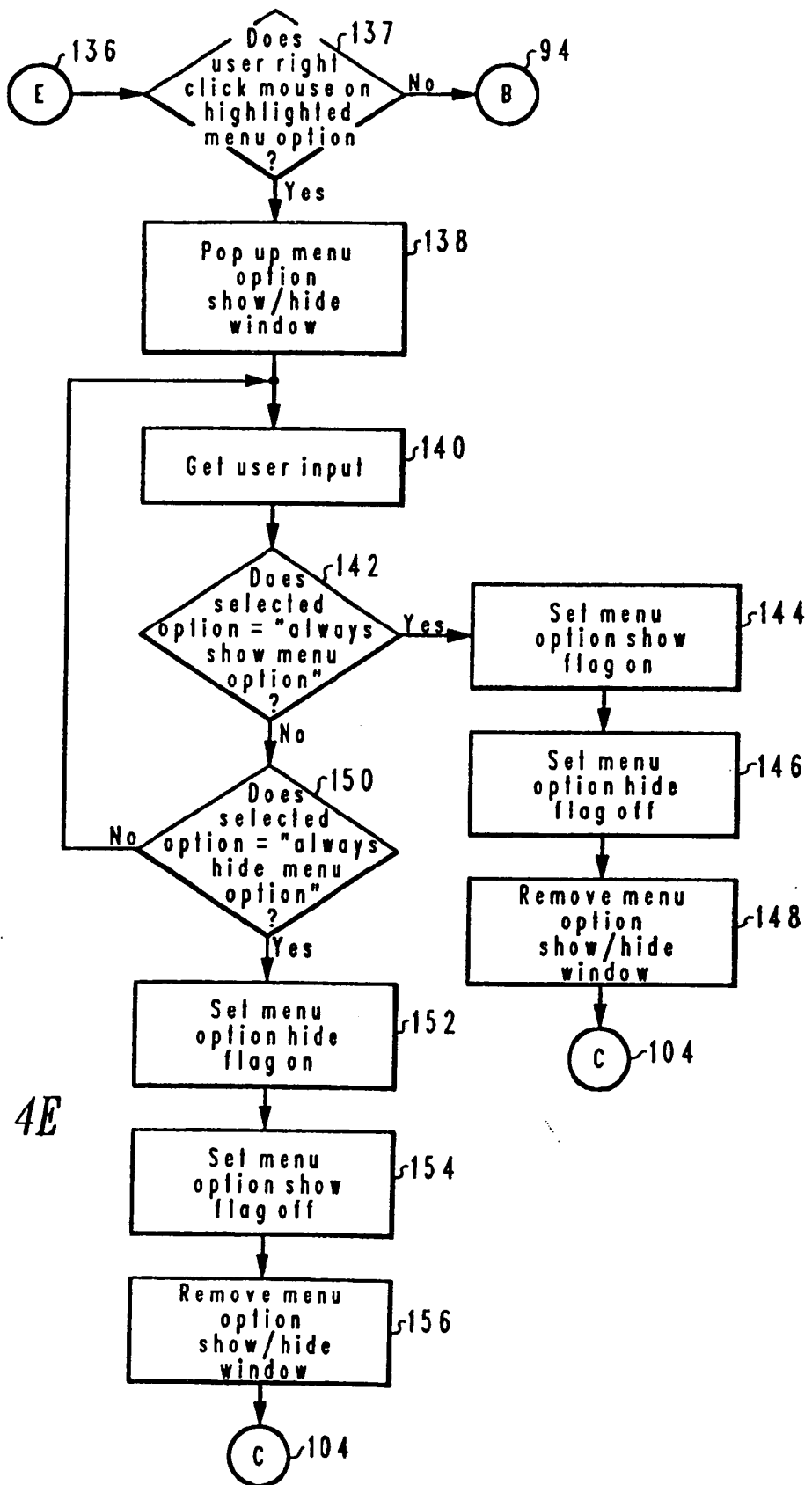


Fig. 4E

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(51) INT CL<sup>6</sup>  
H04Q 7/32, H04M 1/00 1/02

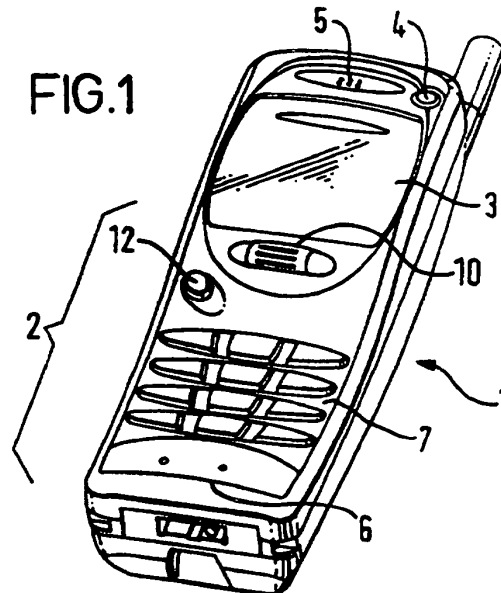
(52) UK CL (Edition Q )  
H4K KFH  
H4L LECX L30  
U1S S2215

(56) Documents Cited  
EP 0715441 A1 EP 0651544 A2 WO 97/50264 A1

(58) Field of Search  
UK CL (Edition P ) H4K KFH, H4L LECX  
INT CL<sup>6</sup> H04M 1/00 1/02 1/22 1/23, H04Q 7/32  
On-Line - WPI

(54) Abstract Title  
**Context sensitive pop-up window for a portable phone**

(57) A portable phone has a display, input means for inputting information and instructions, and a control unit controlling the display in dependence on the operation of the input means. The input means includes navigation means for moving a marker in an active part of the display. The navigation means is provided with a roller body and includes means for detecting the rolling and depression of the roller body and for providing control signals in response thereto. In an information input mode, the control unit moves the marker in the display in dependence on the rolling control signal and generates a pop-up window upon reception of the depression control signal, said pop-up window covering a part of the active display and containing operations which are allowed in a position defined by said marker.



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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FIG.1

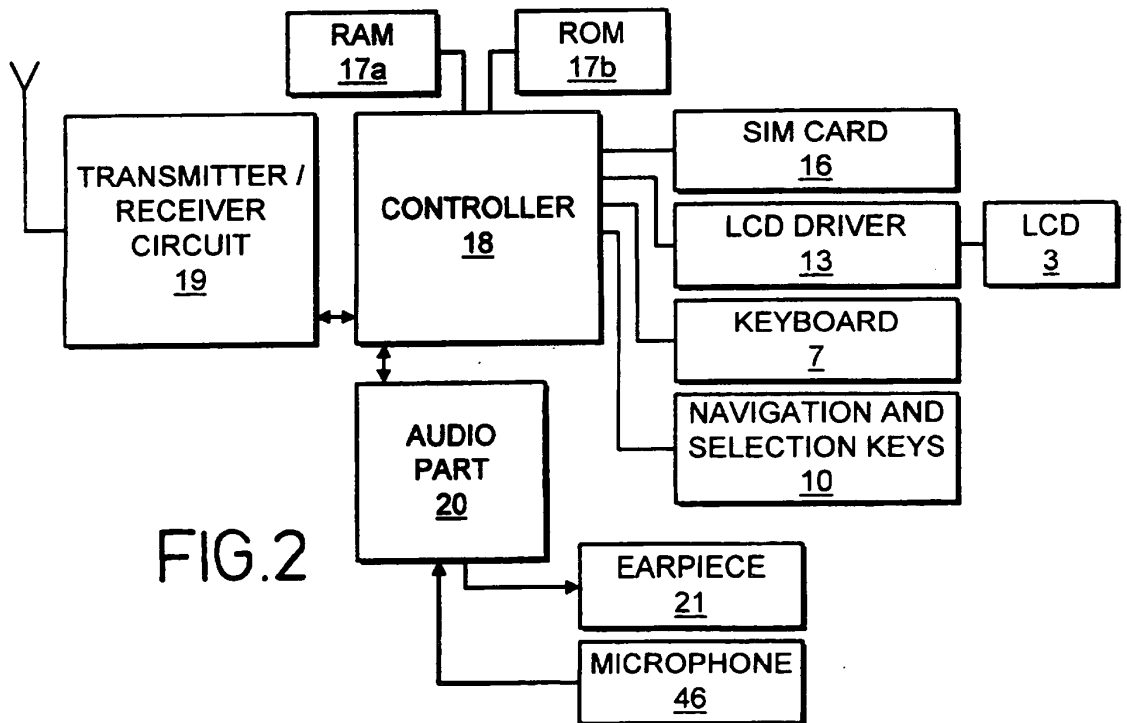
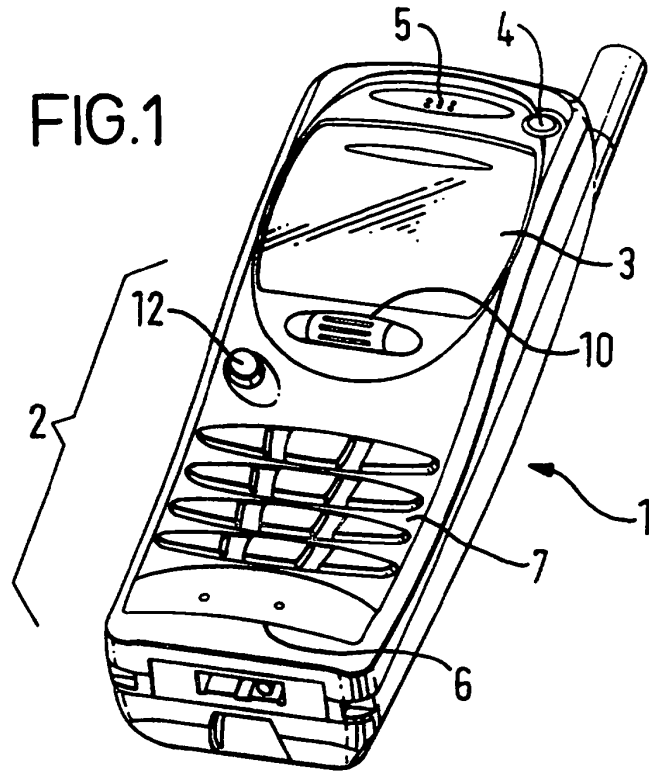


FIG.2



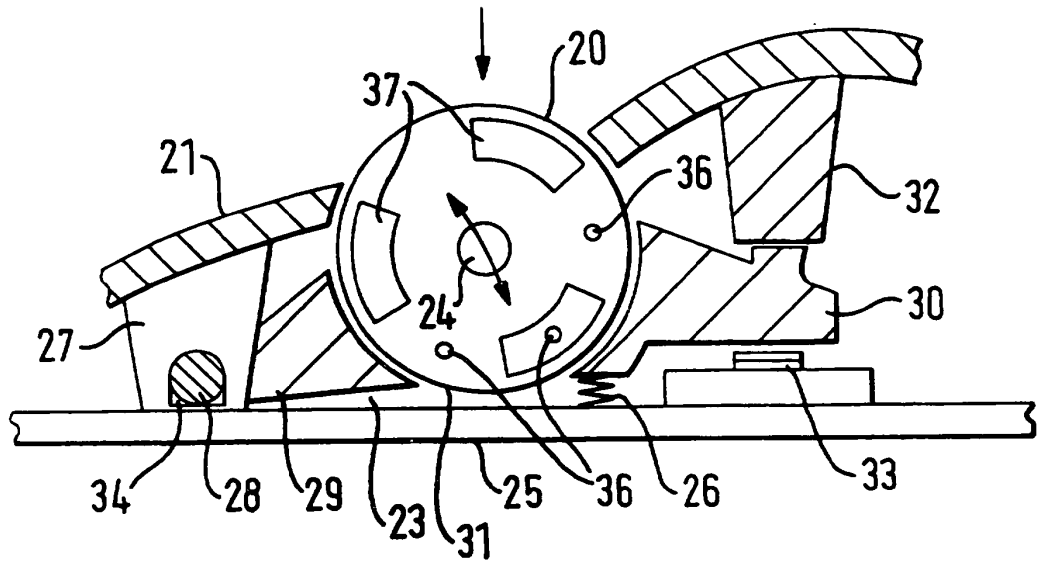


FIG. 3

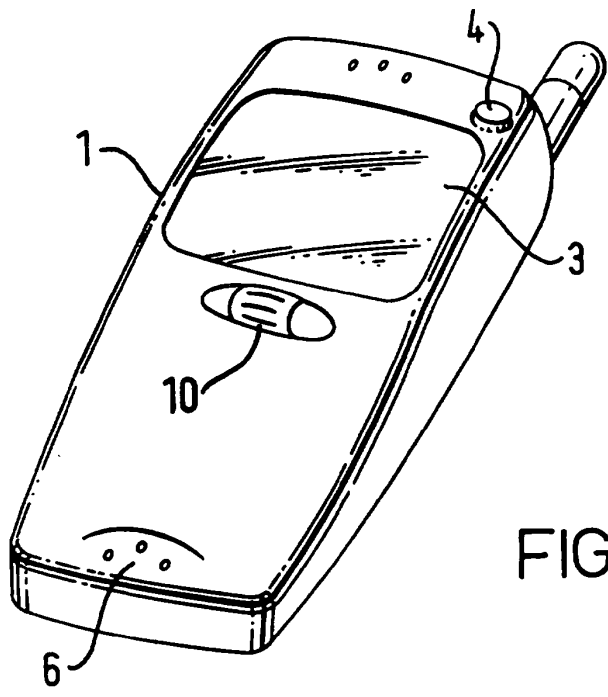


FIG. 6

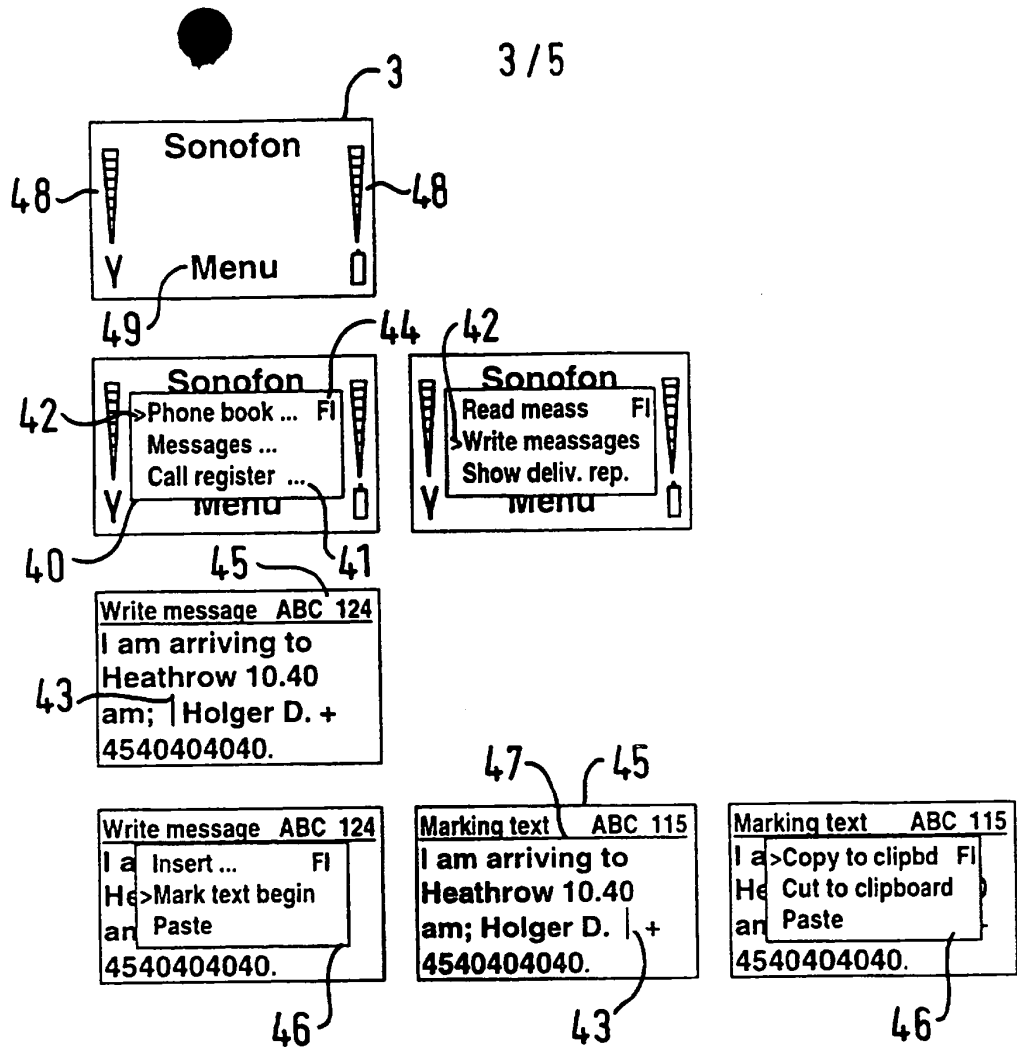


FIG. 4

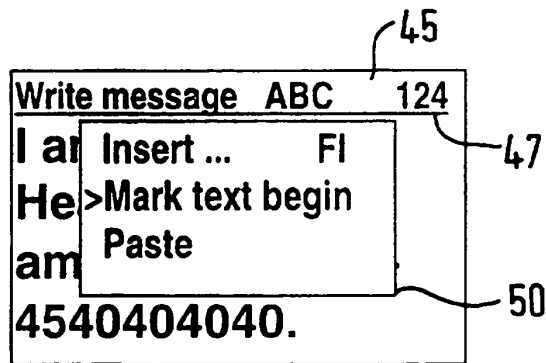


FIG. 5

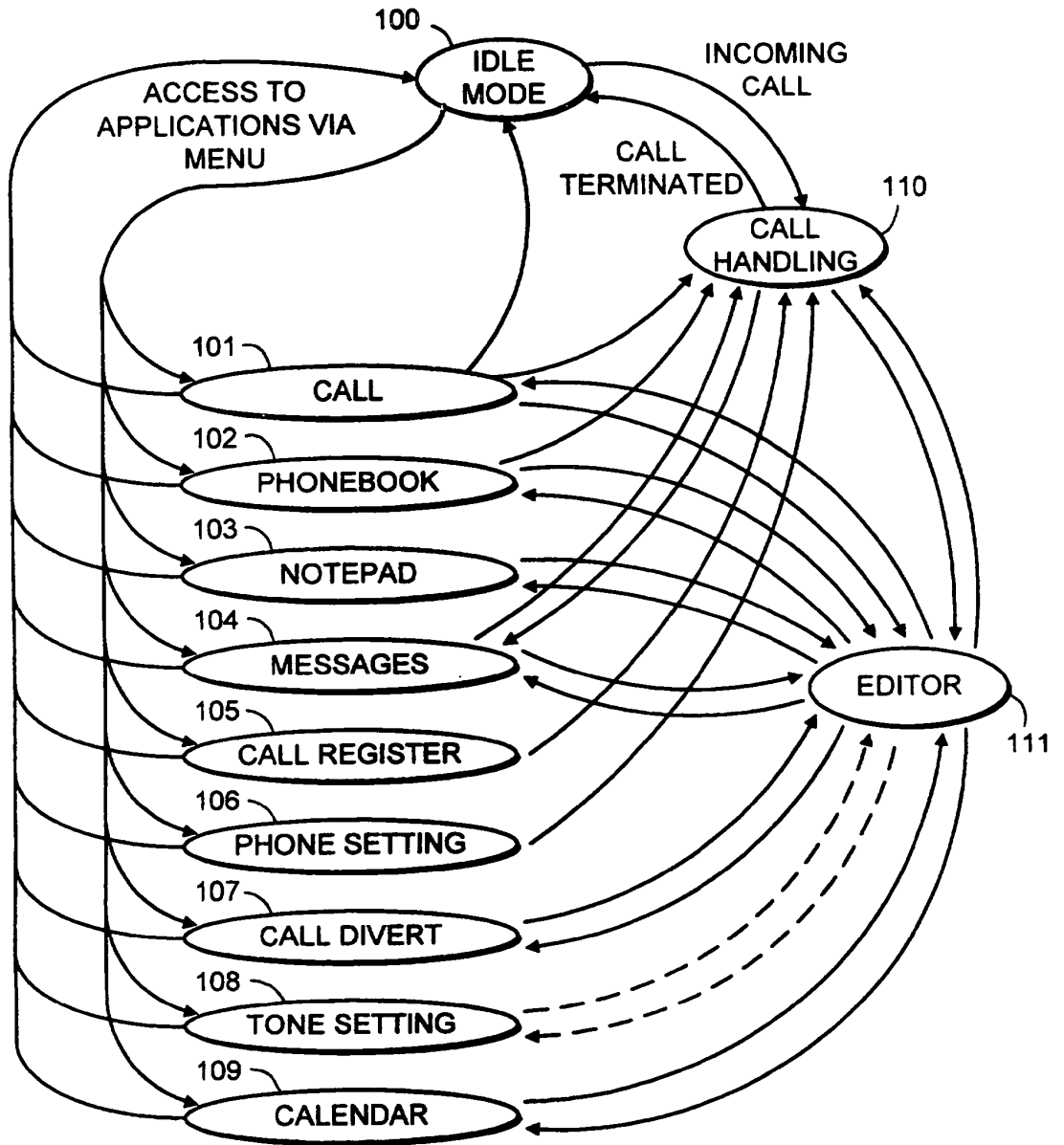


FIG. 7

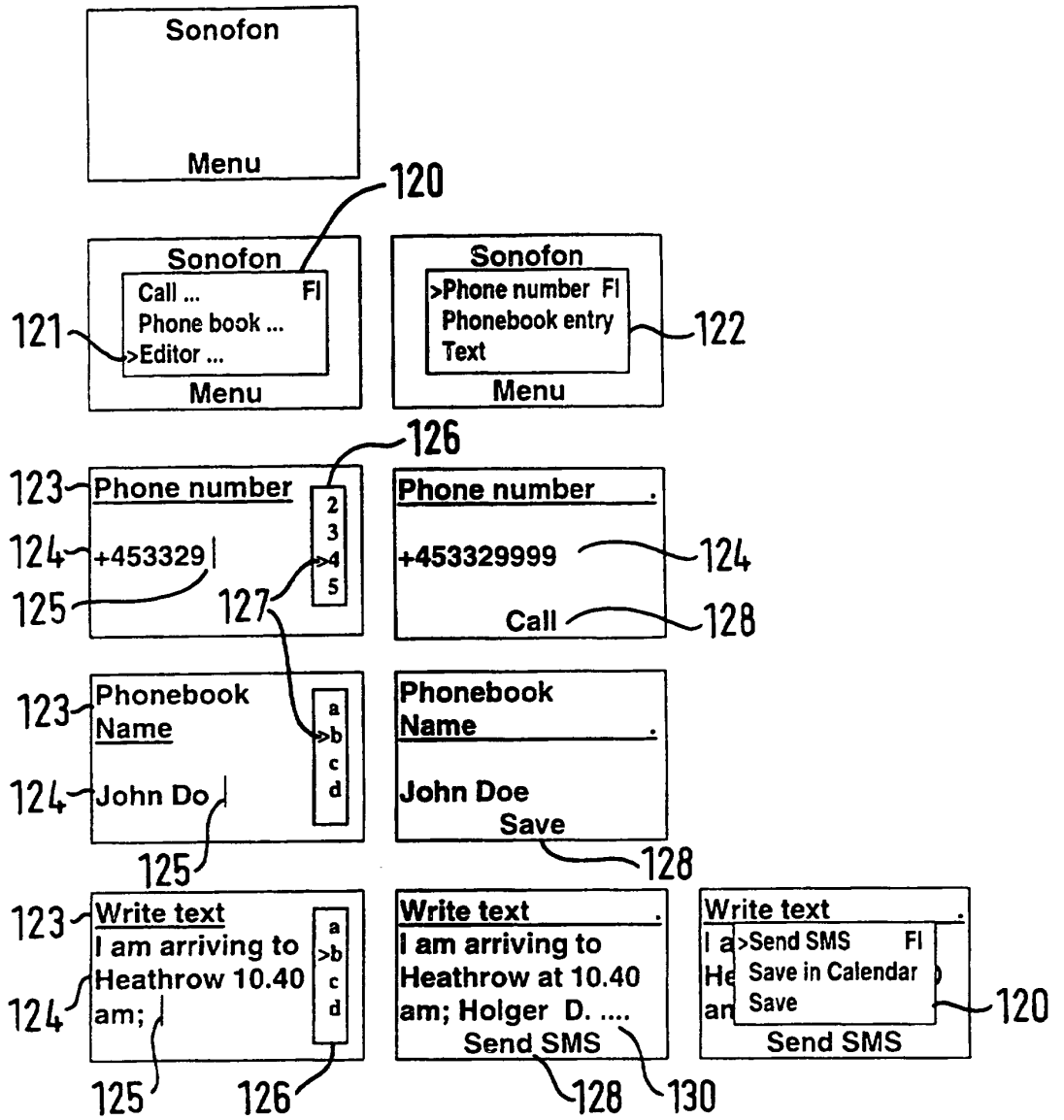


FIG. 8

CONTEXT SENSITIVE POP-UP WINDOW FOR A PORTABLE PHONE

The invention relates to a new and improved user interface (UI) for a telephone handset. The UI of hand portable phones for cellular or cordless systems does not just support the call handling alone. In the recent generations of hand portable phones more and more new applications have been integrated in the phones.

Navigation among the menu items, handling of the individual applications and editing of text as input for the applications are very difficult to perform, because the most commonly used type of navigation is carried out by an up/down scroll key. The number of operations that may be performed by a hand portable phone continues to increase. However, in order to make the phone more user-friendly it is desired to simplify the keypad, since many non-technical users take fright at keys if they do not know how to handle these keys. In general, customers are frightened when they see a keypad overwhelmed with special keys.

In order to reduce the number of keys on a handset more and more functions and operations are integrated in a reduced number of keys. A phone named Nokia 3110® marketed by the applicant has a very limited number of keys having the most commonly used functions and operations as default options, while the functions and operations not used so often are alternative options. This concept is described in a UK patent application 9624520.4 and was fully accepted by the user group when introduced.

Even though this concept makes it much easier for new phone users to become familiar with the most commonly used operations, such as making calls, handling the electronic phone book, etc., it does not improve the usability of the more rarely used operations, such as making conference calls, message handling, etc.

UK patent application 9703646.1 describes a concept according to which a window pops up when a soft key is depressed. This window contains a list including operations available through the soft key.

In accordance with the invention there is provided a portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means; said input means including means for moving a marker in the display; and means for providing a request to the control unit for displaying operations which are allowed in a position defined by said marker; said control unit generating a pop-up window which covers a part of the display upon reception of the request, and which includes said allowed operations. Hereby both the options normally present in the soft keys and the navigation of the cursor may be integrated in the roller body of the navigation means.

One important advantage is that the active part of the display may be increased, because one out of three to five text lines of the display does no longer have to be dedicated to the displaying of the soft key functionality. Another advantage is that a number of the keys may simply be left out. In a simple way, it is hereby easy to obtain a navigation and selection key with the desired properties.

An embodiment of the invention provides a new and improved user interface for a telephone hand set, wherein the default and alternative options available are displayed in a way giving the user a better view of the available options.

Advantageously, the means for moving a marker in the display comprises a navigation key means having a roller body whose rolling is detected by means of an encoder operatively connected to the control unit which controls the movement of the marker in the display in dependence thereon. Preferably, the request means comprises a sensor integrated in a support structure for the roller body, said moving and request means being integrated in the navigation key means. The contents of the pop-up window in an entry or editing mode show marker determined context

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sensitivity. At present, the LCD displays are the preferred type of displays used for e.g. phones, and this type of display is a dot matrix display in which the display signs are preferably arranged in a predetermined number of lines in the active part of the display, each of said lines may contain a plurality of signs, and said marker is provided as a gleaming bar which may be positioned between two of said signs. A new sign is entered to the right of the gleaming bar, and the gleaming bar is moved to the right of the newly entered sign.

Advantageously, the phone changes state upon the occurrence of the context sensitive pop-up window to a listing mode in which a plurality of allowable operations are listed in the pop-up window, and wherein said request providing input means changes functionality to a selection means which, when depressed, selects the operation marked by the cursor. Hereby the same key may be used for different types of navigation in dependence on the present mode of the phone.

By providing the phone with an editor not depending on an alphanumeric keypad, but controlled by the control unit and operated by the navigation key means, the alphanumeric keypad may simply be left out. Hereby it is possible to have the roller body based navigation key as the sole input key. A power on/off key may be present on the phone. The control unit defines for the editor a first display part in the display for displaying a string of entered information; a second display part in the display for displaying a string of a plurality of possible information candidates; one of the candidates in the candidate string being highlighted by the cursor whose movement through information candidates is controlled by the rolling of the navigation key means, and said highlighted candidate being selectable for entering into the string of entered information by pressing the navigation key means.

The invention therefore also relates to a portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means; said input means including a depressable roller body; a support structure for the roller body; an encoder operatively connected to the control unit for detecting the

rolling of the roller body; and a sensor operatively connected to the control unit for detecting the depression of the roller body; said control unit generating a pop-up window which includes a set of allowed operations and which covers a part of the display upon reception of a request provided by depressing the roller body. According to a preferred embodiment of the invention, the navigation key is the only input means of the phone.

The pop-up window is demarcated from the active display area by means of borderlines defining a rectangular frame. When the text is black on a light (yellow or green) background, the rectangular frame may advantageously be black like the text and have a line width corresponding to 2-3 pixels or dots. When the pop-up window area covers from 30 percent to 70 percent of the full active display area, the user will always have the possibility of seeing a part of the background display which is sufficient to recognize the mode or display.

According to the preferred embodiment, the pop-up window contains two-four selectable operations within the rectangular frame. However, the control unit handles a list including a plurality of selectable operations arranged in a predetermined order with only a fractional set of the full set of operation shown simultaneously in the pop-up window. Rolling of the navigation key means causes scanning through the full set of operations. The window thereby moves along the full list.

Preferably, the full list is not provided as an endless loop. Preferably, the full set of operations is arranged with two operations defined as a first item and a last item in the list, respectively; and in the listing mode, when the cursor passes outside the first or the last item in the list, the pop-up window disappears and the phone goes from listing mode to the mode associated with the background display.

Preferably, the context sensitive pop-up window includes all available operations. These are available from a number of sub-menus according to the state of the art. Now the user does no longer have to remember the path to the sub-menu - he can just select from a list.



Figure 1 schematically illustrates a preferred embodiment of a hand portable phone according to the invention.

Figure 2 schematically shows the essential parts of a telephone for communication with a cellular or cordless network.

Figure 3 schematically and in cross-section shows the part of the phone shown in figure 1 included in the navigation and selection key according to the invention.

Figure 4 schematically illustrates a preferred embodiment of a display with a pop-up window according to the invention.

Figure 5 schematically illustrates one of the displays shown in figure 4 on an enlarged scale.

Figure 6 schematically illustrates an alternative embodiment of a hand portable phone according to the invention.

Figure 7 shows a state diagram for the hand portable phone according to the invention.

Figure 8 shows an example of the editor used in the hand portable phone according to the invention.

Figure 1 shows a preferred embodiment of a phone according to the invention, and it will be seen that the phone, which is generally designated by 1, comprises a user interface having a keypad 2, a display 3, an on/off button 4, an ear-piece 5, and a microphone 6. The phone 1 according to the preferred embodiment is adapted for communication via a cellular network, but could have been designed for e.g. a cordless network as well. The keypad 2 has a first group 7 of keys as alphanumeric keys, by means of which the user can enter a telephone number, write a text

message (SMS), write a name (associated with the phone number), etc. Each of the twelve alphanumeric keys 7 is provided with a figure "0-9" or a sign "#" and "\*", respectively. In alpha mode each key is associated with a number of letters and special signs used in the text editing.

The keypad 2 additionally comprises a navigation and selection key 10 and a clear key 12. The clear key 12 may be used e.g. for erasing the digit or letter entered last by brief depression, while depression of a longer duration will erase the entire number or word.

The phone may comprise two call handling keys like in Nokia 8110™, but according to the preferred embodiment the call handling is included in the navigation and selection key 10. This means that depressing the navigation and selection key 10 once in idle mode with at least one digit in the display will cause a pop-up window having "call establishment" as one item to appear, and when the call has been established by selecting "call establishment" by pressing the navigation and selection key 10, the items in the pop-up window will change to "call termination", "conference call", etc.

The navigation and selection key 10 is placed centrally on the front surface of the phone between the display 3 and the group of alphanumeric keys 7. Hereby the user will be able to control this key with his thumb. This is the best site to place an input key requiring precise motoric movements. Many experienced phone users are used to one-hand handling. They place the phone in the hand between the finger tips and the palm of the hand. Hereby the thumb is free for inputting information.

As will be seen from figure 3, the navigation and selection key 10 includes a roller body 20 which extends partly through an opening in the front cover 21 of the phone, and said roller body 20 is essentially cylindrical with a length and diameter of the same size as the width of the keys in the alphanumeric group of keys 7. When the axis of rotation of the roller body 20 is provided such that it extends perpendicularly to the longitudinal axis of the phone 1, the rolling of the roller body 20 will move a

cursor in the display in an up/down direction corresponding to the movement of the thumb. For fulfilling this purpose the navigation and selection key is provided with encoder means (not shown) converting the rotation of the roller body into a train of electronic pulses fed to a processor 17 of the phone. The navigation and selection key structure is furthermore provided with a microswitch (not shown) for detecting the depression of the roller body 20, thereby providing a selection signal for the processor 17 indicating that the item pointed out in the display has been selected. The navigation and selection key is described in detail in GB patent applications 9727062.3, 9727058.1 and 9727060.7 filed by the applicant on 22 December 1997. These pending applications are hereby incorporated by reference.

When the navigation and selection key 10 is arranged as an extension of the central column of the alphanumeric keys 7, the navigation and selection key 10 can be accessed optimally by both left- and right-handed users.

Figure 2 schematically shows the most important parts of a preferred embodiment of a portable phone, said parts being essential to the understanding of the invention. The preferred embodiment of the phone of the invention is adapted for use in connection with the GSM network, but, of course, the invention may also be applied in connection with other phone networks, such as cellular networks and various forms of cordless phone systems. The microphone 6 records the user's speech, and the analog signals formed thereby are A/D converted in an A/D converter 15 before the speech is encoded in an audio codec unit 14. The encoded speech signal is transferred to a physical layer processor 17, which i.a. supports the GSM terminal software. The processor 17 also forms the interface to the peripheral units of the apparatus, including the memories (RAM, ROM), the display 3 and the keypad 2 (as well as SIM, data, power supply, etc.). The processor 17 communicates with the RF part 19 via a baseband converter 18 and a channel equalizer 16. The audio codec unit 14 speech-decodes the signal, which is transferred from the processor 17 to the ear-piece 5 via a D/A converter 13. The units 13-18 are usually integrated in a chip set - either a commercially available one or in a set of specially designed chips (ASIC's).

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The processor 17, which serves as the controller unit in a manner known per se in the preferred embodiment, is connected to the user interface. Thus, it is the processor which monitors the activity in the phone and controls the display 3 in response thereto.

Therefore, it is the processor 17 which detects the occurrence of a state change event and changes the state of the phone and thus the display text. A state change event may be caused by the user when he activates the keypad including the navigation and selection key 10, and this type of events is called entry events or user events. The processor 17 is able to detect the rolling and depression of the roller body 20 by means of a microswitch and an encoder, as will be explained briefly with reference to figure 3. However, also the network in communication with the phone may cause a state change event. This type of events and other events beyond the user's control are called non user events. Non user events comprise status change during call set-up, change in battery voltage, change in antenna conditions, message on reception of SMS, etc.

Figure. 3 illustrates how the navigation and selection key structure according to the invention is placed in a hand portable phone. The navigation and selection key structure comprises a roller body 20 acting as a navigation and selection key and a carrier 23 for carrying the roller body 20. The carrier 23 comprises a beam 29 carrying the stub shaft 28 as hinge parts, a beam 30 and a shaft 24 carrying the roller body 20. The two beams 29, 30 and the shaft 24 are parallel and are interconnected by bearings 31, 35 at each end.

A part of the roller body 20 extends through a close fitting opening (no contact) of the front cover 21 of the phone. The rear side of the front cover 21 is provided with two gripping arms 27 having U-shaped recesses 34 for receiving stub shafts 28, thereby, as a supporting means, defining a hinge axis for the carrier 23. The gripping arms 27 act as spacer members between the front cover 21 of the phone and the printed circuit board (PCB) 25. The latter constitutes a locking member for the shaft

bearing provided by the recesses 34 of the gripping arms 27. The distance between the gripping arms 27 is slightly smaller than the length of a shaft body 24 to avoid axial displacement of the carrier 23.

A spring 26 is provided as a biasing means for urging the carrier 23 away from the printed circuit board 25 towards the front cover 21 of the phone. The front cover 21 is provided with two stop legs 32 which cooperate with an upper surface of the part 30 of the carrier facing away from the hinge 28,34. The lower surface of the carrier part 30 is adapted for cooperation with a microswitch 33. The distance between the contact faces on the microswitch 33 and the stop legs 32 is slightly greater than the thickness of the corresponding carrier part. The coil 26 urges the carrier 23 towards the stop legs 32. When the user depresses the roller with a force greater than the coil force, the carrier will be urged against the microswitch 33 giving an output signal in dependence thereon. The microswitch 33 acts as a detection means for detecting the force counteracting the biasing force provided by the coil 26.

When the roller body 20 is depressed, the whole navigation and selection key structure performs a swing movement around the hinge axis defined by the gripping means 28, 34.

The end wall of the roller body 20 is provided with a number of conducting areas 37. As indicated in figure 3, a number (three according to the preferred embodiment) of sliding shoes 36 (contact springs) of the metallic strips slide along a circular path passing the conductive areas. The sliding shoes 36 and the conducting areas 37 are the interacting part of the encoder by means of which the control unit 17 detects the rolling of the roller body 20. The sliding shoes are mounted on a surface of the carrier 23 facing towards the end face of the roller body 20.

The processor 17 handles a number of displays - normally one for each open application, and the display for the presently active application is actually displayed in the display 3. When the phone is in idle mode, it just monitors the network looking for an incoming call. The idle mode display, seen as the first display in figure 4, will

include information identifying the network operator, here "noprofon", and indicate that the depression of the roller body 20 of the navigation and selection key 10 will give access to the menu of the phone. The display may furthermore include some status indications informing the user about the battery level, the quality of the RF connection, local time, etc.

As will be seen from the second display in figure 4, pressing the navigation and selection key 10 will cause a pop-up window 40 to appear on top of the previous display. The pop-up window 40 covers the underlying display partly, but in a way so that the user will still be able to recognize the background display. The number of text lines that may occur in the pop-up display 40 depends on the font used, of course. But if the full display includes five text lines, the pop-up display may advantageously include three text lines. The number of options or items available at a certain cursor position will in general exceed the number of lines, but then only a part of the list will be displayed.

The list of menu items shown in the pop-up window 40 in figure 4 normally includes up to ten items or even more. The list could be as follows:

1. Phone book - FI
2. Messages
3. Call register
4. Phone settings
5. Call divert services
6. Calendar
7. Tone settings - LI

The functionality associated with the individual menu items is well known from commercial products, e.g. Nokia 3110™, from the applicant. As will be seen from figure 4, only the items 2-4 in the menu list are displayed in the pop-up window 40. It will be seen that one of the items in the list is marked by an icon acting as a cursor 42. Alternatively, the item could be marked by a bar with inverted colors. The cursor

42 is controlled by rolling the roller body 20 of the navigation and selection key 10, and the item pointed out by the cursor may be selected by pressing the roller body 20.

The items on the list are followed by an icon (here three dots) 41 when the selection of the item generates a new list of items to be displayed. This will basically be the situation for all items in the main menu list. It should be noted that the first and the last items in the list are marked by **respective** border icons 44 as FI (first item) and LI (last item). When the cursor 42 is **moved** outside the borders defined by these items (e.g. passing the first item in an upward direction), the pop-up window 40 will automatically disappear.

In the first display in the second row in figure 4 the user selects the "Message" menu item and this will cause a new menu list to pop up, and, as will be seen from the second display in the second row, this menu list will include standard message handling menus, such as:

1. Read messages
2. Write messages
3. Show delivery report
4. Message Center number
5. Reply via own center.
6. Delivery reports.
7. Voice mailbox number.

The idle mode display will still be present as a background display, and the phone will return to this idle mode display if no items are selected with a time-out of e.g. 5 seconds. If the user selects the "write message" item, the pop-up window will disappear and the background display will change from the "idle mode" display to the "text entry" display, as shown in the sole display in the third row of figure 4 with a status line 45 at the top of the display informing the user that the text entry is for a message sending application (**write message**), that the text entry application is in

alpha mode (ABC), and that the cursor 43 is in position 7 (an SMS message contains max. 160 characters, and position 124 means that max. 124 characters follow).

The display 3 is provided as a dot matrix display for displaying signs arranged in a predetermined number of lines, each of which may contain a plurality of signs. The cursor 43 or the marker is provided as a gleaming bar that may be positioned between two of said signs. When the roller body 20 is depressed with the cursor 43 placed in the text, the processor starts displaying a context sensitive pop-up window including a number of selectable items or operations. The context sensitive pop-up window 46 covers a part of the active display, and it contains operations that are allowed in a position defined by the cursor 43 prior to the depression of the roller body 20.

When the context sensitive pop-up window 46 appears in a part of the display, the list of selectable items may include both SMS message related items and text editing related items. The list could include items such as:

1. Insert
2. Mark text begin
3. Paste
4. Send
5. Save
6. Exit
7. Erase

If "Insert" is selected, the user will be requested in a new pop-up window to specify what he wants to insert and where to find it - e.g. an electronic business card (note pad), a name or a number (electronic phone book), etc.

If "Mark text begin" is selected by the user, as is the situation in the first display in the fourth row in figure 4, this cursor position will be handled as a first position. As



will be seen in the second display in the fourth row in figure 4, the user is allowed to move the cursor 43 to a new position by rolling the roller body 20. It should be noted that the status line 45 indicates that the present status is marking text. When the cursor 43 has been moved to a new position by means of the navigation and selection key 10, a context sensitive pop-up window 46 will appear upon pressing the navigation and selection key 10, as will be seen in the third display in the fourth row of figure 4. The user may now select from the list in the pop-up window 40 which operation he wants to perform on the marked text. It does not matter whether the first cursor position is the first or the second one.

In response to the selection of the marked text the controller 17 generates a context sensitive pop-up window 46 (third display in the fourth row of figure 4) asking whether the user wants to cut or copy to the clipboard or replace (paste) the marked text with the content of the clipboard. If he copies the marked text to the clipboard, the paste operation allows the user to transfer the copied text to another application or to another file or record in the same application. The "Paste" option does not appear in the pop-up window when the clipboard memory is empty.

Upon selection of the "Send" option the processor 17 will generate a pop-up window (with the message beneath) asking for the receiving phone number, followed by a request for entering the message center number if that is not stored in the phone already.

When the user selects the "Save" option, the phone suggests saving the entered text and gives the record a name, such as 98.03.26-10:45 (point of time for saving "year.month.date-hour:minutes"). The "Exit" option will cause leaving the application without saving or sending the edited text, while the "Erase" option will erase the edited text but the user will remain in the application.

It should be noted that the pop-up window in the second row appears upon pressing the navigation and selection key 10 when it acts as a soft key. According to the preferred embodiment this will be the situation when the phone is in a mode without

entry of a user input. There will be no cursor in the display during these modes without user input. This will typically be the situation when the user navigates in the menu structure, e.g. initiated in idle mode, until he needs to enter an input.

When the user is requested to enter an input, e.g. to write a message, as explained in relation to figure 4, the full active part of the display is available for the data entry. It will be seen from figure 4, third and fourth rows, how the antenna and battery indicator disappears. Also the soft key text disappears. In data entry mode, the navigation and selection key 10 will no longer have a special functionality or give access to the menu structure. When the navigation and selection key 10 is pressed in this mode, the context sensitive pop-up window 46 will appear, and the processor 17 will only allow operations which are allowable in the present application and with the present cursor position to be displayed in the context sensitive pop-up window 46.

Both the context sensitive pop-up window 46 and the ordinary menu item containing the pop-up window 40 may be escaped by moving the cursor 42 outside the borders of the window or by pressing the "clear" key 12. The phone will then go back to the application related to the underlying display partly visible behind the pop-up window.

A display for a phone according to the invention may e.g. be of the LCD type having a dot matrix display area of a size of 30 x 44 mm (height x width). The dots may preferably be rectangular, e.g. with a size of 0.42 x 0.34 mm (height x width - corresponding to a resolution of 57 x 70 dpi in a vertical and a horizontal direction, respectively) and being arranged with a 0.02 mm spacing. This will approximately provide 68 x 120 dots (height x width) or pixels in the active part.

As will be seen from figure 4, the phone uses a number of e.g. three standard fonts in the display, and the processor 17 changes the fonts dynamically (without actions from the user) in dependence on predetermined rules. Typically, each sign uses (height x width) 10 x 7 pixels in the biggest font and 7 x 5 pixels in the smallest font. The fonts used in the embodiment shown in figure 4 do not have a fixed width -

letters like "l" require less width than the letter "m". The height is the same for all the signs in the font, and the width varies from two pixels (for "l") up to seven pixels (for "M" and "W") with an average width in the range of about five pixels. Generally, two neighbor signs are spaced by a single pixel and two lines are spaced by three pixels. In the idle mode display, columns with a width of ten pixels are used in each side of the display for the status bars 48, and a row with a height corresponding to thirteen pixels is used for the soft key text 49.

In text entry mode the full active display area will be available (here 68 x 120 pixels). The status line 45 has a width corresponding to 120 pixels, and with a font based on a width of approximately five pixels and a spacing of one pixel there between, approximately twenty characters will be allowed in the status line. The character height may be nine pixels. The status line 45 is separated from the text part by a line 47, whereby 51 x 120 pixels will be available for the text - and this will correspond to four lines with up to approximately twenty characters in each line.

The cursor 43 will be implemented as a gleaming bar (1 x 11 pixels) gleaming (pixels go on and off) approximately once per second. When the pop-up window 40 or 46 appears, it is surrounded by a rectangular borderline 50, as will be seen from fig 5. Outside this borderline 50 the underlying display is visible. The borderline 50 may have a width corresponding to two pixels. As will be seen from figure 5, a slightly smaller font is used, and this allows the pop-up window to contain three text lines with the status line 45 and the last line in the text part being fully visible. According to the preferred embodiment of the invention the pop-up window will use 40 x 84 pixels. With the present borderline width and a spacing of some pixels between the borderline and the text, the part of the pop-up window useable for displaying the functionality text may include 32 x 76 pixels. With a 7 x 5 font, three lines having 12-15 characters may be displayed. With the above-mentioned size of the display, the pop-up window will cover just above 40 percent of the full active display. It has been found that a pop-up window may advantageously cover from 30 percent to 60 percent, preferably between 35 and 50 percent, of the full active display when the display has a size corresponding to 50-100 x 75-200 pixels. When the pop-up

window becomes too small, the text will be difficult to read and when the pop-up window covers a substantial part of the display, the user will no longer be able to recognize the background display.

Figure 6 shows an alternative embodiment of a hand portable phone according to the invention, and this phone is remarkable in that the alphanumeric keys are left out, and that all functions are available via the navigation and selection key 10. The navigation and selection key 10 is actually the only input key of the phone. Today, all phones have between 15 and 20 keys or even a higher number of keys.

From idle mode, pressing the navigation and selection key 10 gives access to the menu of the phone. Here the menu list used in the embodiment explained with reference to figure 1 needs some further items. The list could be as follows:

1. Call - FI
2. Phone book
3. Editor
4. Messages
5. Call register
6. Phone settings
7. Call divert services
8. Tone settings - LI

As will be seen from the list, only two new menu items are necessary, and these are "Call" and "Editor". Figure 7 illustrates how the applications interact in the phone shown in figure 6.

Advantageously, the phone is capable of assuming a plurality of states in which a group of predetermined functions or actions associated with the state concerned may be performed or accessed by means of the navigation and selection key 10. The processor 17 displays one of said group of functions as a default function. The default operation or function is executed upon pressing the navigation and selection

key 10, and the full set of operations is available upon rolling the navigation and selection key 10.

Figure 7 illustrates how the one key phone according to an alternative embodiment of the invention may change state from idle mode 100 in two ways. If an in-coming call is detected, the phone changes to a call handling state 110 in which the user is allowed to answer the call by pressing the navigation and selection key 10. By rolling the navigation and selection key 10 the pop-up window with the full set of allowable actions will appear, whereby the user is allowed to reject the incoming call or to manually divert the call.

Otherwise, the user has to access the menu by pressing and rolling the navigation and selection key 10, whereby he may select an item in a pop-up window (like in figure 4). Then the above-mentioned eight menu items are available. The phone is provided with a special editor allowing the user to input all kinds of data into e.g. a phone, and this editor is basically described in a British patent application serial no. 9800746.1 filed by the applicant on 14 January 1998. This application is hereby incorporated by reference into the present application.

This editor is very useful in relation to a one key phone, and the operation of the phone will be explained with reference to figures 7 and 8. When the user selects "Menu" in idle mode (see the display in the first row in figure 8) by pressing the navigation and selection key 10, the processor 17 displays a pop-up window 120 including the items available in the menu structure. According to this embodiment these items will be :

1. Call
2. Phone book
3. Notepad
4. Messages
5. Call register
6. Phone settings

7. Call divert services
8. Tone settings
9. Calendar

When the user moves a cursor 121 to the "Notepad" option and selects this option by rolling and pressing the navigation and selection key 10, as will be seen from the first display in the second row of figure 8, the processor 17 displays a new pop-up window (second display in the second row of figure 8) asking the user to specify the kind of entry he wants to make. The phone is in state 103 in figure 7.

He may enter a phone number for making a standard call, a phone number and a corresponding name for storing a record in the phone book, an alphanumeric string ("Text") for a calendar, a message to be sent, etc. If the user selects the "Phone number" item in the second display in the second row of figure 8, the processor 17 changes the idle mode background display to an editor display shown as the first display in the third row of figure 8, and goes to the editing state 111 in figure 7.

A status line 123 indicates the kind of the present input activity, an auxiliary window 126 indicates a string of input candidates, and a candidate may be pointed out by a cursor 127. The movement of the cursor 127 is controlled by rolling the navigation and selection key 10, and the item is selected by pressing the navigation and selection key 10. When a candidate is selected, it is transferred to a character string 124 in the main part of the display in a position pointed out by a cursor 125. The auxiliary window 126 includes the numbers 0-9, a "+" sign and an "OK" icon indicating that the editing is to be terminated. If the user moves the cursor 126 outside this string (as is the case with the context sensitive pop-up window), the auxiliary window 126 will disappear and the navigation and selection key 10 will control the cursor 125 in the string 124. By pressing the navigation and selection key 10 the user may recall the auxiliary window 126 by selecting an "Insert" option in a context sensitive pop-up window including items such as: "Clear", "Insert", "Quit", "Call" and "Save".

If the user selects the "OK" icon in the auxiliary window 126, said window 126 and the cursor 125 will disappear with the entered character string 124 present in the display, as will be seen from the second display in the third row of figure 8. The navigation and selection key 10 will get the "Call" function as default option when pressed. If the navigation and selection key 10 is rolled, alternative options will appear in a new pop-up window. This pop-up window includes items such as: "Call", "Edit", "SMS", "Quit", and "Save".

With the selection of the "Edit" option the entered string will be re-opened for continued editing, the selection of the "SMS" option will request the user to enter a message text, and the selection of the "Quit" option will cause the phone to leave the editing mode and go back to idle mode without saving anything. The "call" option will initiate a call based on the phone number present in the display. The selection of the "Save" option will request the user to enter a name to be used as a label in the phone book. This is shown in the first display in the fourth row of figure 8. In the status line 123 it is indicated that the editor presently handles a name entry to the phone book. A part of a text string 124 has been entered.

It should be noted that the auxiliary window 126 contains the letters a-z (in the English language version), and an icon for switching between upper and lower cases, an icon giving access to a candidate string comprising the figures 0-9, and an icon giving access to a candidate string comprising the special characters such as the Greek letters and other signs presently used in phones. In general, the editor uses title case when used in combination with the phone book application and text case when used for entering text for a message or a calendar entry. The standard letter string displayed in the auxiliary window 126 acts as a basic character string. Selecting the "OK" icon in the figures string or the special characters string recalls the basic character string, whereas selecting the "OK" icon in the basic character string will cause the editing to terminate.

In the second display in the fourth row in figure 8 the "OK" icon in the basic character string has been selected and the editing is terminated. Pressing the

navigation and selection key 10 will save the entered name number in a record in the phone book.

If, instead of selecting the "Save" option, the user had selected the "SMS" option in the pop-up window which appeared when the navigation and selection key 10 was rolled in the second display in the third row of figure 8, he would have been requested to write a message text. The "Write text" display is shown in the first display in the fifth row in figure 8. The status line 123 indicates the kind of text presently edited, and a cursor 125 is placed in the entered text string 124, indicating the position of the next character selected from the auxiliary window 126. When the "OK" icon is selected in the auxiliary window 126, the entered string becomes truncated, as is indicated by four dots 130, thereby creating space for a soft key text for the navigation and selection key 10. The default function will send an SMS message, but when rolling the navigation and selection key 10 the alternative options will appear. When the "send SMS" is selected, the phone number entered earlier will be used as the receiving number, and the user will be requested to enter his message center number if this number is not stored in the phone yet.

The basic idea of the one key phone is that the phone has a large number of applications, each of which uses the editor for entering new data. When the "Call" application 101 in figure 7 is selected in the menu, the "Call" application 101 uses the editor application 111 for entering the phone number and the call handling application for actually setting up a connection based on the entered phone number.

When the "Phone book" application 102 is selected, the editor application 111 is likewise used for entering a phone number and a name as a new record in the phone book. The editor application 111 is also used when an existing record has to be amended, and the operation will be the same as re-opening the string for continued editing, as explained with reference to figure 8. As will be seen from figure 7, a call may be initiated from a phone book record. This is already possible in Nokia 3110™.



The "Notepad" application 103 gives direct access to the editor application 111, and the entered data may be stored in other applications afterwards. However, records may be stored in the "Notepad" application when it is used as a kind of notebook.

Also the "Message" application 104 uses the editor application 111 for entering text and phone numbers. The "Message" application 104 also uses the call handling application 110 for transmitting and receiving messages.

The "Call register" application 105 just lists the latest ingoing, outgoing and missed calls. The application does not use editing, but outgoing calls may be initiated from this application. The "Phone setting" application 106 just sets some parameters for the phone, and no editing is required.

The "Call divert" application 107 uses the editor application 111 for entering phone numbers and the call handling application 110 for transferring the divert instructions to the network.

The "Tone setting" application 108 normally does not use the editor application 111, but if the editor application is prepared for handling the input of new ringing tunes, as described in the above-mentioned British patent application serial no. 9800746.1, the "Tone setting" application 108 may benefit from inputs from the editor application, too.

The "Calendar application" 109 depends on input from the editor application 111, too. However, inputs may come from e.g. the "Notepad" application 103 or the "Message application 104 - but via the editor application.

A context sensitive pop-up window allows soft keys to be left out. This increases the part of the display available for text editing, etc. However, all the options will be available in the window popping up when the navigation and selection key 10 is pressed. The alphanumeric keys normally used may be left out by using a new editor based on input candidates. The size of the phone may be reduced hereby.

The functionality of the navigation means for moving a marker in the display and the selection means for selecting items marked by the marker, e.g. integrated in a depressable roller based navigation key 10, as described above, varies in dependence on the mode of the phone. Table 1 gives an overview of the most basic modes of the phone according to the invention.

	Rolling the navigation key 10	Pressing the navigation key 10
Idle Mode	The phone will display one of two lists in dependence on the rolling direction, e.g. the phone book and the last-dialed stack.	The navigation key 10 has a functionality corresponding to a soft key known per se. The selection of "Menu" will cause a pop-up window including the sub-items of the Menu to appear.
Listing Mode	The cursor will scroll/browse through the items in the list.	The item highlighted by the cursor will be selected. If the selection of the item allows the user to select among sub-items, a pop-up window including these sub-items will appear in the window.
Call handling Mode	A list containing allowable operations will be accessed.	The default soft key operation will be selected, e.g. terminating an ongoing call.
Editing or Entry Mode	The cursor will be moved through the entered string of letters and numbers.	The context sensitive pop-up window will appear in dependence on the cursor position.

Table 1.

According to the two described embodiments of the invention the navigation key 10 will have a functionality known per se in "Idle Mode". By rolling the navigation key 10 the phone will display one of two lists in dependence on the rolling direction, e.g. the phone book and the last-dialed stack. This corresponds to pressing the Navy-key™

on the phone Nokia 3110™ in idle mode. The navigation key 10 has a functionality corresponding to a soft key on the phone Nokia 3110™. The "Menu" will be selected by pressing the navigation key 10. However, as a novel feature a pop-up window including the sub-items of the Menu will appear.

When the pop-up window occurs - either by selecting a soft key option or the context sensitive one - the phone will be in a "Listing Mode". Rolling the navigation key 10 will cause the cursor to scroll/browse through the items in the list, and pressing the navigation key 10 will cause selection of the item highlighted by the cursor. If the selection of the item allows the user to select among further sub-items, a pop-up window including these sub-items will appear in the window. Otherwise, an operation, e.g. establishing a call, will be performed.

When a call has been set up, the phone will be in a "Call handling Mode" in which the navigation key 10 will have a default soft key functionality (call termination) when depressed. Rolling the navigation key 10 will access a list containing allowable operations in the mode in question.

During editing - either by use of an editor based on an alphanumeric key set or by use of the editor described as the alternative embodiment, the phone will be in an "Editing or Entry Mode". The navigation and selection key 10 will not act as a soft key, whereby the part of the display normally reserved for the display of the soft key operation will be available for the entry. The cursor will be moved through the entered string of letters and numbers or the entry candidate string upon rolling the navigation and selection key 10. The context sensitive pop-up window will appear in dependence on the cursor position upon pressing the navigation and selection key 10. As long as the context sensitive pop-up window is present in the display, the phone will be in the "Listing Mode".

## CLAIMS

1. A portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means;

said input means including:

means for moving a marker in the display; and

means for providing a request to the control unit for displaying operations which are allowed in a position defined by said marker;

said control unit generating a pop-up window which covers a part of the display upon reception of the request, and which includes said allowed operations.

2. A portable phone according to claim 1, wherein said means for moving a marker in the display comprises a navigation key means having a roller body whose rolling is detected by means of an encoder operatively connected to the control unit which controls the movement of the marker in the display in dependence thereon.

3. A portable phone according to claim 2, wherein said request means comprises a sensor integrated in a support structure for the roller body, said moving and request means being integrated in the navigation key means.

4. A portable phone according to claims 1-3, wherein the contents of the pop-up window in an entry or editing mode show marker determined context sensitivity.

5. A phone according to claim 4, wherein the display is a dot matrix display for displaying signs arranged in a predetermined number of lines in the active part of the display, each of said lines may contain a plurality of signs, and said marker is provided as a gleaming bar which may be positioned between two of said signs.

6. A portable phone according to claim 4, wherein the phone changes state upon the occurrence of the context sensitive pop-up window to a listing mode in which a plurality of allowable operations are listed in the pop-up window, and

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wherein said request providing input means changes functionality to a selection means which, when depressed, selects the operation marked by the cursor.

7. A portable phone according to claims 3-5, comprising an editor controlled by the control unit and operated by the navigation key means, said control unit defining for the editor:

a first display part in the display for displaying a string of entered information;

a second display part in the display for displaying a string of a plurality of possible information candidates;

one of the candidates in the candidate string being highlighted by the cursor whose movement through information candidates is controlled by the rolling of the navigation key means, and said highlighted candidate being selectable for entering into the string of entered information by pressing the navigation key means.

8. A portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means; said input means including:

a depressable roller body;

a support structure for the roller body;

an encoder operatively connected to the control unit for detecting the rolling of the roller body; and

a sensor operatively connected to the control unit for detecting the depression of the roller body;

said control unit generating a pop-up window which includes a set of allowed operations, and which covers a part of the display upon reception of a request provided by depressing the roller body.

9. A portable phone according to claim 8, comprising an editor controlled by the control unit and operated by the navigation key, said control unit defining for the editor:

a first display part in the display for displaying a string of entered information;

a second display part in the display for displaying a string of a plurality of possible information candidates;

one of the candidates in the candidate string being highlighted by the cursor whose movement through information candidates is controlled by the rolling of the roller body, and said highlighted candidate being selectable for entering into the string of entered information by pressing the roller body.

10. A portable phone according to claims 8-9, wherein the navigation key is the only input means of the phone.

11. A portable phone according to claim 7, wherein all inputs into the phone may be performed by rolling and pressing the navigation key means.

12. A portable phone according to claim 11, wherein the navigation key means is the only input means of the phone.

13. A portable phone according to claims 1-12, wherein the pop-up window is demarcated from the active display area by means of borderlines defining a rectangular frame.

14. A portable phone according to claim 13, wherein the pop-up window area covers from 30 percent to 70 percent of the full active display area.

15. A portable phone according to claim 13, wherein the pop-up window within the rectangular frame displays a number of selectable operations in a listing mode.

16. A portable phone according to claim 15, wherein the pop-up window within the rectangular frame displays two-four selectable operations.

17. A portable phone according to claim 15, wherein the control unit handles a list including a plurality of selectable operations arranged in a predetermined order with only a fractional set of the full set of operations shown simultaneously in the pop-up

window; and rolling of the navigation key means causing scanning through the full set of operation.

18. A portable phone according to claim 17, wherein the pop-up window displays three operations with the display updated for every step in the list, whereby the cursor will highlight the operation in the middle of the pop-up window.

19. A portable phone according to claim 17 or 18, wherein the full set of operations is arranged with two operations defined as a first item and a last item in the list, respectively; and in the listing mode, when the cursor passes outside the first or the last item in the list, the pop-up window disappears and the phone goes from listing mode to the mode associated with the background display.

20. A portable phone substantially as hereinbefore described with reference to figures 1 to 5, and 7 to 8 or 2 to 8 of the accompanying drawings.



Application No: GB 9806325.8  
Claims searched: All

Examiner: Jared Stokes  
Date of search: 21 August 1998

**Patents Act 1977  
Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:  
  
UK Cl (Ed.P): H4K (KFH)  
                  H4L (LECX)  
  
Int Cl (Ed.6): H04M (1/00, 1/02, 1/22, 1/23)  
                  H04Q (7/32)  
  
Other: On-line - WPI

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
Y	EP 0 715 441 A1 (AT&T) See column 3 line 34-column 4 line 47	1-18
Y	EP 0 651 544 A2 (IBM) See whole document	1-18
Y	WO 97/50264 A1 (Samsung) See whole document	1-18

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.





**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/343,333	Matthieu Kennedy Martyn	5035-133US

INTERNATIONAL APPLICATION NO.

PCT/GB01/03387

I.A. FILING DATE	PRIORITY DATE
------------------	---------------

07/27/2001

07/28/2000

Richard C Woodbridge  
Woodbridge & Associates  
P O Box 592  
Princeton, NJ 08542-0592

**CONFIRMATION NO. 1608**

**371 FORMALITIES LETTER**



\*OC00000010693709\*

Date Mailed: 08/15/2003

**NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 01/28/2003
- Copy of the International Search Report filed on 01/28/2003
- Copy of IPE Report filed on 01/28/2003
- Preliminary Amendments filed on 01/28/2003
- Information Disclosure Statements filed on 04/02/2003
- Oath or Declaration filed on 01/28/2003
- Request for Immediate Examination filed on 01/28/2003
- Copy of references cited in ISR filed on 01/28/2003
- U.S. Basic National Fees filed on 01/28/2003

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date. The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) in that it:
  - is not executed in accordance with either 37 CFR 1.66 or 37 CFR 1.68.
- \$130 Surcharge for providing the oath or declaration later than 30 months from the priority date (37 CFR 1.492(e)) is required.

**SUMMARY OF FEES DUE:**

Total additional fees required for this application is \$130 for a Large Entity:

LGE0003542

- \$130 Late oath or declaration Surcharge.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 305-3736

PART 2 - OFFICE COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/343,333	PCT/GB01/03387	5035-133US

FORM PCT/DO/EO/905 (371 Formalities Notice)

LGE0003543

### Declaration and Power of Attorney For Patent Application English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor) if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

#### COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

The specification of which

(check one)

is attached hereto.

was filed on **JULY 27, 2001** as United States Application No. or PCT International Application Number **PCT/GB01/03387** and was amended on \_\_\_\_\_

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

0019459.7

(Number)

GB

(Country)

28 July 2000

(Day/Month/Year Filed)

\_\_\_\_\_  
(Number)

\_\_\_\_\_  
(Country)

\_\_\_\_\_  
(Day/Month/Year Filed)

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

\_\_\_\_\_  
(Application Serial No.)

\_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Application Serial No.)

\_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Application Serial No.)

\_\_\_\_\_  
(Filing Date)

I hereby claim the benefit under 35 U.S.C. Section 120 of any United States application(s), or Section 365© of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C.F.R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

\_\_\_\_\_  
(Application Serial No.)

\_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Status)  
(patented, pending, abandoned)

\_\_\_\_\_  
(Application Serial No.)

\_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Status)  
(patented, pending, abandoned)

\_\_\_\_\_  
(Application Serial No.)

\_\_\_\_\_  
(Filing Date)

\_\_\_\_\_  
(Status)  
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further 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 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

2  
Richard C. Woodbridge                      26,423  
Stuart H. Nissim                              33,541  
Thomas J. Onka                                42,053

Send Correspondence to:      Richard C. Woodbridge, Esq.  
   Woodbridge & Associates, P.C.  
   P.O. Box 592  
   Princeton, NJ 08542-0592

Direct Telephone Calls to:      (name and telephone number)  
   Richard C. Woodbridge - 609-924-3773

Full name of sole or first inventor

Mathieu Kennedy Martyn

First or sole inventor's signature

*M. Kennedy Martyn*

Date

3/4/03

Residence

61 Strahan Road, London E3 5DA, GB

*CBN*

Citizenship

British

Post Office Address

61 Strahan Road, London E3 5DA, GB

Full name of second inventor, if any

Second inventor's signature

Date

Residence

Citizenship

Post Office Address

<b>Response To Notice To File Missing Parts Of Application Filing Date Granted (PTO-1533) (Large Entity)</b>			Docket No. 5035-133US
In Re Application Of: <b>Matthieu Kennedy Martyn</b>			
Serial No. 10/343,333	Filing Date 28 January 2003	Examiner Vonda M. Wallace	Group Art Unit
Invention: <b>COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS</b>			
<p><u>Mail Stop Missing Parts</u> <u>TO THE COMMISSIONER FOR PATENTS:</u></p> <p>This is a response to the Notice to File Missing Parts of Application - Filing Date Granted (PTO-1533) mailed on <u>August 15, 2003</u> <i>Date</i></p> <p>Enclosed herewith for filing are the following:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> A copy of the Notice to File Missing Parts of Application - Filing Date Granted (PTO-1533). <b>(REQUIRED)</b></li> <li><input type="checkbox"/> An oath or declaration in compliance with 37 CFR 1.63, including residence information and identifying the application by the above Application Number and Filing Date.</li> <li><input checked="" type="checkbox"/> A properly signed oath or declaration in compliance with 37 CFR 1.63.</li> <li><input type="checkbox"/> An oath or declaration in compliance with 37 CFR 1.63 listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date.</li> <li><input type="checkbox"/> A verified English translation of the non-English language application papers as originally filed. It is requested that this translation be used as the copy for examination purposes in the United States Patent and Trademark Office.</li> <li><input checked="" type="checkbox"/> Other (list):</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p><b>Recordation of Assignment, Assignment and \$40.00 filing Fee Acknowledgement Post Card</b></p> </div>			

Rec'd PCT/PTO 27 AUG 2003

<b>Response To Notice To File Missing Parts Of Application Filing Date Granted (PTO-1533)(Large Entity)</b>	Docket No. 5035-133US <i>JH</i>
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In Re Application Of: **Matthieu Kennedy Martyn**

Serial No. <b>10/343,333</b>	Filing Date <b>28 January 2003</b>	Examiner <b>Vonda M. Wallace</b>	Group Art Unit
---------------------------------	---------------------------------------	-------------------------------------	----------------

Invention:  
**COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS**

TO THE COMMISSIONER FOR PATENTS:

Mail Stop Missing Parts

Completion of application fees as calculated below:

- Utility application filing fee \_\_\_\_\_
- Design application filing fee \_\_\_\_\_
- Total number of independent claims = \_\_\_\_\_
- Total number of claims = \_\_\_\_\_
- Multiple dependent claims \_\_\_\_\_
- Surcharge for late payment of filing fee and/or late filing of original declaration or oath \$130.00
- Petition and fee for filing by other than all the inventors or a person not the inventor \_\_\_\_\_
- Fee for processing an application filed with a non-English language specification \_\_\_\_\_
- Fee for processing and retention of application \_\_\_\_\_

09/01/2003 MKCYPFRM 00000094 10343333  
 01 130.00 CP Total completion of application fees \$130.00

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the above-identified Notice to File Missing Parts of Application. The requested extension is as follows (check time period desired). If an additional time extension is required, please consider this a petition therefor.

- One month     Two months     Three months     Four months     Five months

from: \_\_\_\_\_ until: \_\_\_\_\_  
Date Date

Total time extension fees \_\_\_\_\_

Total fees due \$130.00

Rec'd PCT/PTO 27 AUG 2003

<b>Response To Notice To File Missing Parts Of Application</b> <b>Filing Date Granted (PTO-1533) (Large Entity)</b>	Docket No. 5035-133US
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In Re Application Of: **Matthieu Kennedy Martyn**

Serial No. 10/343,333	Filing Date 28 January 2003	Examiner Vonda M. Wallace	Group Art Unit
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Invention:  
**COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS**

TO THE COMMISSIONER FOR PATENTS:  
Mail Stop Missing Parts

The fee of **\$130.00** is to be paid as follows:

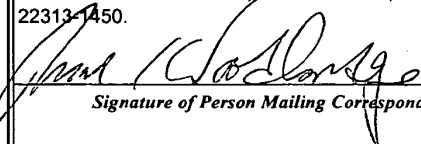
- A check in the amount of the fee is enclosed.
- The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No. **23-3040**
- If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No.

  
Signature

Dated: *Aug. 25, 2003*

**Richard C. Woodbridge**  
**Synnestvedt Lechner & Woodbridge LLP**  
**P.O. Box 592**  
**Princeton, NJ 08542**  
**609-924-3773 - phone**  
**609-924-1811 - fax**

cc: **Peter Langley**

I certify that this document and fee is being deposited on <i>Aug 25, 2003</i> with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.
 Signature of Person Mailing Correspondence
<b>Richard C. Woodbridge</b> Typed or Printed Name of Person Mailing Correspondence





UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
 P.O. Box 1419  
 Alexandria, Virginia 22313-1450  
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U.S. APPLICATION NUMBER NO. 10/343,333	FIRST NAMED APPLICANT Matthieu Kennedy Martyn	ATTY. DOCKET NO. 5035-133US
INTERNATIONAL APPLICATION NO. PCT/GB01/03387		
I.A. FILING DATE 07/27/2001	PRIORITY DATE 07/28/2000	

Richard C Woodbridge  
 Woodbridge & Associates  
 P O Box 592  
 Princeton, NJ 08542-0592

CONFIRMATION NO. 1608  
 371 FORMALITIES LETTER  
  
 \*OC000000010693709\*

Date Mailed: 08/15/2003

**NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

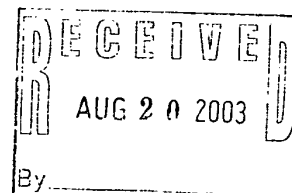
- Copy of the International Application filed on 01/28/2003
- Copy of the International Search Report filed on 01/28/2003
- Copy of IPE Report filed on 01/28/2003
- Preliminary Amendments filed on 01/28/2003
- Information Disclosure Statements filed on 04/02/2003
- Oath or Declaration filed on 01/28/2003
- Request for Immediate Examination filed on 01/28/2003
- Copy of references cited in ISR filed on 01/28/2003
- U.S. Basic National Fees filed on 01/28/2003

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date. The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) in that it:
  - is not executed in accordance with either 37 CFR 1.66 or 37 CFR 1.68.
- \$130 Surcharge for providing the oath or declaration later than 30 months from the priority date (37 CFR 1.492(e)) is required.

SUMMARY OF FEES DUE:

Total additional fees required for this application is \$130 for a Large Entity:



LGE0003550

- \$130 Late oath or declaration Surcharge.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

VONDA M WALLACE

Telephone: (703) 305-3736

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/343,333	PCT/GB01/03387	5035-133US

FORM PCT/DO/EO/905 (371 Formalities Notice)

LGE0003551


**UNITED STATES PATENT AND TRADEMARK OFFICE**

 UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

U.S. APPLICATION NUMBER NO. 10/343,333	FIRST NAMED APPLICANT Mathieu Kennedy Martyn	ATTY. DOCKET NO. 5035-133US
---	---	--------------------------------

INTERNATIONAL APPLICATION NO. PCT/GB01/03387
---

I.A. FILING DATE 07/27/2001	PRIORITY DATE 07/28/2000
--------------------------------	-----------------------------

 Richard C Woodbridge  
 Woodbridge & Associates  
 PO Box 592  
 Princeton, NJ 08542-0592

**CONFIRMATION NO. 1608  
 371 ACCEPTANCE LETTER**


Date Mailed: 09/24/2003

**NOTICE OF ACCEPTANCE OF APPLICATION UNDER 35 U.S.C 371 AND 37 CFR 1.495**

The applicant is hereby advised that the United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495), has determined that the above identified international application has met the requirements of 35 U.S.C. 371, and is **ACCEPTED** for national patentability examination in the United States Patent and Trademark Office.

The United States Application Number assigned to the application is shown above and the relevant dates are:

<u>08/27/2003</u>	<u>08/27/2003</u>
DATE OF RECEIPT OF 35 U.S.C. 371(c)(1), (c)(2) and (c)(4) REQUIREMENTS	DATE OF RECEIPT OF ALL 35 U.S.C. 371 REQUIREMENTS

A Filing Receipt (PTO-103X) will be issued for the present application in due course. **THE DATE APPEARING ON THE FILING RECEIPT AS THE " FILING DATE" IS THE DATE ON WHICH THE LAST OF THE 35 U.S.C. 371 REQUIREMENTS HAS BEEN RECEIVED IN THE OFFICE. THIS DATE IS SHOWN ABOVE.** *The filing date of the above identified application is the international filing date of the international application (Article 11(3) and 35 U.S.C. 363).* Once the Filing Receipt has been received, send all correspondence to the Group Art Unit designated thereon.

The following items have been received:

- Copy of the International Application filed on 01/28/2003
- Copy of the International Search Report filed on 01/28/2003
- Copy of IPE Report filed on 01/28/2003
- Preliminary Amendments filed on 01/28/2003
- Information Disclosure Statements filed on 04/02/2003
- Oath or Declaration filed on 08/27/2003
- Request for Immediate Examination filed on 01/28/2003
- Copy of references cited in ISR filed on 01/28/2003
- U.S. Basic National Fees filed on 01/28/2003
- Assignee Statement filed on 08/27/2003

LGE0003552

---

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

---

VONDA M WALLACE  
Telephone: (703) 305-3736

PART 3 - OFFICE COPY

FORM PCT/DO/EO/903 (371 Acceptance Notice)

LGE0003553

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("6512525").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:16
L2	521	(715/762).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:17
L3	290	(715/808).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
L4	136	(715/759).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
L5	160	(715/776).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
S1	920	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 09:43
S2	17	S1 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 12:03
S3	29	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 09:51
S4	41	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 09:57
S5	2	(("6456841") or ("6144863")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 09:57
S6	79	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 12:03
S7	102	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 16:33



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	5035-133US	1608

7590 12/12/2006  
 Richard C Woodbridge  
 Woodbridge & Associates  
 PO Box 592  
 Princeton, NJ 08542-0592

EXAMINER

VU, THANH T

ART UNIT	PAPER NUMBER
2174	

2174

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> Thanh T. Vu	<b>Art Unit</b> 2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 28 January 2003.
- 2a)  This action is FINAL.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 14-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 14-36 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a)  All    b)  Some \*    c)  None of:
1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

*Specification*

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

*Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims recite “a computer program” claimed as computer listing per se, i.e., the descriptions or expressions of the programs, is not a physical “thing” (see Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, page 53).

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Capps et al. (“Capps”, U.S. Pat. No. 6,512,525) and Arcuri et al. (“Arcuri”, U.S. Pat. No. 6,121,968).

Per claim 14, Capps teaches a computing device comprising a display screen, the computing device being able to display on the screen an application summary window, in which



summary window displays a list of several common functions offered within an application, any item in the list being selectable to initiate the respective function (figs. 7, 8b, 14; col. 2, lines 56-67; col. 3, lines 13-25 and 31-44; col. 12, lines 55-61; col. 22, lines 28; e.g. *application summary window 254, 268, or 374*). Capps does not specifically teach a limited list of several common functions being a subset of all of the functions offered by a given application but not being scrollable to reveal additional functions outside of the subset. However, Arcuri teaches a limited list of several common functions being a subset of all of the functions offered by a given application but not being scrollable to reveal additional functions outside of the subset (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Arcuri in the invention of Capps in order to provide a system for dynamically changing the available commands in a given menu based upon the particular needs and utilization behavior of a user (Arcuri, col. 2, lines 10-13).

Per claim 15, Capps further teaches selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated (figs 8a-8b, 10a-10b; e.g. *open application 256, 274, 392, 410*; col. 13, lines 13-26; col. 16, lines 22-28, lines 39-45).

Per claim 16, Capps further teaches an application launcher lists the names and/or icons of several applications and selecting a name or icon caused the summary window for that application to be opened (figs. 15b and 15c; *names of applications 374*; e.g. *summary window 400 for mail application*; col. 16, lines 62).

Per claim 17, Arcuri teaches the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user (col. 2, lines 9-12; col. 2, lines 15-30).

Per claim 18, Arcuri teaches the user can define what functionality and/or stored data types interest to that user for the summary window for an application (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command form the long menu*).

Per claim 19, Capps the functionality and/or stored data types for a summary window for a given application varies with the environment of the device (col. 2, line 54-col. 3, line 5; col. 16, lines 54-60; *a given persona can be extended by applications running on the computer system*).

Per claim 20, Arcuri teaches the functionality and/or stored data types for a summary window for a given application varies with the actions of the user (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command form the long menu*).

Per claim 21, Capps teaches opening a summary window for a given application does not result in that application being opened (figs. 7, 8b, and 14; e.g. *application summary window 254, 268, or 374*).

Per claim 22, Capps teaches the summary window is a frame which includes the name of the associated application (figs. 7, 8b, and 14; e.g. *application summary window 254, 268, or 374*).

Per claim 23, Capps teaches the summary window further display a list of data stored in that application (col. 3, lines 31-37; *multiple name records pertaining to the personas provided by the system*).

Per claim 24, Capps teaches the computing device of claim 14, being a mobile telephone (see fig. 16b).

Per claim 25, Capps teaches the computing device of claim 14, being a PC (fig. 1; col. 2, lines 52-54; col. 11, lines 40-43).

Claims 26 and 27 are rejected under the same rationale as claim 1.

Claims 28-36 are rejected under the same rationale as claims 15-23 respectively.

#### *Inquiries*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh T. Vu whose telephone number is (571) 272-4073. The examiner can normally be reached on Mon-Thur and every other Fri 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/343,333  
Art Unit: 2174

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T. Vu

*Kristine Kincaid*  
KRISTINE KINCAID  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

LGE0003561



<b>Notice of References Cited</b>	Application/Control No. 10/343,333	Applicant(s)/Patent Under Reexamination MARTYN, MATHIEU KENNEDY	
	Examiner Thanh T. Vu	Art Unit 2174	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,121,968	09-2000	Arcuri et al.	715/825
*	B US-6,512,525	01-2003	Capps et al.	715/762
C	US-			
D	US-			
E	US-			
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

**FOREIGN PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

**NON-PATENT DOCUMENTS**

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



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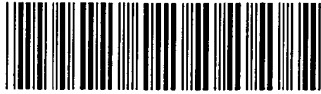
Bib Data Sheet

CONFIRMATION NO. 1608

<b>SERIAL NUMBER</b> 10/343,333	<b>FILING OR 371(c) DATE</b> 08/27/2003 <b>RULE</b>	<b>CLASS</b> 345	<b>GROUP ART UNIT</b> 2672	<b>ATTORNEY DOCKET NO.</b> 5035-133US	
<b>APPLICANTS</b> Mathieu Kennedy Martyn, London, GBN, UNITED KINGDOM;					
** CONTINUING DATA ***** This application is a 371 of PCT/GB01/03387 07/27/2001 TV					
** FOREIGN APPLICATIONS ***** UNITED KINGDOM 0019459.7 07/28/2000 TV					
Foreign Priority claimed <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		<b>STATE OR COUNTRY</b> GBN	<b>SHEETS DRAWING</b> 1	<b>TOTAL CLAIMS</b> 23	<b>INDEPENDENT CLAIMS</b> 2
35 USC 119 (a-d) conditions met <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance					
Verified and Acknowledged Examiner's Signature: <i>[Signature]</i> TV Initials		<b>ADDRESS</b> Richard C Woodbridge Woodbridge & Associates PO Box 592 Princeton ,NJ 08542-0592			
<b>TITLE</b> Computing device with improved user interface for applications					
<b>FILING FEE RECEIVED</b> 1084	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

LGE0003564

**Search Notes**



**Application/Control No.**

10/343,333

**Applicant(s)/Patent under Reexamination**

MARTYN, MATHIEU  
KENNEDY

**Examiner**

Thanh T. Vu

**Art Unit**

2174

**SEARCHED**

Class	Subclass	Date	Examiner
715	762 776 759 808	11/7/2006	TV

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
East Search	11/7/2006	TV

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner



PATENT

Docket No. 5459-141US/28418 USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 5459-141US/28418 USA Group Art Unit: 2174

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON June 12, 2007**

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MAIL STOP AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 C.F.R. §1.111  
TO EXAMINER'S ACTION MAILED DECEMBER 12, 2006**

Sir:

This is in response to the Office Action mailed December 12, 2006, having a period for response set to expire on March 12, 2007. A Petition extending the period for response for three months, to June 12, 2007, is included herein, along with authorization to charge the extension fee to a credit card. The following amendments and remarks are respectfully submitted.

Amendments to the claims begin on page 2 of this paper; Remarks begin on page 7 of this paper.

LGE0003566

**In the Claims**

Claims 1-13 (Canceled)

14. (Currently amended) A computing device comprising a display screen, the computing device being able to display on the screen a main menu listing one or more applications, and additionally being able to display on the screen an application summary window that can be reached directly from the main menu, wherein ; ~~in which~~ the summary window displays a limited list of several common functions offered within an application, any item in the list being selectable to initiate the respective function, ~~the limited list being a sub set of all of the functions offered by a given application but not being scrollable to reveal additional functions outside of the sub set.~~

15. (Original) The computing device of Claim 14 in which selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

16. (Original) The computing device of Claim 14 in which an application launcher lists the names and/or icons of several applications and selecting a name or icon causes the summary window for that application to be opened.

17. (Original) The computing device of Claim 14 in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

18. (Original) The computing device of Claim 14 in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.

19. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.

20. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

21. (Original) The computing device of Claim 14 in which opening a summary window for a given application does not result in that application being opened.

22. (Original) The computing device of Claim 14 in which the summary window is a frame which includes the name of the associated application.

23. (Original) The computing device of Claim 14 in which the summary window further display a list of data stored in that application.

24. (Original) The computing device of Claim 14, being a mobile telephone.

25. (Original) The computing device of Claim 14, being a PC.

26. (Currently amended) A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing one or more applications, and additionally being able to display on the screen an application summary window that can be reached directly from the main menu, wherein, in which the summary window displays a limited list of several common functions offered within an application, any item in the list being selectable to initiate the respective function, the limited list being a sub-set of all of

~~the functions offered by a given application but not being scrollable to reveal additional functions outside of the sub-set.~~

27. (Currently amended) The computer program product of Claim 26, being wherein said computer-readable code comprises an operating system program.

28. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code is operable such that selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

29. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code is operable to cause the screen to display an application launcher which lists the names and/or icons of several applications, wherein selecting a name or icon causes the summary window for that application to be opened.

30. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code enables in which the kinds of content of a summary window for a given application to can be selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

31. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code which enables a user to define what functionality and/or stored data types are of interest to that user for the summary window for an application.

32. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code enables in which the functionality and/or stored data types for a summary window for a given application to vary varies with the environment of the device.

33. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code enables in which the functionality and/or stored data types for a summary window for a given application to vary ~~varies~~ with the actions of the user.

34. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code enables the in which opening of a summary window for a given application without resulting ~~does not result~~ in that application being opened.

35. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code enables in which the summary window to be ~~is~~ a frame which includes the name of the associated application.

36. (Currently amended) The computer program product of Claim 26, wherein said computer-readable code enables in which the summary window to further display ~~displays~~ a list of data stored in that application.

37. (New) The computing device of claim 1 wherein said limited list is a sub-set of all of the functions offered by a given application.

38. (New) The computing device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

39. (New) The computer program product according to claim 26 wherein said limited list is a sub-set of all of the functions offered by a given application.

40. (New) The computer program product according to claim 38 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

**REMARKS**

**Petition for Extension of Time Under 37 CFR 1.136(a)**

It is hereby requested that the term to respond to the Examiner's Action of December 12, 2006 be extended three months, from March 12, 2007 to June 12, 2007.

Authorization to charge a Credit Card is given to cover the extension fee. The Commissioner is hereby authorized to charge any additional fees associated with this communication to Deposit Account No. 19-5425.

In the Office Action, the Examiner indicated that claims 14 through 36 are pending in the application and the Examiner rejected all claims.

**The §101 Rejection**

On page 2 of the Office Action, the Examiner has rejected claims 26-36 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Examiner has indicated that the claims recite "a computer program" and that this is not a physical "thing." Applicant has amended the claims to recite the invention in a form appropriate to U.S. Patent practice, that is, by directing the claims to a "computer program product comprising a computer-readable storage medium having computer-readable program code embodied in the medium..." and by amending the dependent claims to enable their functions via the computer-readable code. Accordingly, applicant respectfully submits that this overcomes the rejection of claims 26-36 under 35 U.S.C. §101, and the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 26-36 under 35 U.S.C. §101.

LGE0003572

**Claim Rejections, 35 U.S.C. § 103**

On page 2 of the Office Action, the Examiner rejected claims 14-36 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,512,525 to Capps et al. in view of U.S. Patent No. 6,121,968 to Arcuri et al.

**The Present Invention**

In one implementation of the present invention, a computing device displays on a display screen a main menu listing a number of applications, and additionally is able to display on the display screen an application summary window that displays a limited list of several common functions offered within an application, such that any item in the limited list is selectable to initiate its respective function.

**U.S. Patent No. 6,512,525 to Capps et al.**

U.S. Patent No. 6,512,525 to Capps et al. (“Capps”) discloses a system capable of adopting a number of personas. All applications running on the system have access to a central repository of extensible personas, and the personas are each associated with a suite of parameters which are appropriate for conducting transactions under a particular persona. Figure 7 illustrates an example of a screen shot according to Capps; it shows an open *application* (an ownership record) (see col. 4, lines 65-67), and also shows a window listing a number of options displayed within the *application*.



**U.S. Patent No. 6,121,968 to Arcuri et al.**

U.S. Patent No. 6,121,968 to Arcuri et al. (“Arcuri”) discloses the concept of short and long menu states, with the long menu being accessible via the short menu. As illustrated in Figs. 2A, 2B, etc., the menus become available once an *application* is opened (in the example shows in Arcuri, the application appears too be Microsoft Word); the menus are not accessible from the device’s main menu.

**The Examiner has not Established a *prima facie* Case of Obviousness**

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

As note above, the present claimed invention, as amended, specifies that the computing device displays a *main menu* listing one or more applications, and is able to display an application summary window directly from the main window. The claims have been amended to focus more directly on this aspect, and new claims 37-40 have been added to recite limitations, now in dependent form, that have been removed from the independent claims by this amendment. The summary window displays a limited list of one or more common functions offered within an application listed on the main menu, and each item in the limited list is selectable to activate its function, instead of

requiring the user to first access the desired application and then “drill down” to the common function. Both independent claims recite these features, and thus, all claims include these features.

Neither Capps nor Arcuri teach or suggest these claimed elements. In each, the various functions described are accessible only after the user has entered the *application* of interest – they do not teach or suggest functionality that enables the functions to be accessible from the main menu and across all applications displayed in the main menu. . The present claimed invention has significant advantages over the prior art, including Capps and Arcuri. Using the present invention, a user can very quickly select the desired functionality, without needing to first launch a selected application and then enter a menu system specific to that application. Instead, the user can access a limited list of functions (which could, for example, represent the most commonly-selected functions for a particular application) directly from the main menu, as illustrated in Figures 1-3 of the present application. Neither Capps nor Arcuri, alone or combined, teach or suggest any such advantage, and do not provide a person skilled in the art with any motivation to modify the respective arrangements of Capps and Arcuri so as to make a limited set of an application’s functions available to a user directly from the main menu.

Accordingly, for the reasons set forth above, it is submitted that each of claims 14-36 patentably define over Capps and Arcuri, taken alone or in combination. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of claims 14-36 under 35 U.S.C. §103.

**Conclusion**

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

Included herein is a Petition for extension of time to respond to the Examiner's Action, and authorization to charge the extension fee to a credit card. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

June 12, 2007  
Date

/Mark D. Simpson/  
Mark D. Simpson, Esquire  
Registration No. 32,942

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W:\SLW CLIENTS\=CLIENTS - 5000\=CLIENTS - 5400 THRU 5499\5459 - SYMBIAN LIMITED\141US - P28418 USA\FORMERLY ORIGIN FILE 5035-133US - APPLICATION SNAPSHOT\NON-FINAL OA OF 12122006\10343333REPLYTOOAO12122006.DOC

LGE0003576

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Mark D. Simpson/Lynn White			
<b>Attorney Docket Number:</b>	5035-133US			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
Claims in excess of 20	1615	4	50	200
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
Post-Allowance-and-Post-Issuance:				
<b>Extension-of-Time:</b>				

LGE0003577

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$0 paid	1253	1	1020	1020
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1220</b>

LGE0003578

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	1862570
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Correspondence Address:</b>	Richard C Woodbridge Woodbridge & Associates PO Box 592 - Princeton NJ 08542-0592 US - -
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	5035-133US
<b>Receipt Date:</b>	12-JUN-2007
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	11:51:21
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 1220
RAM confirmation Number	5869

LGE0003579

Deposit Account	
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**File Listing:**

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1		10343333ReplytoOAof12122006.pdf	62352	yes	11
<b>Multipart Description/PDF files in .zip description</b>					
	<b>Document Description</b>		<b>Start</b>		<b>End</b>
	Amendment - After Non-Final Rejection		1		1
	Claims		2		6
	Applicant Arguments/Remarks Made in an Amendment		7		11

**Warnings:**

**Information:**

2	Fee Worksheet (PTO-06)	fee-info.pdf	8338	no	2
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**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	70690
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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

LGE0003580

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875					Application or Docket Number <b>10/343,333</b>		Filing Date <b>08/27/2003</b>		<input type="checkbox"/> To be Mailed		
<b>APPLICATION AS FILED – PART I</b>											
(Column 1)			(Column 2)			SMALL ENTITY <input type="checkbox"/>		OR		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)			RATE (\$)	FEE (\$)			
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A				N/A				
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A				N/A				
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A				N/A				
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		OR		X \$ =				
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =				X \$ =				
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).										
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>											
* If the difference in column 1 is less than zero, enter "0" in column 2.											
<b>APPLICATION AS AMENDED – PART II</b>											
(Column 1)			(Column 2)			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
AMENDMENT	<b>06/12/2007</b>	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(j))</small>	+ 27	Minus	** 23	= 4	X \$ =		OR	X \$50=	200	
	Independent <small>(37 CFR 1.16(h))</small>	+ 2	Minus	***3	= 0	X \$ =		OR	X \$200=	0	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>										
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	<b>200</b>	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(j))</small>	+	Minus	**	=	X \$ =		OR	X \$ =		
	Independent <small>(37 CFR 1.16(h))</small>	+	Minus	***	=	X \$ =		OR	X \$ =		
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>										
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.											
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".											
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

Legal Instrument Examiner:  
Deborah Nash

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**  
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	5035-133US	1608
	7590 08/22/2007	Richard C Woodbridge Woodbridge & Associates PO Box 592 Princeton, NJ 08542-0592	EXAMINER VU, THANH T	
			ART UNIT 2174	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/343,333	MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thanh T. Vu	2174	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 12 June 2007.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-40 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-40 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a)  All    b)  Some \* c)  None of:
      - 1.  Certified copies of the priority documents have been received.
      - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_.

**DETAILED ACTION**

This communication is responsive to Amendment, filed 06/12/2007.

Claims 14-40 are pending in this application. In the Amendment, claims 37-40 were added, and claims 14, and 26 were amended. This action is made Final.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Capps et al. (“Capps”, U.S. Pat. No. 6,512,525), Richard (U.S. Pat. No. 6,781,161) and Arcuri et al. (“Arcuri”, U.S. Pat. No. 6,121,968).

Per claim 14, Capps teaches a computing device comprising a display screen, the computing device being able to display on the screen an application summary window, in which summary window displays a list of several common functions offered within an application, any item in the list being selectable to initiate the respective function (figs. 7, 8b, 14; col. 2, lines 56-67; col. 3, lines 13-25 and 31-44; col. 12, lines 55-61; col. 22, lines 28; e.g. *application summary window 254, 268, or 374*). Capps does not specifically teach the computing device being able to display on the screen a main menu listing one or more applications, and a limited list of several common functions offered by a given application. However, Richard teaches computing device being able to display on the screen a main menu listing one or more applications (fig. 6; APP A, APP B; element 510). Arcuri teaches a limited list of several common functions offered within

an application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Richard, and Arcuri in the invention of Capps in order to provide a switching menu between multiple open windows in multiple applications on a computer desktop, and in order to provide a system for dynamically changing the available commands in a given menu based upon the particular needs and utilization behavior of a user (Arcuri, col. 2, lines 10-13).

Per claim 15, Capps further teaches selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated (figs 8a-8b, 10a-10b; *e.g. open application 256, 274, 392, 410*; col. 13, lines 13-26; col. 16, lines 22-28, lines 39-45).

Per claim 16, Capps further teaches an application launcher lists the names and/or icons of several applications and selecting a name or icon caused the summary window for that application to be opened (figs. 15b and 15c; *names of applications 374*; *e.g. summary window 400 for mail application*; col. 16, lines 62).

Per claim 17, Arcuri teaches the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user (col. 2, lines 9-12; col. 2, lines 15-30).

Per claim 18, Arcuri teaches the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 19, Capps teaches the functionality and/or stored data types for a summary window for a given application varies with the environment of the device (col. 2, line 54-col. 3, line 5; col. 16, lines 54-60; *a given persona can be extended by applications running on the computer system*).

Per claim 20, Arcuri teaches the functionality and/or stored data types for a summary window for a given application varies with the actions of the user (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 21, Capps teaches opening a summary window for a given application does not result in that application being opened (figs. 7, 8b, and 14; e.g. *application summary window 254, 268, or 374*).

Per claim 22, Capps teaches the summary window is a frame which includes the name of the associated application (figs. 7, 8b, and 14; e.g. *application summary window 254, 268, or 374*).

Per claim 23, Capps teaches the summary window further display a list of data stored in that application (col. 3, lines 31-37; *multiple name records pertaining to the personas provided by the system*).

Per claim 24, Capps teaches the computing device of claim 14, being a mobile telephone (see fig. 16b).

Per claim 25, Capps teaches the computing device of claim 14, being a PC (fig. 1; col. 2, lines 52-54; col. 11, lines 40-43).

Claims 26 and 27 are rejected under the same rationale as claim 1.

Claims 28-36 are rejected under the same rationale as claims 15-23 respectively.

Per claim 37, Arcuri teaches the computing device of claim 1, wherein said limited list if a sub-set of all of the functions offered by a given application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Per claim 38, Arcuri teaches the computer device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Claims 39-40 are rejected under the same rationale as claims 37 and 38.

***Response to Arguments***

Applicant's arguments with respect to the amendment have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Inquiries*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh T. Vu whose telephone number is (571) 272-4073. The examiner can normally be reached on Mon-Thur and every other Fri 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T. Vu

  
KRISTINE KINCAID  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

<b>Notice of References Cited</b>	Application/Control No. 10/343,333	Applicant(s)/Patent Under Reexamination MARTYN, MATHIEU KENNEDY	
	Examiner Thanh T. Vu	Art Unit 2174	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,781,611	08-2004	Richard, Christian James	715/779
B	US-			
C	US-			
D	US-			
E	US-			
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

**FOREIGN PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

**NON-PATENT DOCUMENTS**

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



**Search Notes**



<b>Application/Control No.</b> 10/343,333	<b>Applicant(s)/Patent under Reexamination</b> MARTYN, MATHIEU KENNEDY	
<b>Examiner</b> Thanh T. Vu	<b>Art Unit</b> 2174	

SEARCHED			
Class	Subclass	Date	Examiner
715	Updated Search	8/13/2007	TV

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
East Search	8/13/2007	TV

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

PATENT

Docket No. 5459-141US/28418 USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 5459-141US/28418 USA Group Art Unit: 2174

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON October 22, 2007**

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MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY UNDER 37 CFR §1.116  
TO FINAL OFFICE ACTION MAILED AUGUST 22, 2007**

Sir:

This is in response to the final Office Action mailed August 22, 2007, having a period for response set to expire on November 22, 2007. The following remarks are respectfully submitted.

Remarks begin on page 2 of this paper.

LGE0003591

**REMARKS**

In the Office Action, the Examiner indicated that claims 14 through 40 are pending in the application and the Examiner rejected all claims.

**Claim Rejections, 35 U.S.C. § 103**

On page 2 of the Office Action, the Examiner rejected claims 14-40 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,512,525 to Capps et al. in view of U.S. Patent No. 6,781,161 to Richard and U.S. Patent No. 6,121,968 to Arcuri et al.

**The Present Invention**

In one implementation of the present invention, a computing device displays on a display screen a main menu listing a number of applications, and additionally is able to display on the display screen an application summary window that displays a limited list of several common functions offered within an application, such that any item in the limited list is selectable to initiate its respective function. In other words, the present invention displays in a main menu a list of accessible applications, and by selecting (e.g., hovering the cursor over) one of the applications listed in the main menu, a summary window is opened showing various functions that can be selected within the selected application.

**The Examiner has not Established a *prima facie* Case of Obviousness**

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

Applicant has presented previous arguments to the Examiner regarding the Capps and Arcuri patents. In response to those arguments and amendments made in the last response by the Applicant, the Examiner cited Richard and asserted that while Capps and Arcuri do not specifically teach the computing device being able to display on the screen a main menu listing one or more applications, and a limited list of several common functions offered by one of the listed applications, Richard does teach this feature and function. The Examiner points to Figure 6 of Richard, and refers to “APP A”, “APP B”, and “element 510” of Figure 6 as teaching this claimed aspect of the present invention.

Applicant disagrees. As can be seen in Richard, and specifically in Figure 6 of Richard, a main menu listing one or more applications is not shown. Rather, Richard shows two *open applications* (AppA and AppB) and by clicking and holding arrow 522 (which serves as a visual indicator that there are a plurality of windows open in AppB), a pop-up menu appears listing three already-opened windows in AppB. By selecting one of the three windows listed in the pop-up menu, that window “surfaces”, i.e., comes to the front as the active window. This is not the same as the claimed main menu that lists accessible applications, and selecting one of the listed

applications to display a limited list of functions offered by the application, with the selection of one of the listed functions initiating the function. While Richard does teach a way to bring to the forefront of a GUI window one of several windows already opened within an application, it contains no teaching whatsoever of a main menu listing available applications, and selection of one of the listed applications generating a list of selectable functions within that application.

Accordingly, for the reasons set forth above, it is submitted that each of claims 14-36 patentably define over Capps/Arcuri/Richards, taken alone or in combination. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of claims 14-36 under 35 U.S.C. §103.

### **Conclusion**

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

**Applicant believes that it has claimed the distinctions set forth above and set forth in previous responses in a manner that patentably defines over the cited references; however, if the foregoing remarks are not found to be persuasive in the Examiner's opinion regarding the allowability of the claims, applicant requests that the Examiner contact the undersigned attorney to set up an interview prior to the issuance of an Advisory Action. Applicant believes that agreement as to the allowability of the claims may be reached during such an interview.**

**PATENT**  
**Application No. 10/343,333**

**Docket No. 5459-141US/28418 USA**  
**Page 5**

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

October 22, 2007  
Date

/Mark D. Simpson/  
Mark D. Simpson, Esquire  
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SYNNESTVEDT LECHNER & WOODBRIDGE  
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Q:\MSIMPSON\TO BE REVIEWED\DRAFTS FOR REVIEW\5459-141US REPLY TO FINAL OA OF 08222007SYMBIAN DUE 10-22.DOC

LGE0003595

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	2353011
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Correspondence Address:</b>	Richard C Woodbridge Woodbridge & Associates PO Box 592 - Princeton NJ 08542-0592 US - -
<b>Filer:</b>	Mark D. Simpson
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	5035-133US
<b>Receipt Date:</b>	22-OCT-2007
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	18:04:44
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	no
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**File Listing:**

LGE0003596

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		10-343333_Response_after_final.pdf	37104 6072e3d85d87164051c27b71dc21d73f484434e5	yes	5
<b>Multipart Description/PDF files in .zip description</b>					
<b>Document Description</b>			<b>Start</b>	<b>End</b>	
Amendment After Final			1	1	
Applicant Arguments/Remarks Made in an Amendment			2	5	
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			37104		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

LGE0003597



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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875					Application or Docket Number <b>10/343,333</b>		Filing Date <b>08/27/2003</b>		<input type="checkbox"/> To be Mailed					
<b>APPLICATION AS FILED – PART I</b>														
(Column 1)			(Column 2)			SMALL ENTITY <input type="checkbox"/>		OR			OTHER THAN SMALL ENTITY			
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)				
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>		N/A	N/A		N/A				N/A					
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>		N/A	N/A		N/A		N/A							
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>		N/A	N/A		N/A		N/A							
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>		minus 20 =		*	X \$ =		OR		X \$ =					
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>		minus 3 =		*	X \$ =		OR		X \$ =					
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).												
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>														
* If the difference in column 1 is less than zero, enter "0" in column 2.														
<b>APPLICATION AS AMENDED – PART II</b>														
(Column 1)			(Column 2)			(Column 3)			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
AMENDMENT	<b>10/22/2007</b>		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)		
	Total <small>(37 CFR 1.16(j))</small>		+ 27	Minus	** 27	= 0	X \$ =		OR		X \$50=	0		
	Independent <small>(37 CFR 1.16(h))</small>		+ 2	Minus	***3	= 0	X \$ =		OR		X \$210=	0		
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>													
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>														
						TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE	<b>0</b>			
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)		
	Total <small>(37 CFR 1.16(j))</small>		+	Minus	**	=	X \$ =		OR		X \$ =			
	Independent <small>(37 CFR 1.16(h))</small>		+	Minus	***	=	X \$ =		OR		X \$ =			
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>													
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>														
						TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE				
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.														
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".														
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".														
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.														
Legal Instrument Examiner: lavinia d. johnson														

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**  
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

<b>Advisory Action Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> Thanh T. Vu	<b>Art Unit</b> 2174	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 22 October 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

a)  The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.

b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

(a)  They raise new issues that would require further consideration and/or search (see NOTE below);

(b)  They raise the issue of new matter (see NOTE below);

(c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

(d)  They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.

12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_

13.  Other: \_\_\_\_\_.

/Sy D Luu/  
Primary Examiner, Art Unit 2174

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's primary argument is that the combination of Capps Richard and Arcuri does not teach "the computing device being able to display on the screen a main menu listing one or more applications and a limited list of several command functions offered by one of the listed applications".

The examiner does not agree for the following reasons:

During patent examination, the pending claims must be "given >their< broadest reasonable interpretation consistent with the specification." > In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In this case, Richard and Arcuri teach the claim limitation because Richard teaches computing device being able to display on the screen a main menu listing one or more applications, see fig. 6, a main menu 510 listing one or more applications 512-516. Arcuri teaches a limited list of several common functions offered within an application (figs. 2A-2B; col. 2, lines 56-65 and col. 8, lines 13-15 and lines 27-32 which shows a limited set of selections (i.e. functions) offered within an application). Accordingly, the combination of Richard and Arcuri teach the claim limitation of the computing device being able to display on the screen a main menu listing one or more applications and a limited list of several command functions offered by one of the listed applications.

OK TO ENTER: /TV/ (11/01/2007)

**PATENT**

**Docket No. 5459-141US/28418 USA**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 5459-141US/28418 USA Group Art Unit: 2174

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON October 22, 2007**

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MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY UNDER 37 CFR §1.116**  
**TO FINAL OFFICE ACTION MAILED AUGUST 22, 2007**

Sir:

This is in response to the final Office Action mailed August 22, 2007, having a period for response set to expire on November 22, 2007. The following remarks are respectfully submitted.

Remarks begin on page 2 of this paper.

LGE0003601

**PATENT**

**Docket No. 5459-141US/28418 USA**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 5459-141US/28418 USA Group Art Unit: 2174

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON December 26, 2007**

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MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 CFR §1.116  
TO FINAL OFFICE ACTION MAILED AUGUST 22, 2007**

Sir:

This Reply and Amendment is being filed in further response to the final Office Action mailed August 22, 2007. A Request for Reconsideration was filed in response to the final Office Action on November 22, 2007, which resulted in the present Advisory Action. A Petition extending the period for response for one month, to December 26, 2007 (December 22 being a Saturday; December 23 being a Sunday, December 24 being a Patent Office holiday, and December 25 being federal holiday), is included herein, along with authorization to charge the extension fee to a credit card. The following amendments and remarks are respectfully submitted, which Applicant believes place the application in allowable condition.

Amendments to the claims begin on page 2 of this paper; Remarks begin on page 7 of this paper.

LGE0003602

Claims 1-13 (Canceled)

14. (Currently amended) A computing device comprising a display screen, the computing device being configured able to display on the screen a main menu listing one or more applications, and additionally being configured able to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of several common functions offered within an application, any item in the list being selectable to initiate the respective function, and wherein the application summary window is displayed while the application is in an un-launched state.

15. (Original) The computing device of Claim 14 in which selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

16. (Original) The computing device of Claim 14 in which an application launcher lists the names and/or icons of several applications and selecting a name or icon causes the summary window for that application to be opened.

17. (Original) The computing device of Claim 14 in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

18. (Original) The computing device of Claim 14 in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.

19. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.

20. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

21. (Original) The computing device of Claim 14 in which opening a summary window for a given application does not result in that application being opened.

22. (Original) The computing device of Claim 14 in which the summary window is a frame which includes the name of the associated application.

23. (Original) The computing device of Claim 14 in which the summary window further display a list of data stored in that application.

24. (Original) The computing device of Claim 14, being a mobile telephone.

25. (Original) The computing device of Claim 14, being a PC.

26. (Currently amended) A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing one or more applications, and additionally causes the device ~~being able~~ to display on the screen an application summary window that can be reached directly from the main menu, wherein the summary window displays a limited list of several common functions offered within an application, any item in the list being selectable to initiate the respective function, and wherein the application summary window is displayed while the application is in an unlaunched state.

27. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code comprises an operating system program.

28. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code is operable such that selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

29. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code is operable to cause the screen to display an application launcher which lists the names and/or icons of several applications, wherein selecting a name or icon causes the summary window for that application to be opened.

30. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the kinds of content of a summary window for a given application to be selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

31. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables a user to define what functionality and/or stored data types are of interest to that user for the summary window for an application.

32. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the environment of the device.



33. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the actions of the user.

34. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the opening of a summary window for a given application without resulting in that application being opened.

35. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the summary window to be a frame which includes the name of the associated application.

36. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the summary window to further display a list of data stored in that application.

37. (Previously presented) The computing device of claim 1 wherein said limited list is a sub-set of all of the functions offered by a given application.

38. (Previously presented) The computing device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

39. (Previously presented) The computer program product according to claim 26 wherein said limited list is a sub-set of all of the functions offered by a given application.

40. (Previously presented) The computer program product according to claim 38 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

**REMARKS**

**Petition for Extension of Time Under 37 CFR 1.136(a)**

It is hereby requested that the term to respond to the Examiner's Action of August 22, 2007 be extended one month, from November 22, 2007 to December 26, 2007 (December 22 being a Saturday; December 23 being a Sunday, December 24 being a Patent Office holiday, and December 25 being federal holiday).

Authorization to charge a Credit Card is given to cover the extension fee. The Commissioner is hereby authorized to charge any additional fees associated with this communication to Deposit Account No. 19-5425.

In the Office Action, the Examiner indicated that claims 14 through 40 are pending in the application and the Examiner rejected all claims.

**Claim Rejections, 35 U.S.C. § 103**

On page 2 of the Office Action, the Examiner rejected claims 14-40 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,512,525 to Capps et al. in view of U.S. Patent No. 6,781,161 to Richard and U.S. Patent No. 6,121,968 to Arcuri et al.

**The Present Invention**

In one implementation of the present invention, a computing device displays on a display screen a main menu listing a number of available applications, and additionally is able to display on the display screen an application summary window that displays a limited list of several common functions offered within an application, such that any item in the limited list is

selectable to initiate its respective function. The application summary window is displayed regardless of the launched or unlaunched status of this application. In other words, the present invention displays in a main menu a list of accessible applications, and by designating (e.g., hovering the cursor over) one of the applications listed in the main menu, a summary window is opened showing various functions that can be selected within the designated application even while the application is unlaunched.

**The Examiner has not Established a *prima facie* Case of Obviousness**

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

Applicant has presented previous arguments to the Examiner regarding the Capps and Arcuri patents. In response to those arguments and amendments made in the last response by the Applicant, the Examiner cited Richard and asserted that while Capps and Arcuri do not specifically teach the computing device being able to display on the screen a main menu listing one or more applications, and a limited list of several common functions offered by one of the listed applications, Richard does teach this feature and function. The Examiner points to Figure 6 of Richard, and refers to “APP A”, “APP B”, and “element 510” of Figure 6 as teaching this claimed aspect of the present invention.

*Richard* describes a pop-up menu (510) on the taskbar. Applicant respectfully disagrees with the Examiner's assertion that the items in menu 510 (512, 514, 516) correspond to applications. The menu items actually correspond to *open* windows within a single application to which the entire menu relates (APP B). This is explicitly stated in the description at column 3, lines 20-44.

The 'main menu' described in *Richards* is therefore merely a menu of *open* windows within a single application, i.e., a launched application. It follows from the fact the windows are open within the application that the application must be running and therefore has been launched.

*Arcuri* describes the provision of both long and short versions of menus, the idea being that commonly selected items are offered in the short version of the menu, with an option to expand the menu to its long version in order to access less-commonly selected items. In the example of Fig 2A, to which the Examiner has referred, the short/long menu is a view menu within a word processing program (col. 8, lines 10-12). It is true that this menu offers a limited list of the common functions available within the word processing program; however, it is only ever displayed within a *running* instance of the program, i.e., only when the program is in a *launched* state.

Claim 1 requires that the application summary window including the common functions (the view menu in *Arcuri*, according to the Examiner) can be directly reached from the main menu (the pop up window in *Richard*, according to the Examiner). However, there is no suggestion in any of the cited references that would render it obvious to make the *Arcuri* menu directly reachable from the menu in *Richard*. Indeed, such a process is counter-intuitive, since the menu items in *Richard* are windows inside an application and the menu in *Arcuri* forms part of the overall application – not a specific window.

Even regardless of the “reached directly” requirement, *Richard* and *Arcuri* and/or *Capps* cannot be combined to arrive at the subject matter of amended claims 14 and 26. This is because these claims now require that summary window is displayed *while the application is in an unlaunched state*. The menu described in *Richard* relates to open windows in a *running* application and likewise the menus in *Arcuri* and *Capps* relate to functions of a *running* application. These documents all describe menus that relate to running applications and combining them does nothing to satisfy the requirement of the present claims that the application summary window is displayed without launching the application.

The underlying purpose of the application summary window of the present invention is to provide the user with a shortcut to functions within an application directly from the main menu (i.e. when the application is designated). This allows the user to launch an application in such a way that it is initiated to directly perform one of the common functions, rather than forcing the user to hunt for the function in the interface once the application has finished loading in its default (and perhaps undesired) state. This advantage cannot be achieved if the application summary window is not displayed until after the application is already running. The benefit of the claimed invention therefore cannot be achieved using only the teaching of *Richard* and *Arcuri* and/or *Capps*, alone or in combination.

Accordingly, for the reasons set forth above, it is submitted that each of claims 14-36 patentably define over *Capps/Arcuri/Richards*, taken alone or in combination. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of claims 14-36 under 35 U.S.C. §103.

**Conclusion**

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

**Applicant believes that it has claimed the distinctions set forth above and set forth in previous responses in a manner that patentably defines over the cited references; however, if the foregoing remarks are not found to be persuasive in the Examiner's opinion regarding the allowability of the claims, applicant requests that the Examiner contact the undersigned attorney to set up an interview prior to the issuance of an Advisory Action. Applicant believes that agreement as to the allowability of the claims may be reached during such an interview.**

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

December 26, 2007  
Date

/Mark D. Simpson/  
Mark D. Simpson, Esquire  
Registration No. 32,942

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W:\SLW CLIENTS\=CLIENTS - 5000=CLIENTS - 5400 THRU 5499\5459 - SYMBIAN LIMITED\141US - P28418 USA\FORMERLY ORIGIN FILE 5035-133US - APPLICATION SNAPSHOT\ADVISORY ACTION 11-08-2007\10343333\_REPLY\_AND\_AMENDMENT.DOC

LGE0003612

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Mark D. Simpson/Lynn White			
<b>Attorney Docket Number:</b>	5035-133US			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
Post-Allowance-and-Post-Issuance:				
<b>Extension-of-Time:</b>				
Extension - 1 month with \$0 paid	1251	1	120	120

LGE0003613



Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>120</b>

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	2638249
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Correspondence Address:</b>	Richard C Woodbridge Woodbridge & Associates PO Box 592 - Princeton NJ 08542-0592 US - -
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	5035-133US
<b>Receipt Date:</b>	26-DEC-2007
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	11:48:16
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 120

LGE0003615

RAM confirmation Number	10058				
Deposit Account	195425				
Authorized User	SIMPSON,MARK D.				
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)					
<b>File Listing:</b>					
Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		10343333_Reply_and_Amendment.pdf	60979 d3370b93e883f48876c1cee96becdb131750a108	yes	11
<b>Multipart Description/PDF files in .zip description</b>					
<b>Document Description</b>			<b>Start</b>	<b>End</b>	
Amendment After Final			1	1	
Claims			2	6	
Applicant Arguments/Remarks Made in an Amendment			7	11	
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8178 cb5f8ba8d05501f75171483cd9496d49edc096ae	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			69157		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

LGE0003616

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875					Application or Docket Number <b>10/343,333</b>		Filing Date <b>08/27/2003</b>		<input type="checkbox"/> To be Mailed			
<b>APPLICATION AS FILED – PART I</b>												
(Column 1)			(Column 2)			SMALL ENTITY <input type="checkbox"/>		OR			OTHER THAN SMALL ENTITY	
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)		
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>		N/A	N/A		N/A				N/A			
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>		N/A	N/A		N/A		N/A					
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>		N/A	N/A		N/A		N/A					
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>		minus 20 =		*	X \$ =		OR		X \$ =			
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>		minus 3 =		*	X \$ =		OR		X \$ =			
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).										
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>												
* If the difference in column 1 is less than zero, enter "0" in column 2.												
<b>APPLICATION AS AMENDED – PART II</b>												
(Column 1)			(Column 2)			SMALL ENTITY		OR			OTHER THAN SMALL ENTITY	
AMENDMENT	<b>12/26/2007</b>		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(j))</small>		+ 27	Minus	** 27	= 0	X \$ =		OR	X \$50=	0	
	Independent <small>(37 CFR 1.16(h))</small>		+ 2	Minus	***3	= 0	X \$ =		OR	X \$210=	0	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>											
TOTAL ADD'L FEE							OR		TOTAL ADD'L FEE			<b>0</b>
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(j))</small>		*	Minus	**	=	X \$ =		OR	X \$ =		
	Independent <small>(37 CFR 1.16(h))</small>		*	Minus	***	=	X \$ =		OR	X \$ =		
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>											
TOTAL ADD'L FEE							OR		TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.												
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".												
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".												
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.												

Legal Instrument Examiner:  
Debra R. Wyatt

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**  
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	5035-133US	1608
	7590 01/24/2008			
Richard C Woodbridge Woodbridge & Associates PO Box 592 Princeton, NJ 08542-0592			EXAMINER VU, THANH T	
			ART UNIT 2174	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> THANH T. VU	<b>Art Unit</b> 2174	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 26 December 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a)  The period for reply expires 4 months from the mailing date of the final rejection.  
b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a)  They raise new issues that would require further consideration and/or search (see NOTE below);  
(b)  They raise the issue of new matter (see NOTE below);  
(c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d)  They present additional claims without canceling a corresponding number of finally rejected claims.  
NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.

12.  Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_

13.  Other: \_\_\_\_\_.

/David A Wiley/  
Supervisory Patent Examiner, Art Unit 2174

Continuation of 3. NOTE: New issues: "wherein the application summary window is displayed while the application is in an unlaunched state" had never been presented before.

**PATENT**

**Docket No. 5459-141US/28418 USA**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 5459-141US/28418 USA Group Art Unit: 2174

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON December 26, 2007**

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MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 CFR §1.116  
TO FINAL OFFICE ACTION MAILED AUGUST 22, 2007**

Sir:

This Reply and Amendment is being filed in further response to the final Office Action mailed August 22, 2007. A Request for Reconsideration was filed in response to the final Office Action on November 22, 2007, which resulted in the present Advisory Action. A Petition extending the period for response for one month, to December 26, 2007 (December 22 being a Saturday; December 23 being a Sunday, December 24 being a Patent Office holiday, and December 25 being federal holiday), is included herein, along with authorization to charge the extension fee to a credit card. The following amendments and remarks are respectfully submitted, which Applicant believes place the application in allowable condition.

Amendments to the claims begin on page 2 of this paper; Remarks begin on page 7 of this paper.

LGE0003621



REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	10343333	Filing Date	2003-08-27	Docket Number (if applicable)	5459-141US/28418 USA	Art Unit	2174
First Named Inventor	Mathieu Kennedy Martyn			Examiner Name	T. Vu		
<p><b>This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.</b>            Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV</p>							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
<p>Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).</p>							
<p><input checked="" type="checkbox"/> Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.</p> <p style="padding-left: 40px;"><input type="checkbox"/> Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____</p> <p style="padding-left: 40px;"><input checked="" type="checkbox"/> Other <u>Reply, dated Dec. 26, 2007, filed in response to final Office Action mailed Aug. 22, 2007</u></p> <p><input type="checkbox"/> Enclosed</p> <p style="padding-left: 40px;"><input type="checkbox"/> Amendment/Reply</p> <p style="padding-left: 40px;"><input type="checkbox"/> Information Disclosure Statement (IDS)</p> <p style="padding-left: 40px;"><input type="checkbox"/> Affidavit(s)/ Declaration(s)</p> <p style="padding-left: 40px;"><input type="checkbox"/> Other _____</p>							
MISCELLANEOUS							
<p><input type="checkbox"/> Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____            (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)</p> <p><input type="checkbox"/> Other _____</p>							
FEES							
<p><b>The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.</b></p> <p><input checked="" type="checkbox"/> The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to            Deposit Account No <u>195425</u></p>							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
<p><input checked="" type="checkbox"/> Patent Practitioner Signature</p> <p><input type="checkbox"/> Applicant Signature</p>							

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Mark D. Simpson/	Date (YYYY-MM-DD)	2008-02-21
Name	Mark D. Simpson	Registration Number	32942

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**PATENT**

**Docket No. 5459-141US/28418 USA**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 5459-141US/28418 USA Group Art Unit: 2174

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON February 21, 2008**

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MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Petition for Extension of Time Under 37 CFR 1.136(a)**

Sir:

It is hereby requested that the term to respond to the Examiner's final Action of August 22, 2007 be extended two additional months, from December 22, 2007 to February 22, 2008. A one-month extension, covering the period November 22, 2007 to December 26, 2007) was requested and the fee paid with applicant's Reply, dated December 26, 2007 (December 22-25 falling on a weekend/holiday).

The extension fee is authorized to be charged to a credit card. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted,

/Mark D. Simpson/  
Mark D. Simpson  
(Registration No. 32,942)

SYNNESTVEDT & LECHNER LLP  
Synnestvedt Lechner & Woodbridge LLP  
112 Nassau Street  
P.O. Box 592  
Princeton, NJ 08542-0592

LGE0003625

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Mark D. Simpson/Lynn White			
<b>Attorney Docket Number:</b>	5035-133US			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
Post-Allowance-and-Post-Issuance:				
<b>Extension-of-Time:</b>				
Extension - 3 months with \$120 paid	1253	1	930	930

LGE0003626

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Request for continued examination	1801	1	810	810
<b>Total in USD (\$)</b>				<b>1740</b>

LGE0003627

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	2890468
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Correspondence Address:</b>	Richard C Woodbridge Woodbridge & Associates PO Box 592 - Princeton NJ 08542-0592 US - -
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	5035-133US
<b>Receipt Date:</b>	21-FEB-2008
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	12:37:15
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 1740

LGE0003628

RAM confirmation Number	6643				
Deposit Account	195425				
Authorized User	SIMPSON,MARK D.				
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)					
<b>File Listing:</b>					
Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	sb0030e_fill.pdf	727976	no	3
			8d84fba972b946b05bb0fab50244963a264a948		
<b>Warnings:</b>					
<b>Information:</b>					
2	Extension of Time	10343333_ExtensionforRCE.pdf	18467	no	1
			c76fae5e7049ab7c1e9e18362e42972997b3e14		
<b>Warnings:</b>					
<b>Information:</b>					
3	Fee Worksheet (PTO-06)	fee-info.pdf	8339	no	2
			1cdd01cff9606a4c1e9e18362e429729d121677		
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			754782		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

LGE0003629





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	5035-133US	1608
	7590 04/23/2008			
Richard C Woodbridge Woodbridge & Associates PO Box 592 Princeton, NJ 08542-0592			EXAMINER VU, THANH T	
			ART UNIT 2175	PAPER NUMBER
			MAIL DATE 04/23/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> THANH T. VU	<b>Art Unit</b> 2175	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)  Responsive to communication(s) filed on 26 December 2007.

2a)  This action is **FINAL**.                      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 14-40 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 14-40 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \*    c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

### DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/26/2007 has been entered.

This communication is responsive to Amendment, filed 12/26/2007.

Claims 14-40 are pending in this application. In the Amendment, claims 14, and 26 were amended.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Capps et al. ("Capps", U.S. Pat. No. 6,512,525), Frederiksen (U.S. Pat. No. 6,570,596), Arcuri et al. ("Arcuri", U.S. Pat. No. 6,121,968), and Krause (U.S. Pat. No. 6,160,554).

Per claim 14, Capps teaches a computing device comprising a display screen, the computing device being able to display on the screen an application summary window, in which summary window displays a list of several common functions offered within an application, any item in the list being selectable to initiate the respective function (figs. 7, 8b, 14; col. 2, lines 56-67; col. 3, lines 13-25 and 31-44; col. 12, lines 55-61; col. 22, lines 28; e.g. *application summary*

*window 254, 268, or 374*). Capps does not specifically teach the computing device being able to display on the screen a main menu listing one or more applications, displaying a limited list of several common functions offered by a given application, and the application summary window is displayed while the application is in an un-launched state. However, Frederiksen teaches computing device being able to display on the screen a main menu listing one or more applications (figs. 4 and 8; applications: i.e. phone book, message, or call register...). Arcuri teaches displaying a limited list of several common functions offered within an application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32). Krause teaches displaying a summary window of an application while an application is in an un-launched state (col. 1, lines 52-56; col. 2, lines 2-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Frederiksen, Arcuri, and Krause in the invention of Capps in order to provide the user with a context sensitive menu of available applications within a system, and in order to provide a system for dynamically changing the available commands in a given menu based upon the particular needs and utilization behavior of a user (Arcuri, col. 2, lines 10-13, and in order to provide a fast convenient, and reliable technique for determining the contents of an executable file (i.e. an application) without the need to launch the application.

Per claim 15, Capps further teaches selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated (figs 8a-8b, 10a-10b; *e.g. open application 256, 274, 392, 410*; col. 13, lines 13-26; col. 16, lines 22-28, lines 39-45).

Per claim 16, Capps further teaches an application launcher lists the names and/or icons of several applications and selecting a name or icon caused the summary window for that application to be opened (figs. 15b and 15c; *names of applications 374*; e.g. summary window 400 for mail application; col. 16, lines 62).

Per claim 17, Arcuri teaches the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user (col. 2, lines 9-12; col. 2, lines 15-30).

Per claim 18, Arcuri teaches the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 19, Capps teaches the functionality and/or stored data types for a summary window for a given application varies with the environment of the device (col. 2, line 54-col. 3, line 5; col. 16, lines 54-60; *a given persona can be extended by applications running on the computer system*).

Per claim 20, Arcuri teaches the functionality and/or stored data types for a summary window for a given application varies with the actions of the user (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 21, Capps teaches opening a summary window for a given application does not result in that application being opened (figs. 7, 8b, and 14; e.g. *application summary window 254, 268, or 374*).

Per claim 22, Capps teaches the summary window is a frame which includes the name of the associated application (figs. 7, 8b, and 14; e.g. *application summary window 254, 268, or 374*).

Per claim 23, Capps teaches the summary window further display a list of data stored in that application (col. 3, lines 31-37; *multiple name records pertaining to the personas provided by the system*).

Per claim 24, Capps teaches the computing device of claim 14, being a mobile telephone (see fig. 16b).

Per claim 25, Capps teaches the computing device of claim 14, being a PC (fig. 1; col. 2, lines 52-54; col. 11, lines 40-43).

Claims 26 and 27 are rejected under the same rationale as claim 1.

Claims 28-36 are rejected under the same rationale as claims 15-23 respectively.

Per claim 37, Arcuri teaches the computing device of claim 1, wherein said limited list if a sub-set of all of the functions offered by a given application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Per claim 38, Arcuri teaches the computer device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Claims 39-40 are rejected under the same rationale as claims 37 and 38.

#### ***Response to Arguments***

Applicant's arguments with respect to the amendment have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH T. VU whose telephone number is (571)272-4073. The examiner can normally be reached on Mon- Fri 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L. Bashore can be reached on (571) 272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh T. Vu/  
Examiner, Art Unit 2175

<b>Notice of References Cited</b>	Application/Control No. 10/343,333	Applicant(s)/Patent Under Reexamination MARTYN, MATHIEU KENNEDY	
	Examiner THANH T. VU	Art Unit 2175	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,570,596	05-2003	Frederiksen, Steen Lillethorup	715/808
*	B US-6,160,554	12-2000	Krause, Michael D	715/804
C	US-			
D	US-			
E	US-			
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

**FOREIGN PATENT DOCUMENTS**

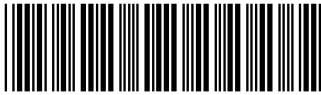
*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

**NON-PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
U					
V					
W					
X					

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

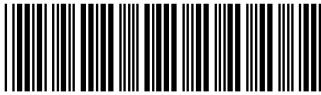


<b>Index of Claims</b> 	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

✓	<b>Rejected</b>	-	<b>Cancelled</b>	N	<b>Non-Elected</b>	A	<b>Appeal</b>
=	<b>Allowed</b>	÷	<b>Restricted</b>	I	<b>Interference</b>	O	<b>Objected</b>


Claims renumbered in the same order as presented by applicant
  CPA
  T.D.
  R.1.47

CLAIM		DATE									
Final	Original	04/22/2008									
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	2	-									
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	31	✓									
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	33	✓									
	34	✓									
	35	✓									
	36	✓									

<b>Index of Claims</b> 	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

✓	<b>Rejected</b>	-	<b>Cancelled</b>	N	<b>Non-Elected</b>	A	<b>Appeal</b>
=	<b>Allowed</b>	÷	<b>Restricted</b>	I	<b>Interference</b>	O	<b>Objected</b>

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47			
CLAIM		DATE							
Final	Original	04/22/2008							
	37	✓							
	38	✓							
	39	✓							
	40	✓							

<b>Search Notes</b> 	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

<b>SEARCHED</b>			
<b>Class</b>	<b>Subclass</b>	<b>Date</b>	<b>Examiner</b>
715	762, 759, 776, 808	4/22/2008	TV

<b>SEARCH NOTES</b>		
<b>Search Notes</b>	<b>Date</b>	<b>Examiner</b>
East Search	4/22/2008	TV

<b>INTERFERENCE SEARCH</b>			
<b>Class</b>	<b>Subclass</b>	<b>Date</b>	<b>Examiner</b>

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	920	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 09:43
S2	17	S1 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 12:03
S3	29	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 09:51
S4	41	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 09:57
S5	2	(("6456841") or ("6144863")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 09:57
S6	79	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 12:03
S7	102	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/13 12:46
S8	1	("6512525").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:16
S9	521	(715/762).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:17
S10	290	(715/808).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
S11	136	(715/759).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
S12	160	(715/776).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18

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S16	1	("6240410").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/15 10:14
S17	51	vu-thanh.xa.	US-PGPUB; USPAT	OR	ON	2007/08/13 15:50
S18	1	("6993712").PN.	US-PGPUB; USPAT	OR	OFF	2007/08/13 15:50
S19	3	((("6512525") or ("6781161") or ("6121968")).PN.	US-PGPUB; USPAT	OR	OFF	2008/04/21 14:34
S20	3	((("6512525") or ("6781611") or ("6121968")).PN.	US-PGPUB; USPAT	OR	OFF	2008/04/21 14:36
S21	1	("6160554").PN.	US-PGPUB; USPAT	OR	OFF	2008/04/21 14:47
S22	6	("6160554").URPN.	USPAT	OR	ON	2008/04/21 14:47
S23	0	(list with application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:17
S24	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:18
S25	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:18
S26	2	(application with (pre adj1 view) with (window or dialog))	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:18
S27	5	(application with list with alert with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:22
S28	22	(application with list with (notific\$6) with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:26

4/22/2008 9:40:17 AM

C:\Documents and Settings\tvu2\My Documents\EAST\Workspaces\10343333.wsp

**POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO**

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number: 78905

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number		Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number: 78905

OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

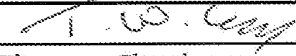
Assignee Name and Address:

SYMBIAN LIMITED  
2-6 BOUNDARY ROW, SOUTHWARK  
LONDON, UNITED KINGDOM SE1 8HP

**A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.**

**SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	2/9/2008
Name	Thomas Chambers	Telephone	
Title	Chief Financial Officer, Symbian Limited		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	3882201
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Correspondence Address:</b>	Richard C Woodbridge Woodbridge & Associates PO Box 592 - Princeton NJ 08542-0592 US - -
<b>Filer:</b>	Theodore R. West
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	5035-133US
<b>Receipt Date:</b>	03-SEP-2008
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	16:39:18
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	no
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**File Listing:**

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LGE0003645



Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73(b).	int920.PDF	27543 4feb8063a331d5f10d6bd7afe73fba4d3dc68c8	no	1
<b>Warnings:</b>					
<b>Information:</b>					
2	Power of Attorney	int921.PDF	556380 eeb799acc1e3bdedad9e90be1091edef721eacc6	no	1
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			583923		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

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**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: SYMBIAN LIMITED

Application No./Patent No.: 10/343,333 Filed/Issue Date: August 27, 2003

Entitled: Computing device with improved user interface for applications

SYMBIAN LIMITED, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- 1.  the assignee of the entire right, title, and interest; or
- 2.  an assignee of less than the entire right, title and interest  
(The extent (by percentage) of its ownership interest is \_\_\_\_\_ %)

in the patent application/patent identified above by virtue of either:

A.  An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 014591, Frame 0410, or for which a copy therefore is attached.

OR

B.  A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

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3. From: \_\_\_\_\_ To: \_\_\_\_\_

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Additional documents in the chain of title are listed on a supplemental sheet.

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Theodore R. West  
Signature

September 3, 2008  
Date

Theodore R. West  
Printed or Typed Name

717-257-7552  
Telephone Number

Registered Patent Agent (Reg. No. 47202)  
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/343,333	08/27/2003	Mathieu Kennedy Martyn	5035-133US

**CONFIRMATION NO. 1608**  
**POA ACCEPTANCE LETTER**

78905  
Saul Ewing LLP (Philadelphia)  
Attn: Patent Docket Clerk  
2 North Second St.  
Harrisburg, PA 17101



Date Mailed: 09/10/2008

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 09/03/2008.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/gbien-aime/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/343,333	08/27/2003	Mathieu Kennedy Martyn	5035-133US

Richard C Woodbridge  
Woodbridge & Associates  
PO Box 592  
Princeton, NJ 08542-0592

**CONFIRMATION NO. 1608**  
**POWER OF ATTORNEY NOTICE**



Date Mailed: 09/10/2008

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 09/03/2008.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/gbien-aime/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

**PATENT**

**Docket No. 356952.00012**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 356952.00012 Group Art Unit: 2175

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON September 23, 2008**

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MAIL STOP AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 CFR §1.112  
TO OFFICE ACTION MAILED APRIL 23, 2008**

Sir:

This Reply and Amendment is being filed in response to the Office Action mailed April 23, 2008, having a period for response set to expire on July 23, 2008. A Petition extending the period for response for two months, to September 23, 2008, is included herein, along with authorization to charge the extension fee to Deposit Account No. 50-4364. The following amendments and remarks are respectfully submitted.

Amendments to the claims begin on page 2 of this paper; Remarks begin on page 7 of this paper.

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Claims 1-13 (Canceled)

14. (Currently amended) A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing ~~one or more~~ at least a first application[[s]], and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of ~~several common~~ at least one function[[s]] offered within the first [[an]] application, ~~any item~~ each function in the list being selectable to launch the first application and initiate the selected ~~respective~~ function, and wherein the application summary window is displayed while the application is in an un-launched state.

15. (Original) The computing device of Claim 14 in which selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

16. (Original) The computing device of Claim 14 in which an application launcher lists the names and/or icons of several applications and selecting a name or icon causes the summary window for that application to be opened.

17. (Original) The computing device of Claim 14 in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

18. (Original) The computing device of Claim 14 in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.

19. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.

20. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

21. (Original) The computing device of Claim 14 in which opening a summary window for a given application does not result in that application being opened.

22. (Original) The computing device of Claim 14 in which the summary window is a frame which includes the name of the associated application.

23. (Original) The computing device of Claim 14 in which the summary window further display a list of data stored in that application.

24. (Original) The computing device of Claim 14, being a mobile telephone.

25. (Original) The computing device of Claim 14, being a PC.

26. (Currently amended) A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing ~~one or more~~ at least a first application[[s]], and additionally causes the device to display on the screen an application summary window that can be reached directly from the main menu, wherein the summary window displays a limited list of at least one ~~several common~~ function[[s]] offered within the first [[an]] application, ~~any item~~ each function in the list being selectable to launch

the first application and initiate the respective selected function, and wherein the application summary window is displayed while the application is in an unlaunched state.

27. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code comprises an operating system program.

28. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code is operable such that selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

29. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code is operable to cause the screen to display an application launcher which lists the names and/or icons of several applications, wherein selecting a name or icon causes the summary window for that application to be opened.

30. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the kinds of content of a summary window for a given application to be selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

31. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables a user to define what functionality and/or stored data types are of interest to that user for the summary window for an application.

32. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the environment of the device.



33. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the actions of the user.

34. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the opening of a summary window for a given application without resulting in that application being opened.

35. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the summary window to be a frame which includes the name of the associated application.

36. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the summary window to further display a list of data stored in that application.

37. (Previously presented) The computing device of claim 1 wherein said limited list is a sub-set of all of the functions offered by a given application.

38. (Previously presented) The computing device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

39. (Previously presented) The computer program product according to claim 26 wherein said limited list is a sub-set of all of the functions offered by a given application.

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40. (Previously presented) The computer program product according to claim 38 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

**REMARKS**

**Petition for Extension of Time Under 37 CFR 1.136(a)**

It is hereby requested that the term to respond to the Examiner's Action of April 23, 2008 be extended two months, from July 23, 2008 to September 23, 2008.

The Commissioner is hereby authorized to charge the extension fee and any additional fees associated with this communication to Deposit Account No. 50-4364.

In the Office Action, the Examiner indicated that claims 14 through 40 are pending in the application and the Examiner rejected all claims.

**Claim Rejections, 35 U.S.C. § 103**

On page 2 of the Office Action, the Examiner rejected claims 14-40 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,512,525 to Capps et al., U.S. Patent No. 6,570,596 to Frederiksen, U.S. Patent No. 6,121,968 to Arcuri et al., and U.S. Patent No. 6,160,554 to Krause

**The Present Invention**

In one implementation of the present invention, a computing device displays on a display screen a main menu listing a number of available applications, and additionally is able to display on the display screen an application summary window that displays a limited list of several common functions offered within an application, such that any item in the limited list is selectable to initiate its respective function. The application summary window is displayed

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regardless of the launched or unlaunched status of this application. In other words, the present invention displays in a main menu a list of accessible applications, and by designating (e.g., hovering the cursor over) one of the applications listed in the main menu, a summary window is opened showing various functions that can be selected within the designated application even while the application is unlaunched.

**The Examiner has not Established a *prima facie* Case of Obviousness**

KSR (*KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007)) requires that an Examiner provide “some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness.” Further, an Examiner must “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does,” In addition, the Examiner must make “explicit” this rationale of “the apparent reason to combine the known elements in the fashion claimed,” including a detailed explanation of “the effects of demands known to the design community or present in the marketplace” and “the background knowledge possessed by a person having ordinary skill in the art.”

The Examiner has not met these requirements.

The comments that follow refer only to device claim 14. However, they are also applicable to claim 26, which has corresponding method steps.

The Examiner appears to consider the purpose of the claimed invention to be “to provide the user with a context sensitive menu of available applications within a system, and in order to

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provide a system for dynamically changing the available commands in a given menu based upon the particular needs and utilization behaviour of a user [...], and in order to provide a fast convenient, and reliable technique for determining the contents of an executable file (i.e. an application) without the need to launch the application”, since it is with this aim in mind that it is alleged one of ordinary skill in the art would find it obvious to combine the four citations to arrive at the claimed invention. However, this purpose (and result) is not close to that of the claimed invention, and *no* combination of the citations render obvious claim 14 or 26, and no combination of the citations teaches or reasonably suggests all of the limitations of claims 14 or 26.

In general terms, what is claimed is a computing device that can display certain components on a screen, one of which is a main menu that lists applications that can be launched on the device, and another is an application summary window. The application summary window can be reached directly from the main menu and displays some of the functions offered *within* a particular application listed in the main menu. When one of these functions in the application summary window is selected, the respective application is launched and that function is initiated.

The purpose of the application summary window is two-fold. Firstly, it provides a preview of functions available within the application without requiring the application to be launched (at the cost of time and system resources). Secondly, it provides a shortcut to the user, through which he or she can “reach into” the application and select a particular function prior to launching the application; when the function is selected, the application is launched and this function initiated so that it is ‘ready to go’ without any navigation required within the

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application. In addition to the improved user experience, there are performance benefits gained from pre-selecting the function.

To better understand this functionality, consider the following example. The Nokia E61i smartphone uses the Symbian OS operating system and the Nokia S60 interface. The phone includes a calendar application, which includes a function for adding a new meeting appointment to the user's personal calendar. To add a new calendar entry, the user must perform the following steps, starting from a main menu:

1. Select *Calendar* application  
[*Calendar* application launches]  
[My personal calendar is loaded and displayed]
2. Select *Options* menu  
[*Options* menu opens]
3. Select *New Entry*  
[*New Entry* sub-menu opens]
4. Select *Meeting* item  
[*New Meeting* dialogue is displayed]
5. Enter meeting details
6. Select *Done*  
[New meeting appointment is created]

Now consider the following alternative operation, which is achieved using the device of claim

14:

1. Select *Calendar* application.  
[*Calendar* summary window is displayed]

2. Select *New Meeting* item in *Calendar* summary window.  
[*Calendar* application launches]  
[*New Meeting* dialogue is displayed]
3. Enter meeting details
4. Select *Done*  
[New meeting appointment is created]

The second example is better for two reasons. Firstly, it saves the user from the tedious task of navigating through the internal menu structure of the calendar application. Secondly, it eliminates the need for the phone to perform unnecessary tasks in which the user has no interest when creating the new appointment. Such tasks will include loading and displaying the user's personal calendar – an operation that takes time and occupies resources and yet is of no benefit to the user when all he/she wishes to do is create the new appointment.

There are several features of claim 14 that contribute especially to the sort of functionality described above in the second example, allowing the normal start of the application to be 'leapfrogged' and the desired function initialized immediately upon launch. These features are as follows:

1. The application summary window is reached directly from the main menu (i.e. from where the user normally launches the application)
2. Some functions within the application are displayed in the application summary window before the application is launched
3. When a desired function is selected, the application is launched and that function is initiated in response to the selection

As described below, no combination of the cited prior art provides all three of these features, and it follows that the prior art cannot be combined to provide the ‘leapfrogging’ functionality that is described above.

**Capps – US 6,512,525**

Capps describes a computing device that can be shared between multiple users, each having his or her own user account. Users can add or edit information associated with their account using the interface shown in Figs. 7 and 8b and as described in col. 2, lines 65-67; col. 3, lines 13-25 and lines 31-44; and col. 12, lines 55-61. It is also possible for a user to perform various operations on an open document (print, fax, beam, etc.) using the interface shown in Figure 14.

The interfaces referred to in *Capps* do list functions that are available within an application – however, this list of functions is only ever displayed within the application while it is actually running.

The Examiner has also referred to col. 22, line 28, but this appears to be in error. Line 28 reads “the program instructions the step of determining a” and appears not to be relevant to the present application.

With reference to the objection to claim 15, the passages of Capps that are cited at the bottom of page 3 of the official action do not describe the selection of a function causing the related application to open and the selected function to be activated. Instead, these passages



merely illustrate the display of a dialogue of selectable functions from *within* the application while it is actually running.

Capps does not teach or suggest an application summary window that is directly reachable from the main menu, it does not teach or suggest displaying functions from within an application in the application summary window before the application is launched, and it does not teach or suggest launching the application and initiating a function upon selection of that function in the application summary window.

**Frederiksen – US 6,570,596**

Frederiksen is cited as disclosing “a computing device being able to display on the screen a main menu listing one or more applications”. Applicant does not dispute that the concept of a main menu is well known in the prior art.

However, Frederiksen provides little more than this – it does not teach or suggest displaying an application summary window that is directly reachable from the main menu, it does not teach or suggest displaying functions from within an application in the application summary window before the application is launched, and it does not teach or suggest launching the application and initiating a function upon selection of that function in the application summary window. In fact, Frederiksen is not very relevant at all to the present application.

**Arcuri – US 6,121,968**

Arcuri is cited as disclosing “displaying a limited list of several common functions offered within an application”. In fact, Arcuri discloses the adaptive menus that are present in

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Microsoft Office 2000, where they are accessible via the menu bar within a running application and act to conceal from the user those menu options that are not frequently used.

Arcuri does not teach or suggest displaying an application summary window that is directly reachable from the main menu, it does not teach or suggest displaying functions from within an application in the application summary window before the application is launched, and it does not teach or suggest launching the application and initiating a function upon selection of that function in the application summary window.

**Krause – US 6,160,554**

Krause is cited as teaching “displaying a summary window of an application while an application is in an unlaunched state”. In fact, what the cited passages of Krause disclose is the display of metadata that is associated with a file, in order to provide a preview of its contents. The file can be a document (e.g. a text file or image), or an application.

Col. 3, lines 12-28 describe the nature of the displayed metadata. In the case of a text file, the metadata can be text that is automatically extracted from the file. In the case of a graphical file, the metadata can be a thumbnail, frame or other image that is automatically extracted from the file. Alternatively, the metadata can be manually entered and associated with the file – for example a textual description of the file’s contents or (in the case of an executable), its uses.

Krause nowhere discloses presenting functions from within an application as part of the preview metadata. Similarly, it does not suggest that the metadata is selectable, or otherwise usable for anything other than previewing the file’s contents.

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Krause does not, therefore, teach or suggest displaying functions from within an application in the application summary window before the application is launched, and it does not teach or suggest launching the application and initiating a function upon selection of that function in the application summary window.

Even if it were obvious to combine the entire contents of the four above documents (which it is not), such a combination does not result in anything close to the claimed invention. Instead, a combination of the contents of the four documents for the reasons set out by the Examiner would result in a device that functions as follows:

- One or more applications are presented in a main menu. (Frederiksen)
- A preview of an executable file can be displayed before that file is executed; however, this preview is limited to a manually-entered description of the executable file's uses. The preview does not contain any selectable functions. (Krause)
- Once launched and running, an application displays (internally) a menu of selectable functions that can be performed by the application. (Capps)
- The functions in a running application's menu are hidden from or revealed to the user based upon historical usage data. (Arcuri).

Such a device does not include all of the limitations of claim 14, since it is not “configured to display an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of at least one function offered within the first application, *each function in the list being selectable to launch the first application and initiate the selected function*, and wherein *the application summary window is displayed while the application is in an un-launched state*”, as is required by claim 14.

It should be clear that the combination of these four documents does not result in a device that can 'leapfrog' into an application as described above with reference to the 'new meeting' example. However, this is exactly the advantageous functionality offered by claim 14.

Since no combination of the cited prior art (obvious or otherwise) teaches or suggests a device with all of the features of claim 14, or even a device that is capable of the same desirable results as claim 14, the subject matter of claim 14 *must* be patentable over these citations. Claim 26 is patentable for the same reasons. Further, all the claims depending from claims 14 and 26 are allowable for the same reasons. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims under 35 U.S.C. §103.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

September 23, 2008  
Date

/Mark D. Simpson/  
Mark D. Simpson, Esquire  
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Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Mark D. Simpson/Lynn White			
<b>Attorney Docket Number:</b>	356952.00012-U1			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
Extension - 2 months with \$0 paid	1252	1	460	460

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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>460</b>

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<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	3987385
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	23-SEP-2008
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	12:21:39
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$460
RAM confirmation Number	13527
Deposit Account	504364
Authorized User	
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p style="padding-left: 40px;">Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)</p> <p style="padding-left: 40px;">Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)</p>	

LGE0003668

<b>File Listing:</b>					
<b>Document Number</b>	<b>Document Description</b>	<b>File Name</b>	<b>File Size(Bytes)/ Message Digest</b>	<b>Multi Part /.zip</b>	<b>Pages (if appl.)</b>
1		int64D.PDF	154171	yes	16
			ad5f1e9a5db97cf38eee209e0fb3bd726fb86aa8		
<b>Multipart Description/PDF files in .zip description</b>					
<b>Document Description</b>			<b>Start</b>	<b>End</b>	
Amendment/Req. Reconsideration-After Non-Final Reject			1	1	
Claims			2	6	
Applicant Arguments/Remarks Made in an Amendment			7	16	
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (PTO-06)	fee-info.pdf	30299	no	2
			42b15d8dbcc5f39c3e0cc1d805b2a0b5c7a6cebc		
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			184470		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875					Application or Docket Number <b>10/343,333</b>		Filing Date <b>08/27/2003</b>		<input type="checkbox"/> To be Mailed				
<b>APPLICATION AS FILED – PART I</b>													
(Column 1)			(Column 2)		SMALL ENTITY <input type="checkbox"/>			OR			OTHER THAN SMALL ENTITY		
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR			RATE (\$)	FEE (\$)		
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>		N/A	N/A		N/A					N/A			
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>		N/A	N/A		N/A		N/A						
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>		N/A	N/A		N/A		N/A						
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>		minus 20 = *		*	X \$ =		X \$ =						
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>		minus 3 = *		*	X \$ =		X \$ =						
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>													
* If the difference in column 1 is less than zero, enter "0" in column 2.													
<b>APPLICATION AS AMENDED – PART II</b>													
(Column 1)			(Column 2)		SMALL ENTITY			OR			OTHER THAN SMALL ENTITY		
AMENDMENT	<b>09/23/2008</b>		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR			RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(j))</small>	* 27	Minus	** 27	= 0	X \$ =		X \$50=				0	
	Independent <small>(37 CFR 1.16(h))</small>	* 2	Minus	***3	= 0	X \$ =		X \$210=	0				
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>												
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>												
TOTAL ADD'L FEE						TOTAL ADD'L FEE						<b>0</b>	
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR			RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(j))</small>	*	Minus	**	=	X \$ =		X \$ =					
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	X \$ =		X \$ =					
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>												
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>												
TOTAL ADD'L FEE						TOTAL ADD'L FEE							
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.										Legal Instrument Examiner: /ROSA HOLLAND/			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".													
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".													
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.													

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**  
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 10/343,333 filed 08/27/2003 by Mathieu Kennedy Martyn, attorney Saul Ewing LLP, and examiner VU, THANH T.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> THANH T. VU	<b>Art Unit</b> 2175	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)  Responsive to communication(s) filed on 23 September 2008.

2a)  This action is **FINAL**.                      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 14-40 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 14-40 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \*    c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

This communication is responsive to Amendment, filed 09/23/2008.

Claims 14-40 are pending in this application. In the Amendment, claims 14, and 26 were amended. This action is made Final.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15, 16, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "a common function". There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the names and/or icons". There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the name of the associated application ". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard (US, 5, 815,142), Arcuri et al. (“Arcuri”, U.S. Pat. No. 6,121,968), and Krause (U.S. Pat. No. 6,160,554).

Per claim 14, Allard teaches a computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application (fig. 4), and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a list of at least one function offered within the first an application, each function in the list being selectable to launch the first application and initiate the selected respective function (fig. 6).

Allard does not specifically teach the application summary window displays a limited list of at least one function offered within the first an application, and the application summary window is displayed while the application is in an un-launched state. However, Arcuri teaches displaying a limited list of at least one function offered within an application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 287-32). Krause teaches displaying a summary window of an application while an application is in an un-launched state (col. 1, lines 52-56; col. 2, lines 2-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Arcuri, and Krause in the invention of Capps in order to provide a system for dynamically changing the available commands in a given menu based upon the particular needs and utilization behavior of a user (Arcuri, col. 2, lines 10-13), and in order to provide a fast convenient, and reliable technique for determining the contents of an executable file (i.e. an application) without the need to launch the application.

Per claim 15, Allard further teaches selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated (figs. 6B and 6C).

Per claim 16, Allard further teaches an application launcher lists the names and/or icons of several applications and selecting a name or icon caused the summary window for that application to be opened (figs. 6A and 6B; col. 4, lines 8-20).

Per claim 17, Arcuri teaches the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user (col. 2, lines 9-12; col. 2, lines 15-30).

Per claim 18, Arcuri teaches the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 19, Allard and Arcuri teach the functionality and/or stored data types for a summary window for a given application varies with the environment of the device (Allard, figs. 4 and 6; Arcuri figs. 2A and 2B).

Per claim 20, Arcuri teaches the functionality and/or stored data types for a summary window for a given application varies with the actions of the user (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 21, Krause teaches opening a summary window for a given application does not result in that application being opened (col. 1, lines 52-56 and col. 2, lines 2-5).

Per claim 22, Allard teaches the summary window is a frame which includes the name of the associated application (figs. 6A and 6B).

Per claim 23, Allard teaches the summary window further display a list of data stored in that application (figs. 6A-6C).

Per claim 24, Allard teaches the computing device of claim 14, being a mobile telephone (fig. 1).

Per claim 25, Allard teaches the computing device of claim 14, being a PC (claim 1).

Claims 26 and 27 are rejected under the same rationale as claim 1.

Claims 28-36 are rejected under the same rationale as claims 15-23 respectively.

Per claim 37, Arcuri teaches the computing device of claim 1, wherein said limited list is a sub-set of all of the functions offered by a given application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Per claim 38, Arcuri teaches the computer device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Claims 39-40 are rejected under the same rationale as claims 37 and 38.

### ***Response to Arguments***

Applicant's arguments with respect to the amendment have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH T. VU whose telephone number is (571)272-4073. The examiner can normally be reached on Mon- Fri 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L. Bashore can be reached on (571) 272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2175

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh T. Vu/  
Primary Examiner, Art Unit 2175

<b>Notice of References Cited</b>	Application/Control No. 10/343,333	Applicant(s)/Patent Under Reexamination MARTYN, MATHIEU KENNEDY	
	Examiner THANH T. VU	Art Unit 2175	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-5,815,142	09-1998	Allard et al.	345/173
B	US-			
C	US-			
D	US-			
E	US-			
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

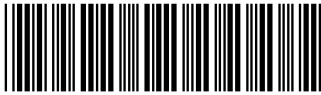
**FOREIGN PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

**NON-PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)			
U					
V					
W					
X					

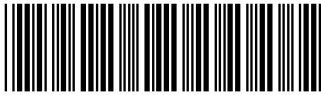
\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>Index of Claims</b> 	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

✓	<b>Rejected</b>	-	<b>Cancelled</b>	N	<b>Non-Elected</b>	A	<b>Appeal</b>
=	<b>Allowed</b>	÷	<b>Restricted</b>	I	<b>Interference</b>	O	<b>Objected</b>

Claims renumbered in the same order as presented by applicant
  CPA
  T.D.
  R.1.47


CLAIM		DATE							
Final	Original	04/22/2008	12/30/2008						
	1	-	-						
	2	-	-						
	3	-	-						
	4	-	-						
	5	-	-						
	6	-	-						
	7	-	-						
	8	-	-						
	9	-	-						
	10	-	-						
	11	-	-						
	12	-	-						
	13	-	-						
	14	✓	✓						
	15	✓	✓						
	16	✓	✓						
	17	✓	✓						
	18	✓	✓						
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	32	✓	✓						
	33	✓	✓						
	34	✓	✓						
	35	✓	✓						
	36	✓	✓						

<b>Index of Claims</b> 	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

✓	<b>Rejected</b>	-	<b>Cancelled</b>	N	<b>Non-Elected</b>	A	<b>Appeal</b>
=	<b>Allowed</b>	÷	<b>Restricted</b>	I	<b>Interference</b>	O	<b>Objected</b>

Claims renumbered in the same order as presented by applicant
  CPA
  T.D.
  R.1.47

CLAIM		DATE							
Final	Original	04/22/2008	12/30/2008						
	37	✓	✓						
	38	✓	✓						
	39	✓	✓						
	40	✓	✓						

<b>Search Notes</b>  	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

SEARCHED			
Class	Subclass	Date	Examiner
715	762, 759, 776, 808	4/22/2008	TV
715	762, 759, 776, 808	12/30/2008	TV

SEARCH NOTES		
Search Notes	Date	Examiner
East Search	4/22/2008	TV
East Search	12/30/2008	TV

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	((("6512525") or ("6570596") or ("6121968") or ("6160554")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 09:42
L2	1	("5815142").PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 10:11
L3	1577	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L4	24	L3 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L5	59	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
L6	77	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
L7	2	((("6456841") or ("6144863")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L8	147	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L9	200	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
L10	1	("6512525").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L11	832	(715/762).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L12	384	(715/808).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07

L13	168	(715/759).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
L14	188	(715/776).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
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L18	1	("6240410").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
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L20	1	("6993712").PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
L21	3	((("6512525") or ("6781161") or ("6121968")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
L22	3	((("6512525") or ("6781611") or ("6121968")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
L23	1	("6160554").PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
L24	8	("6160554").URPN.	USPAT	OR	ON	2008/12/30 11:07
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L27	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
L28	2	(application with (pre adj1 view) with (window or dialog))	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07

L29	5	(application with list with alert with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
L30	22	(application with list with (notific\$6) with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07

12/ 30/ 2008 11:15:21 AM

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**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Nokia Corporation  
Application No./Patent No.: 10/343,333 Filed/Issue Date: August 27, 2003

Titled: **COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS**

Nokia Corporation, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- 1.  the assignee of the entire right, title, and interest in;
- 2.  an assignee of less than the entire right, title, and interest in  
(The extent (by percentage) of its ownership interest is \_\_\_\_\_ %); or
- 3.  the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A.  An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy therefore is attached.

**OR**

B.  A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Inventors To: Symbian Limited

The document was recorded in the United States Patent and Trademark Office at  
Reel 014591, Frame 0410, or for which a copy thereof is attached.

2. From: Symbian Limited To: Nokia Corporation

The document was recorded in the United States Patent and Trademark Office at  
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3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
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Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Mark D. Simpson/  
Signature

2009-02-13  
Date

Mark D. Simpson  
Printed or Typed Name

Attorney of Record  
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	4790101
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	13-FEB-2009
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	13:14:55
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73(b).	int45.PDF	27074 <small>3052733c570b8c761171ce1ad6ae59112491d1f</small>	no	1

### Warnings:

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

**PATENT**

**Docket No. 356952.00012**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 356952.00012 Group Art Unit: 2175

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON March 2, 2009**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 CFR §1.116  
TO FINAL OFFICE ACTION MAILED DECEMBER 31, 2008**

Sir:

This Reply is being filed in response to the final Office Action mailed December 31, 2008, having a period for response set to expire on March 31, 2009. The following amendments and remarks are respectfully submitted.

Amendments to the claims begin on page 2 of this paper; Remarks begin on page 7 of this paper.

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Claims 1-13 (Canceled)

14. (Previously presented) A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application, and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an un-launched state.

15. (Currently amended) The computing device of Claim 14 in which selecting a ~~common~~ function listed in the summary window causes the ~~related~~ first application to open and that selected ~~common~~ function to be activated.

16. (Currently amended) The computing device of Claim 14 in which an application launcher lists ~~the~~ names and/or icons of several applications and selecting a one of said names or icons causes the summary window for that application to be opened.

17. (Original) The computing device of Claim 14 in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

18. (Original) The computing device of Claim 14 in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.

19. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.

20. (Original) The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

21. (Original) The computing device of Claim 14 in which opening a summary window for a given application does not result in that application being opened.

22. (Currently amended) The computing device of Claim 14 in which the summary window is a frame which includes the name of the ~~associated~~ first application.

23. (Original) The computing device of Claim 14 in which the summary window further display a list of data stored in that application.

24. (Original) The computing device of Claim 14, being a mobile telephone.

25. (Original) The computing device of Claim 14, being a PC.

26. (Previously presented) A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing at least a first application, and additionally causes the device to display on the screen an application summary window that can be reached directly from the main menu, wherein the summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected

function, and wherein the application summary window is displayed while the application is in an unlaunched state.

27. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code comprises an operating system program.

28. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code is operable such that selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

29. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code is operable to cause the screen to display an application launcher which lists the names and/or icons of several applications, wherein selecting a name or icon causes the summary window for that application to be opened.

30. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the kinds of content of a summary window for a given application to be selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

31. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables a user to define what functionality and/or stored data types are of interest to that user for the summary window for an application.

32. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the environment of the device.

33. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the actions of the user.

34. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the opening of a summary window for a given application without resulting in that application being opened.

35. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the summary window to be a frame which includes the name of the associated application.

36. (Previously presented) The computer program product of Claim 26, wherein said computer-readable code enables the summary window to further display a list of data stored in that application.

37. (Previously presented) The computing device of claim 1 wherein said limited list is a sub-set of all of the functions offered by a given application.

38. (Previously presented) The computing device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

39. (Previously presented) The computer program product according to claim 26 wherein said limited list is a sub-set of all of the functions offered by a given application.

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40. (Previously presented) The computer program product according to claim 38 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

**REMARKS**

In the Office Action, the Examiner indicated that claims 14 through 40 are pending in the application and the Examiner rejected all claims.

**The §112 Rejections**

On page 2 of the Office Action, the Examiner rejected claims 15, 16, and 22 under 35 U.S.C. §112, second paragraph, as being indefinite.

Applicant has amended these claims to remove the antecedent-basis issues raised by the Examiner. Accordingly, the examiner is respectfully requested to reconsider and withdraw the rejection of claims 15, 16, and 22 under 35 U.S.C. §112, second paragraph.

**Claim Rejections, 35 U.S.C. § 103**

On page 3 of the Office Action, the Examiner rejected claims 14-40 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,815,142 to Allard, U.S. Patent No. 6,121,968 to Arcuri et al., and U.S. Patent No. 6,160,554 to Krause.

**The Present Invention**

In one implementation of the present invention, a computing device displays on a display screen a main menu listing a number of available applications, and additionally is able to display on the display screen an application summary window that displays a limited list of several common functions offered within an application, such that any item in the limited list is

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selectable to initiate its respective function. The application summary window is displayed regardless of the launched or unlaunched status of this application. In other words, the present invention displays in a main menu a list of accessible applications, and by designating (e.g., hovering the cursor over) one of the applications listed in the main menu, a summary window is opened showing various functions that can be selected within the designated application even while the application is unlaunched.

**The Examiner has not Established a *prima facie* Case of Obviousness**

KSR (*KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007)) requires that an Examiner provide “some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness.” Further, an Examiner must “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does,” In addition, the Examiner must make “explicit” this rationale of “the apparent reason to combine the known elements in the fashion claimed,” including a detailed explanation of “the effects of demands known to the design community or present in the marketplace” and “the background knowledge possessed by a person having ordinary skill in the art.”

The combination of Allard et al., Arcuri et al. and Krause does not lead the skilled person to the claimed invention, as will be discussed in the following.

**Allard et al.**

The Examiner acknowledges that Allard et al. do not disclose either “a limited list of at least one function” or that “the application summary window is displayed while the application is in an un-launched state”. The Examiner is acknowledging therefore that Allard et al. discloses that an application may contain a menu through which functions may be accessed, a well-known concept. In fact, Allard et al. is directed to an entirely different problem to that solved by the present invention: how to enable a user to easily select and copy text using a stylus or human finger.

**Arcuri et al.**

As noted by the Examiner, Arcuri et al. teach displaying a limited list of at least one function offered within an application. Arcuri et al. too, then, discloses no more than might be considered part of the common general knowledge of a person skilled in the art. In other words, menus are available within a launched application which provide a subset of the functions available in an application. In fact, Arcuri et al. deal with a quite different problem to that solved by the present invention: how to make a menu list display only those functions which are required by a user, thereby shortening the list.

**Krause**

With regard to Krause, the Examiner’s characterization of Krause is incorrect. Specifically, the Examiner states that Krause discloses, “a summary window of an *application*”.

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It does not. Krause is concerned solely with enabling a user to view information relating to a *file*. This information may be metadata relating to the file or it may be a thumbnail showing the file's contents. Krause's description is universally about files, and the problem of enabling a user to know more about a file than its file name might reveal. Krause does not, therefore, disclose a summary window of an application. The only windows it displays relate to file information.

The present Applicant claims a device in which an un-launched *application* displays a window listing the *functions* which it is able to perform, those functions being able to be carried out once the application has been launched. Krause discloses nothing of the sort.

### **Conclusion**

Allard et al. and Arcuri et al. disclose no more than is commonly known to the skilled person. That is, a launched application contains menus which contain a limited list of application functions. Neither Allard nor Arcuri et al. consider the problem of how to enable a user to view certain application functions while the application is in an un-launched state.

Krause discloses a mechanism which enables a user to view the contents of a file without having to open the file. Krause does not disclose a mechanism which enables a list of application functions to be displayed prior to launching the application.

As there is nothing in the cited prior art which teaches or suggests displaying functions of an application in a summary window, and which is available prior to application launch, it is not a reasonable conclusion that one of ordinary skill in the art would arrive at the claimed invention from Allard, Arcuri, or Krause, taken alone or in combination.

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Applicant notes that the comments above refer only to device claim 14. However, they are also applicable to claim 26, which has corresponding method steps.

Since no combination of the cited prior art (obvious or otherwise) teaches or suggests a device with all of the features of claim 14, or even a device that is capable of the same desirable results as claim 14, the subject matter of claim 14 *must* be patentable over these citations. Claim 26 is patentable for the same reasons. Further, all the claims depending from claims 14 and 26 are allowable for the same reasons. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims under 35 U.S.C. §103.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

March 2, 2009  
Date

/Mark D. Simpson/  
Mark D. Simpson, Esquire  
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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	4886479
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	02-MAR-2009
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	16:27:20
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		int4F.PDF	123294 <small>4c61fbaad9b09e59478bbfab3d2239cb92a794a9</small>	yes	11

LGE0003700

<b>Multipart Description/PDF files in .zip description</b>		
<b>Document Description</b>	<b>Start</b>	<b>End</b>
Amendment After Final	1	1
Claims	2	6
Applicant Arguments/Remarks Made in an Amendment	7	11
<b>Warnings:</b>		
<b>Information:</b>		
<b>Total Files Size (in bytes):</b>	123294	
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>		

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FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR			RATE (\$)	FEE (\$)		
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<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>		N/A	N/A		N/A		N/A						
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>		minus 20 = *			X \$ =		X \$ =						
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>		minus 3 = *			X \$ =		X \$ =						
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>													
* If the difference in column 1 is less than zero, enter "0" in column 2.													
<b>APPLICATION AS AMENDED – PART II</b>													
(Column 1)			(Column 2)		SMALL ENTITY			OR			OTHER THAN SMALL ENTITY		
AMENDMENT	<b>03/02/2009</b>		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR			RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(j))</small>	* 27	Minus	** 27	= 0	X \$ =		X \$52=				0	
	Independent <small>(37 CFR 1.16(h))</small>	* 2	Minus	***3	= 0	X \$ =		X \$220=	0				
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>												
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>												
TOTAL ADD'L FEE						TOTAL ADD'L FEE						<b>0</b>	
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR			RATE (\$)	ADDITIONAL FEE (\$)
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	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>												
TOTAL ADD'L FEE						TOTAL ADD'L FEE							
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.										Legal Instrument Examiner: /Debra R. Wyatt/			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".													
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".													
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.													

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	356952.00012-U1	1608
78905	7590	03/17/2009	EXAMINER	
Saul Ewing LLP (Philadelphia) Attn: Patent Docket Clerk 2 North Second St. Harrisburg, PA 17101			VU, THANH T	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			03/17/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> THANH T. VU	<b>Art Unit</b> 2175	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 02 March 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a)  The period for reply expires 3 months from the mailing date of the final rejection.  
b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a)  They raise new issues that would require further consideration and/or search (see NOTE below);  
(b)  They raise the issue of new matter (see NOTE below);  
(c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d)  They present additional claims without canceling a corresponding number of finally rejected claims.  
NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 14-40.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.

12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_

13.  Other: \_\_\_\_\_.

/Thanh T. Vu/  
Primary Examiner, Art Unit 2175

Continuation of 11. does NOT place the application in condition for allowance because: In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this case the combination of Allard, Arcuri, and Krause teaches the claimed limitation of an application summary window display a limited list of at least one function offered within the first application, and the application summary window is displayed while the application is in an un-launched state, as in the following:

Allard teaches an application summary window display a list of at least one function offered within the application in fig. 6, which shows an application summary window for mail messages having a list of functions such as "received messages", "Ready to Send", and "Save messages" offered within the application. In addition, Acuri teaches how to shorten a list of functions, thereby allowing a limited list of at least one function offered within an application as shown in figs. 2A-2B, col. 2, lines 56-65, and col. 8, lines 13-15 and lines 28-32. Furthermore, Krause teaches a window related to an application while the application in un-launched state, see col. 1, lines 52-65 and col. 2, lines 1-5..

OK TO ENTER: /TV/ (03/16/2009)

**PATENT**

**Docket No. 356952.00012**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 356952.00012 Group Art Unit: 2175

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON March 2, 2009**

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MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 CFR §1.116  
TO FINAL OFFICE ACTION MAILED DECEMBER 31, 2008**

Sir:

This Reply is being filed in response to the final Office Action mailed December 31, 2008, having a period for response set to expire on March 31, 2009. The following amendments and remarks are respectfully submitted.

Amendments to the claims begin on page 2 of this paper; Remarks begin on page 7 of this paper.

1140852.1 3/2/09

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<b>NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES</b>		Docket Number (Optional) <b>356952.00012</b>
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____  Signature _____  Typed or printed name _____	In re Application of <b>Mathieu Kennedy Martyn</b>	
	Application Number <b>10343333</b>	Filed <b>2003-08-27</b>
	For Computing Device with Improved User Interface for Applications	
	Art Unit <b>2175</b>	Examiner <b>T. Vu</b>
Applicant hereby <b>appeals</b> to the Board of Patent Appeals and Interferences from the last decision of the examiner.		
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1))		\$ <u>540.00</u>
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is:		\$ _____
<input type="checkbox"/> A check in the amount of the fee is enclosed.		
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.		
<input checked="" type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account.		
<input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. <u>504364</u> .		
<input checked="" type="checkbox"/> A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.		
<p><b>WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</b></p>		
I am the		
<input type="checkbox"/> applicant/inventor.	_____ /Mark D. Simpson/ Signature	
<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	_____ Mark D. Simpson Typed or printed name	
<input checked="" type="checkbox"/> attorney or agent of record. <u>32,942</u> Registration number _____	_____ 215 972 7880 Telephone number	
<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	_____ June 30, 2009 Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.		
<input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.		

This collection of information is required by 37 CFR 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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<b>PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)</b> <b>FY 2009</b> <i>(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)</i>	Docket Number (Optional) 356952.00012																								
Application Number 10343333	Filed 2003-08-27																								
For Computing Device with Improved User Interface for Applications																									
Art Unit 2175	Examiner T. Vu																								
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):																									
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="text-align: center; border-bottom: 1px solid black;">Fee</th> <th style="text-align: center; border-bottom: 1px solid black;">Small Entity Fee</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> One month (37 CFR 1.17(a)(1))</td> <td style="text-align: center;">\$130</td> <td style="text-align: center;">\$65</td> <td style="text-align: center;">\$ _____</td> </tr> <tr> <td><input type="checkbox"/> Two months (37 CFR 1.17(a)(2))</td> <td style="text-align: center;">\$490</td> <td style="text-align: center;">\$245</td> <td style="text-align: center;">\$ _____</td> </tr> <tr> <td><input checked="" type="checkbox"/> Three months (37 CFR 1.17(a)(3))</td> <td style="text-align: center;">\$1110</td> <td style="text-align: center;">\$555</td> <td style="text-align: center;">\$ 1110 _____</td> </tr> <tr> <td><input type="checkbox"/> Four months (37 CFR 1.17(a)(4))</td> <td style="text-align: center;">\$1730</td> <td style="text-align: center;">\$865</td> <td style="text-align: center;">\$ _____</td> </tr> <tr> <td><input type="checkbox"/> Five months (37 CFR 1.17(a)(5))</td> <td style="text-align: center;">\$2350</td> <td style="text-align: center;">\$1175</td> <td style="text-align: center;">\$ _____</td> </tr> </tbody> </table>			Fee	Small Entity Fee		<input type="checkbox"/> One month (37 CFR 1.17(a)(1))	\$130	\$65	\$ _____	<input type="checkbox"/> Two months (37 CFR 1.17(a)(2))	\$490	\$245	\$ _____	<input checked="" type="checkbox"/> Three months (37 CFR 1.17(a)(3))	\$1110	\$555	\$ 1110 _____	<input type="checkbox"/> Four months (37 CFR 1.17(a)(4))	\$1730	\$865	\$ _____	<input type="checkbox"/> Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$ _____
	Fee	Small Entity Fee																							
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<input type="checkbox"/> Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$ _____																						
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. <input type="checkbox"/> A check in the amount of the fee is enclosed. <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached. <input checked="" type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>504364</u> .																									
<b>WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</b>																									
I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96). <input checked="" type="checkbox"/> attorney or agent of record. Registration Number <u>32,942</u> <input type="checkbox"/> attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____																									
<u>/Mark D. Simpson/</u> _____ Signature	<u>June 30, 2009</u> _____ Date																								
<u>Mark D. Simpson</u> _____ Typed or printed name	<u>215 972 7880</u> _____ Telephone Number																								
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.																									
<input checked="" type="checkbox"/> Total of <u>1</u> forms are submitted.																									

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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LGE0003708

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Mark D. Simpson/Lynn White			
<b>Attorney Docket Number:</b>	356952.00012-U1			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
Notice of appeal	1401	1	540	540
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

LGE0003709



Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$0 paid	1253	1	1110	1110
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1650</b>

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	5611632
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	30-JUN-2009
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	10:25:05
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1650
RAM confirmation Number	7378
Deposit Account	504364
Authorized User	
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p style="padding-left: 40px;">Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)</p> <p style="padding-left: 40px;">Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)</p>	

LGE0003711

<b>File Listing:</b>					
<b>Document Number</b>	<b>Document Description</b>	<b>File Name</b>	<b>File Size(Bytes)/ Message Digest</b>	<b>Multi Part /.zip</b>	<b>Pages (if appl.)</b>
1		int66C.PDF	58270 c4f642f2c314772fd387d24abef1d39636e2d38d	yes	2
<b>Multipart Description/PDF files in .zip description</b>					
	<b>Document Description</b>		<b>Start</b>		<b>End</b>
	Notice of Appeal Filed		1		1
	Extension of Time		2		2
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (PTO-875)	fee-info.pdf	31983 0e052d468ad5cc36a3d8f8a0ab5692fd2cd b9b1d	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			90253		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>					

LGE0003712

**PATENT**

**Docket No. 356952.00012**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 356952.00012 Group Art Unit: 2175

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON August 31, 2009**

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Commissioner for Patents  
MAIL STOP APPEAL BRIEF-PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Attention: Board of Patent Appeals and Interferences**

**APPELLANTS' BRIEF**

This brief is in furtherance of the Notice of Appeal filed in this case on June 30, 2009. The Commissioner is authorized to charge the fee for filing of this Appeal Brief to Deposit Account No. 50-4364.

**1. REAL PARTY IN INTEREST**

The present application is assigned to Nokia Corporation, having its principal place of business at Keilalahdentie 2-4, 02150 Espoo, FINLAND. Accordingly, Nokia Corporation is the real party in interest.

1181952.1 8/31/09

LGE0003713

**2. RELATED APPEALS AND INTERFERENCES**

The appellant, assignee, and the legal representatives of both are unaware of any other appeal or interference which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**3. STATUS OF CLAIMS**

- A. Claims canceled: 1-13
- B. Claims withdrawn from consideration but not canceled: None
- C. Claims pending: 14-40
- D. Claims allowed: none
- E. Claims rejected: 14-40
- F. Claims appealed: 14-40

Appealed claims 14-40 as currently pending are attached as the Claims Appendix hereto.

**4. STATUS OF AMENDMENTS**

A Reply under 37 C.F.R. §1.111 was filed on June 12, 2007; claim amendments were made. In response, the Examiner issued a final Office Action on August 22, 2007. A Reply under 37 C.F.R. §1.116 was filed on October 22, 2007, no claim amendments were made. A Request for Continued Examination and Supplemental Reply were filed on December 26, 2007;

claim amendments were made. In response, the Examiner issued a non-final Office Action on April 23, 2008. A Reply under 37 C.F.R. §1.112 was filed on September 23, 2008; claim amendments were made. In response, the Examiner issued the final Office Action appealed herein.

A Reply under 37 CFR §1.116 was filed on March 2, 2009; claim amendments were made. The submission of the Reply did not result in allowance by the Examiner.

#### 5. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 14: A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application (*published application, paragraphs [0015]-[0016], Figure 1*), and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu (*published application, paragraph [0017], Figures 2 and 3*), wherein the application summary window displays a limited list of at least one function offered within the first application (*published application, paragraph [0017], Figures 2 and 3*), each function in the list being selectable to launch the first application and initiate the selected function (*published application, paragraph [0018]*), and wherein the application summary window is displayed while the application is in an un-launched state (*published application, paragraphs [0017]-[0018]*).

Claim 26: A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing at

least a first application (*published application, paragraphs [0015]-[0016], Figure 1*), and additionally causes the device to display on the screen an application summary window that can be reached directly from the main menu (*published application, paragraph [0017], Figures 2 and 3*), wherein the summary window displays a limited list of at least one function offered within the first application (*published application, paragraph [0017], Figures 2 and 3*), each function in the list being selectable to launch the first application and initiate the selected function (*published application, paragraph [0018]*), and wherein the application summary window is displayed while the application is in an unlaunched state (*published application, paragraphs [0017]-[0018]*).

In one implementation of the present invention, a computing device displays on a display screen a main menu listing a number of available applications, and additionally is able to display on the display screen an application summary window that displays a limited list of several common functions offered within an application, such that any item in the limited list is selectable to initiate its respective function. The application summary window is displayed regardless of the launched or unlaunched status of this application. In other words, the present invention displays in a main menu a list of accessible applications, and by designating (e.g., hovering the cursor over) one of the applications listed in the main menu, a summary window is opened showing various functions that can be selected within the designated application even while the application is unlaunched.

**6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Applicant requests the Board to review the following rejection:

1. Rejection of claims 14-40 under 35 U.S.C. §103(a) based on U.S. Patent No. U.S. Patent No. 5,815,142 to Allard, U.S. Patent No. 6,121,968 to Arcuri et al., and U.S. Patent No. 6,160,554 to Krause.

**7. ARGUMENT**

**A Prima Facie Case of Obviousness Has Not Been Established**

*KSR (KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727, 82 USPQ2d 1385 (2007)*

requires that an Examiner provide “some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness.” Further, an Examiner must “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does,” In addition, the Examiner must make “explicit” this rationale of “the apparent reason to combine the known elements in the fashion claimed,” including a detailed explanation of “the effects of demands known to the design community or present in the marketplace” and “the background knowledge possessed by a person having ordinary skill in the art.”

In general terms, what is claimed is a computing device that can display certain components on a screen, one of which is a main menu that lists applications that can be launched on the device, and another is an application summary window. The application summary window can be reached directly from the main menu and, among other things, displays some of the



functions offered *within* a particular unlaunched application listed in the main menu. When one of these functions in the application summary window is selected, the respective application is launched and that function is simultaneously initiated.

The purpose of the application summary window is two-fold. Firstly, it provides a preview of functions available within the application without requiring the application to be launched (at the cost of time and system resources). Secondly, it provides a shortcut to the user, through which he or she can “reach into” the application and select a particular function prior to launching the application; when the function is selected, the selection process launches the application and initiates the process as a single action, so that it is ‘ready to go’ without any navigation required within the application. In addition to the improved user experience, there are performance benefits gained from pre-selecting the function.

To better understand this functionality, consider the following example. The Nokia E61i smartphone uses the Symbian OS operating system and the Nokia S60 interface. The phone includes a calendar application, which includes a function for adding a new meeting appointment to the user’s personal calendar. To add a new calendar entry, the user must perform the following steps, starting from a main menu:

1. Select *Calendar* application  
[*Calendar* application launches]  
[My personal calendar is loaded and displayed]
2. Select *Options* menu  
[*Options* menu opens]
3. Select *New Entry*  
[*New Entry* sub-menu opens]

4. Select *Meeting* item  
[*New Meeting* dialogue is displayed]

5. Enter meeting details

6. Select *Done*  
[New meeting appointment is created]

Now consider the following alternative operation, which is achieved using the device of claim

14:

1. Select *Calendar* application.  
[*Calendar* summary window is displayed but *Calendar* application remains unlaunched]

2. Select *New Meeting* item in *Calendar* summary window.  
[*Calendar* application launches]  
[*New Meeting* dialogue is displayed]

3. Enter meeting details

4. Select *Done*  
[New meeting appointment is created]

The second example is better for two reasons. Firstly, it saves the user from the tedious task of navigating through the internal menu structure of the calendar application. Secondly, it eliminates the need for the phone to perform unnecessary tasks in which the user has no interest when creating the new appointment. Such tasks will include loading and displaying the user's personal calendar – an operation that takes time and occupies resources and yet is of no benefit to the user when all he/she wishes to do is create the new appointment.

There are several features of claim 14 (and similarly, claim 26) that contribute especially to the sort of functionality described above in the second example, allowing the normal start of

the application to be 'leapfrogged' and the desired function initialized immediately upon launch.

These features are as follows:

1. The application summary window is reached directly from the main menu (i.e. from where the user normally launches the application)
2. Some functions available within the application are displayed in the application summary window before the application is launched
3. When a desired function is selected, the application is launched and that function is initiated in response to the selection in a single step

As described below, no combination of the cited prior art provides all three of these features, and it follows that the prior art cannot be combined to provide the 'leapfrogging' functionality that is described above. The combination of Allard et al., Arcuri et al. and Krause does not lead the skilled person to the claimed invention, as will be discussed in the following.

**Allard et al.**

The Examiner acknowledges that Allard et al. do not disclose either "a limited list of at least one function" or that "the application summary window is displayed while the application is in an un-launched state". The Examiner is acknowledging therefore that Allard et al. discloses that a launched application may contain a menu through which functions may be accessed, a well-known concept. In fact, Allard et al. is directed to an entirely different problem to that solved by the present invention: how to enable a user to easily select and copy text using a stylus or human finger.

**Arcuri et al.**

As noted by the Examiner, Arcuri et al. teach displaying a limited list of at least one function offered within a launched application. Arcuri et al. too, then, discloses no more than might be considered part of the common general knowledge of a person skilled in the art. In other words, menus are available within a launched application which provide a subset of the functions available in an application. In fact, Arcuri et al. deal with a quite different problem to that solved by the present invention: how to make a menu list display only those functions which are required by a user, thereby shortening the list.

**Krause**

With regard to Krause, the Examiner's characterization of Krause is incorrect. Specifically, the Examiner states that Krause discloses, "a summary window of an *application*". It does not. Krause is concerned solely with enabling a user to view information relating to a *file*. This information may be metadata relating to the file or it may be a thumbnail showing the file's contents. Krause's description is universally about files, and the problem of enabling a user to know more about a file than its file name might reveal. Krause does not, therefore, disclose a summary window of an application. The only windows it displays relate to file information.

The present Applicant claims a device in which an un-launched *application* displays a window listing the *functions* which it is able to perform, those functions being able to be carried out once the application has been launched. Krause discloses nothing of the sort.

To summarize, no combination of Allard, Arcuri, and/or Kraus teaches or suggests displaying, in a main menu, a list of accessible applications, and, by designating (e.g., hovering the cursor over) one of the applications listed in the main menu, opening a summary window which shows various functions that can be selected within the designated application even while the application is unlaunched.

**8. CONCLUSION**

For the foregoing reasons applicants respectfully request this Board to overrule the Examiner's rejections and allow claims 14-40.

Respectfully submitted:

August 31, 2009  
Date

/Mark D. Simpson/  
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**CLAIMS APPENDIX**

**CLAIMS INVOLVED IN THIS APPEAL:**

14. A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application, and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an un-launched state.

15. The computing device of Claim 14 in which selecting a function listed in the summary window causes the first application to open and that selected function to be activated.

16. The computing device of Claim 14 in which an application launcher lists names and/or icons of several applications and selecting one of said names or icons causes the summary window for that application to be opened.

17. The computing device of Claim 14 in which the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

18. The computing device of Claim 14 in which the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application.

19. The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the environment of the device.

20. The computing device of Claim 14 in which the functionality and/or stored data types for a summary window for a given application varies with the actions of the user.

21. The computing device of Claim 14 in which opening a summary window for a given application does not result in that application being opened.

22. The computing device of Claim 14 in which the summary window is a frame which includes the name of the first application.
23. The computing device of Claim 14 in which the summary window further display a list of data stored in that application.
24. The computing device of Claim 14, being a mobile telephone.
25. The computing device of Claim 14, being a PC.
26. A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing at least a first application, and additionally causes the device to display on the screen an application summary window that can be reached directly from the main menu, wherein the summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an unlaunched state.



27. The computer program product of Claim 26, wherein said computer-readable code comprises an operating system program.

28. The computer program product of Claim 26, wherein said computer-readable code is operable such that selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated.

29. The computer program product of Claim 26, wherein said computer-readable code is operable to cause the screen to display an application launcher which lists the names and/or icons of several applications, wherein selecting a name or icon causes the summary window for that application to be opened.

30. The computer program product of Claim 26, wherein said computer-readable code enables the kinds of content of a summary window for a given application to be selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user.

31. The computer program product of Claim 26, wherein said computer-readable code enables a user to define what functionality and/or stored data types are of interest to that user for the summary window for an application.

32. The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the environment of the device.

33. The computer program product of Claim 26, wherein said computer-readable code enables the functionality and/or stored data types for a summary window for a given application to vary with the actions of the user.

34. The computer program product of Claim 26, wherein said computer-readable code enables the opening of a summary window for a given application without resulting in that application being opened.

35. The computer program product of Claim 26, wherein said computer-readable code enables the summary window to be a frame which includes the name of the associated application.

36. The computer program product of Claim 26, wherein said computer-readable code enables the summary window to further display a list of data stored in that application.

37. The computing device of claim 1 wherein said limited list is a sub-set of all of the functions offered by a given application.

38. The computing device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

39. The computer program product according to claim 26 wherein said limited list is a sub-set of all of the functions offered by a given application.

40. The computer program product according to claim 38 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set.

**EVIDENCE APPENDIX**

No additional evidence is presented.

**RELATED PROCEEDINGS APPENDIX**

No related proceedings are presented.

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Mark D. Simpson/Lynn White			
<b>Attorney Docket Number:</b>	356952.00012-U1			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
Filing a brief in support of an appeal	1402	1	540	540
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

LGE0003731

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>540</b>

LGE0003732

<b>Electronic Acknowledgement Receipt</b>	
<b>EFS ID:</b>	5985036
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	31-AUG-2009
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	16:10:59
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

**Payment information:**

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 540
RAM confirmation Number	2485
Deposit Account	504364
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<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p style="padding-left: 40px;">Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)</p> <p style="padding-left: 40px;">Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)</p>	

LGE0003733



<b>File Listing:</b>					
<b>Document Number</b>	<b>Document Description</b>	<b>File Name</b>	<b>File Size(Bytes)/ Message Digest</b>	<b>Multi Part /.zip</b>	<b>Pages (if appl.)</b>
1	Appeal Brief Filed	int10D4.PDF	156617	no	18
			8084ed7fee22fbc509812423db36c2c006c5 Zabb		
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (PTO-875)	fee-info.pdf	30099	no	2
			b5611dd5cb26cfc2b787213d33291c4647e 1fb93		
<b>Warnings:</b>					
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<b>Total Files Size (in bytes):</b>			186716		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

LGE0003734



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	356952.00012-U1	1608
78905	7590	11/10/2009	EXAMINER	
Saul Ewing LLP (Philadelphia) Attn: Patent Docket Clerk 2 North Second St. Harrisburg, PA 17101			VU, THANH T	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			11/10/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/343,333  
Filing Date: August 27, 2003  
Appellant(s): MARTYN, MATHIEU KENNEDY

\_\_\_\_\_  
Saul Ewing LLP  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/13/2009 appealing from the Office action mailed 12/31/2008.

LGE0003736

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The amendment after final rejection filed on 3/02/2009 has been entered.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,815,142	Allard et al.	9-1998
6,121,968	Arcuri et al.	9-2000
6,160,554	Krause	12-2000

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 14-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard (US, 5, 815,142), Arcuri et al. (“Arcuri”, U.S. Pat. No. 6,121,968), and Krause (U.S. Pat. No. 6,160,554).**

Per claim 14, Allard teaches a computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application (fig. 4); and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a list of at least one function offered within the first an application, each function in the list being selectable to launch the first application and initiate the selected respective function (*fig. 6*).

Allard does not specifically teach the application summary window displays a limited list of at least one function offered within the first an application, and the application summary window is displayed while the application is in an un-launched state. However, Arcuri teaches displaying a limited list of at least one function offered within an application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 287-32). Krause teaches displaying a summary window of an application while an application is in an un-launched state (col. 1, lines 52-56; col. 2, lines 2-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Arcuri, and Krause in the invention of Capps in order to provide a system for dynamically changing the available commands in a given menu based upon the particular needs and utilization behavior of a user (Arcuri, col. 2, lines 10-13), and in order to

provide a fast convenient, and reliable technique for determining the contents of an executable file (i.e. an application) without the need to launch the application.

Per claim 15, Allard further teaches selecting a common function listed in the summary window causes the related application to open and that selected common function to be activated (figs. 6B and 6C).

Per claim 16, Allard further teaches an application launcher lists the names and/or icons of several applications and selecting a name or icon caused the summary window for that application to be opened (figs. 6A and 6B; col. 4, lines 8-20).

Per claim 17, Arcuri teaches the kinds of content of a summary window for a given application is selected using a process in which the device learns what functionality and/or stored data types are of interest to any given user (col. 2, lines 9-12; col. 2, lines 15-30).

Per claim 18, Arcuri teaches the user can define what functionality and/or stored data types are of interest to that user for the summary window for an application (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 19, Allard and Arcuri teach the functionality and/or stored data types for a summary window for a given application varies with the environment of the device (Allard, figs. 4 and 6; Arcuri figs. 2A and 2B).

Per claim 20, Arcuri teaches the functionality and/or stored data types for a summary window for a given application varies with the actions of the user (col. 2, lines 9-12; col. 2, lines 54-65; *a command is added to the subset of commands in the short form menu when the user selects a command from the long menu*).

Per claim 21, Krause teaches opening a summary window for a given application does not result in that application being opened (col. 1, lines 52-56 and col. 2, lines 2-5).

Per claim 22, Allard teaches the summary window is a frame which includes the name of the associated application (figs. 6A and 6B).

Per claim 23, Allard teaches the summary window further display a list of data stored in that application (figs. 6A-6C).

Per claim 24, Allard teaches the computing device of claim 14, being a mobile telephone (fig. 1).

Per claim 25, Allard teaches the computing device of claim 14, being a PC (claim 1).

Claims 26 and 27 are rejected under the same rationale as claim 14.

Claims 28-36 are rejected under the same rationale as claims 15-23 respectively.

Per claim 37, Arcuri teaches the computing device of claim 1, wherein said limited list is a sub-set of all of the functions offered by a given application (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Per claim 38, Arcuri teaches the computer device of claim 37 wherein said limited list displays only functions in said sub-set and thus cannot be scrolled to reveal additional functions outside of the sub-set (figs. 2A-2B; col. 2, lines 56-65; col. 8, lines 13-15 and lines 27-32).

Claims 39-40 are rejected under the same rationale as claims 37 and 38.

#### **(10) Response to Argument**

Appellant's primary argument as shown on page 8 and 10 of "ARGUMENT" are "no combination of the cited prior art provides all three of these features, and it follows that the prior

art cannot be combined to provide the 'leapfrogging' functionality that is described above. The combination of Allard et al., Arcuri et al. and Krause does not lead the skilled person to the claimed invention” and “no combination of Allard, Arcuri, and/or Kraus teaches or suggests displaying, in a main menu, a list of accessible applications, and, by designating (e.g., hovering the cursor over) one of the applications listed in the main menu, opening a summary window which shows various functions that can be selected within the designated application even while the application is unlaunched”.

In response to appellant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “leapfrogging” functionality and “designating (e.g. hovering the cursor over one of the applications listed in the main menu”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In this case, the combination of Allard et al., Arcuri et al., and Krause teaches the claimed limitations “a main menu listing at least a first application, and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an un-launched state” as follow:

Allard teaches a main menu listing at least a first application (*fig. 4 shows a main menu listing a "Mail" application (i.e. a first application)*), and additionally being configured to



Art Unit: 2175

display on the screen an application summary window that can be reached directly from the main menu (*fig. 6A shows an application summary window which can be reached directly from the main menu of Fig. 4 by selecting the "Mail" icon*, wherein the application summary window displays a list of at least one function offered within the first an application (*fig. 6A shows the "Mail" application summary windows displaying a list of function such as "Received Messages", "Ready to Send", and "Saved Messages"*), each function in the list being selectable to launch the first application and initiate the selected respective function (*fig. 6B and 6C show a function of fig. 6A being selected to launch the "Mail" application.*)

In addition, Acuri teaches how to shorten a list of functions within an application, thereby, allowing a listed list of at least one function offered within an application as shows in *figs. 2A-2B, col. 2, line 56-65, and col. 8, lines 13-15 and lines 28-32.*

Furthermore, Krause teaches displaying a preview window related to an application while the application is in un-launch state, see *fig. 1, preview window 140 and col. 1, lines 52-65, col. 2, lines 1-5, and col. 3, lines 5-15.* Thus, this would allow the summary window of *fig. 6A of Allard* being display while the Mail application is in un-launch state.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Thanh T. Vu/

Primary Examiner, Art Unit 2175

Conferees:

/William L. Bashore/

Supervisory Patent Examiner, Art Unit 2175

/Kieu Vu/

Supervisory Patent Examiner, Art Unit 2173

**PATENT**

**Docket No. 356952.00012**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTORS: Mathieu K. Martyn

APPLICATION NO. 10/343,333

Confirmation No. 1608

FILED: August 27, 2003

Examiner: T. Vu

CASE NO. 356952.00012

Group Art Unit: 2175

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON January 11, 2010**

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**Attention: Board of Patent Appeals and Interferences**

**REPLY BRIEF**

This Reply Brief is filed in response to the Examiner's Answer, mailed November 10, 2009. Applicant believes that no fee is associated with the filing of this brief, but authorizes the Commissioner to charge any fees to Deposit Account No. 50-4364.

**1. REPLY TO EXAMINER'S ARGUMENTS**

On pages 5 through 7 of the Examiner's Answer, the Examiner makes assertions regarding the Allard and Kreuse references, and makes reference to the unclaimed term

1212017.1 1/11/10

LGE0003744

“leapfrogging” used by the Applicant to simplify the explanation of the claimed invention.

In response, Applicant submits the following:

The Examiner makes particular reference to the display illustrated as Fig. 6A in Allard. This display is entitled “Main Menu” and is apparently accessed by launching the Mail application by selecting the Mail application’s icon in the “Mobile Office” display (see Fig. 4 of Allard). This process (i.e. selecting the Mail icon in order to arrive at the Mail application’s “Main Menu”) launches the mail application and appears to be the only way to do so; at least, no other way is taught by Allard.

The “Main Menu” of the Mail application, shown in Fig. 6A, displays functionality that is offered only by the Mail application. This is entirely normal; it is common place for a launched application to display ways of accessing the functionality it provides. Applicant underlines that when the “Main Menu” of Fig. 6A is displayed, this happens because the Mail application has already been launched and is itself displaying the “Main Menu”. It follows that the “Main Menu” cannot be displayed when the Mail application is in an unlaunched state. It further follows that the “Main Menu” display of Fig. 6A cannot allow the user to launch the Mail application and initiate a function of it, since it is a menu that is only ever displayed within the Mail application when it is already launched and running.

The Examiner has again referred to the Kreuse document. Kreuse is specifically concerned with ‘previewing’ metadata relating to files in a computing system. Such metadata is displayed without opening the file, and an option may be included to open the file by launching a suitable application. This is conceptually very different to a user selecting an application and

causing functionality of that application to be displayed, or allowing the application to be launched and a certain functionality initiated, or displaying functionality of the application of the unlaunched application on a main menu screen and allowing the functionality to be initiated from this main menu screen, as is claimed herein. Even if we consider the case where the file in question is an executable file relating to an application (something about which Kreuse is entirely silent), then there is still no suggestion that the application's functionality would form any part of the metadata that is displayed. Instead, one might expect information relating to the file size, last modified date, etc. to be displayed, perhaps with an option to launch a program for viewing/editing the contents of the executable file (e.g. a so-called "Hex editor") – such are the sorts of information that might be displayed about a file. However, even this is speculation that not only pushes beyond the limits of what is hinted at in Kreuse, but also fails to lead us to those features of the claims that are missing from Allard.

Leaving aside the prior art, Applicant wishes to address the comments made in respect of the "leapfrogging" discussion that was included in the Appeal Brief. Specifically, the Examiner alleges that the leapfrogging functionality is unclaimed and therefore should not be used as a basis for establishing non-obviousness. In fact, what is being referred to is the idea of launching an application and initiating a function within it in response to a selection that is made in the summary window displayed on the main screen. This is as opposed to the two separate operations of first launching an application, and then navigating to and selecting a function within the launched application. An example of the latter two-step process would be the user selecting the Mail icon in Allard (Fig. 4), whereupon the Mail application is launched and the

user can select the “Received Messages” function (for example) from within the launched application (Fig. 6). This “leapfrogging” behavior is an effect that results from the features that are claimed – in particular that functionality is selected before an application is launched, in response to which the application launches and the (pre-selected) functionality is initiated. The term “leapfrogging” is not claimed because it is not needed; applicant simply used the term to describe the functionality made available by the claimed steps to assist the Examiner’s understanding. The claimed operation is highly efficient and beneficial to the user for several reasons that have previously been presented to the Examiner. None of the prior art references describe this leapfrogging effect facilitated by the claimed steps, for the reason that none of the references teaches the essential features required to achieve it (unlike the pending claims).

Applicant acknowledges that the Mail application in Allard appears to be relatively simple with few functions, and the extra burden on the user and the device during the above “Received Messages” example could therefore be considered to be fairly light. The fact that Allard may not have a need for a “leapfrogging” approach is irrelevant. Allard’s lack of a need for the claimed approach does not mean that the unique and non-obvious features of the pending claims do not provide a very useful and desirable result.

**2. CONCLUSION**

For the foregoing reasons applicant respectfully requests this Board to overrule the Examiner's rejections and allow claims 14-40.

Respectfully submitted:

January 11, 2010  
Date

/Mark D. Simpson/  
Mark D. Simpson  
Reg. No. 32,942

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## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	6787140
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	11-JAN-2010
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	16:36:25
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Reply Brief Filed	10343333_ReplyBrief.pdf	54930 <small>cd7a21d39d0686267d16b6e7c56455764240f23e</small>	no	5

### Warnings:

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	356952.00012-U1	1608
78905	7590	02/16/2010	EXAMINER	
Saul Ewing LLP (Philadelphia) Attn: Patent Docket Clerk 2 North Second St. Harrisburg, PA 17101			VU, THANH T	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			02/16/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10343333	8/27/2003	MARTYN, MATHIEU KENNEDY	356952.00012-U1

Saul Ewing LLP (Philadelphia)  
 Attn: Patent Docket Clerk  
 2 North Second St.  
 Harrisburg, PA 17101

<b>EXAMINER</b>
-----------------

THANH T.. VU

ART UNIT	PAPER
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2175

20100209

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

The reply brief filed 01/11/2010 has been entered and considered. The application has been forwarded to the Board of Patent Appeals and Interferences for decision on the appeal.

/Thanh T. Vu/  
Primary Examiner, Art Unit 2175

PTO-90C (Rev.04-03)

LGE0003752



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	356952.00012-U1	1608
78905	7590	03/01/2010	EXAMINER	
Saul Ewing LLP (Philadelphia) Attn: Patent Docket Clerk 2 North Second St. Harrisburg, PA 17101			VU, THANH T	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			03/01/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte*: MATHIEU KENNEDY MARTYN

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Application No. 10/343,333  
Technology Center 2100

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Mailed: March 1, 2010

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Before DEBORAH L. PERRY, *Supervisory Paralegal Specialist, Review Team*.

**ORDER RETURNING UNDOCKETED APPEAL TO EXAMINER**

This application was electronically received by the Board of Patent Appeals and Interferences on February 17, 2010. A review of the application revealed that it is not ready for docketing as an appeal. Accordingly, the application is herewith being returned to the Examiner to address the following matter requiring attention prior to docketing.

LGE0003754

APPEAL BRIEF, SUMMARY OF CLAIMED SUBJECT MATTER

Appellant filed an Appeal Brief dated August 31, 2009. The Appeal Brief is not in compliance with 37 C.F.R. § 41.37(c) effective September 13, 2004.

According to 37 C.F.R. § 41.37(c)(v), an Appeal Brief must include the following:

(v) *Summary Of Claimed Subject Matter.* A concise explanation of the subject matter defined in each of the independent claims involved in the appeal, which must refer to the specification by page and line number, and to the drawing, if any, by reference characters. For each independent claim involved in the appeal and for each dependent claim argued separately under the provisions of 37 CFR 41.37(c)(1)(vii), every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters.

The “Summary of claimed subject matter” appearing on pages 3-4 of the Appeal Brief filed August 31, 2009, is deficient because it does not refer to the specification for independent claim 14 & 26. Correction is required.

MPEP § 1205.03 states in part:

(B) When the Office holds the brief to be defective solely due to appellant’s failure to provide a summary of the claimed subject matter as required by 37 CFR 41.37(c)(1)(v), an entire new brief need

not, and should not, be filed. Rather, a paper providing a summary of the claimed subject matter as required by 37 CFR 41.37(c)(1)(v) will suffice. Failure to timely respond to the Office's requirement will result in dismissal of the appeal. See MPEP § 1215.04 and § 711.02(b).

### CONCLUSION

Accordingly,

it is ORDERED that the application is returned to the Examiner:

- 1) hold the Appeal Brief filed August 31, 2009, defective, as required by 37 CFR § 41.37(d);
- 2) notify the Appellant to submit a "paper" which corrects the Appeal Brief's Summary of Claimed Subject Matter under 37 CFR §41.37(c)(1)(v);
- 3) acknowledge and consider any "paper" submitted by Appellant to correct the Appeal Brief; and
- 4) for such further action as may be appropriate.

If there are any questions pertaining to this Order, please contact the Board of Patent Appeals and Interferences at 571-272-9797.

DLP/jsd

Application No. 10/343,333

Saul Ewing LLP (Philadelphia)  
Attn: Patent Docket Clerk  
2 North Second St.  
Harrisburg PA 17101





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Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	356952.00012-U1	1608

78905                      7590                      03/05/2010

Saul Ewing LLP (Philadelphia)  
Attn: Patent Docket Clerk  
2 North Second St.  
Harrisburg, PA 17101

EXAMINER

ART UNIT                      PAPER NUMBER

DATE MAILED: 03/05/2010

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Notification of Non-Compliant Appeal Brief (37 CFR 41.37)</b>	<b>Application No.</b> 10/343,333	<b>Applicant(s)</b> MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b> THANH T. VU	<b>Art Unit</b> 2175	

*--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

The Appeal Brief filed on 31 August 2009 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1.  The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
2.  The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
3.  At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
4.  (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
5.  The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi)).
6.  The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
7.  The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
8.  The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
9.  The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
10.  Other (including any explanation in support of the above items):

As indicated by the Board of Patent Appeals and Interferences, the Appeal Brief does not refer to the specification for claims 14 and 26.

/Thanh T. Vu/  
Primary Examiner, Art Unit 2175

PATENT

Docket No. 356952.00012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: Mathieu K. Martyn  
APPLICATION NO. 10/343,333 Confirmation No. 1608  
FILED: August 27, 2003 Examiner: T. Vu  
CASE NO. 356952.00012 Group Art Unit: 2175

TITLE: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

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**FILED ELECTRONICALLY ON March 16, 2010**

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Commissioner for Patents  
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Alexandria, VA 22313-1450

**Attention: Board of Patent Appeals and Interferences**

**AMENDED PORTION OF APPELLANTS' BRIEF FILED IN RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF, MAILED MARCH 5, 2010**

This is in response to the Notification of Non-Compliant Appeal Brief, mailed by the Patent Office on March 5, 2010, having a period for response set to expire on April 5, 2010. In response to the Notification, applicant submits herewith an amended "Summary of the Claimed Subject Matter" section of the Appeal Brief originally filed on August 31, 2009. This section of the Brief has been amended to include reference to the subject matter defined in each of the independent claims by page and line number in the specification, as required in the Notification.

Applicant believes that no fee is required, but authorizes the Commissioner to charge any fees associated with this communication to Deposit Account No. 50-4364.

1227047.1 3/16/10

LGE0003760

**5. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Claim 14: A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application (*page 4, lines 5-31 of the specification, Figure 1*), and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu (*page 5, lines 1-16 of the specification, Figures 2 and 3*), wherein the application summary window displays a limited list of at least one function offered within the first application (*page 5, lines 1-16 of the specification, Figures 2 and 3*), each function in the list being selectable to launch the first application and initiate the selected function (*page 5, lines 18-30 of the specification*), and wherein the application summary window is displayed while the application is in an un-launched state (*page 5, lines 1-30 of the specification*).

Claim 26: A computer program product comprising a computer-readable storage medium having computer-readable code embodied in the medium which, when running on a computing device, causes the computing device to display on a screen of the device a main menu listing at least a first application (*page 4, lines 5-31 of the specification, Figure 1*), and additionally causes the device to display on the screen an application summary window that can be reached directly from the main menu (*page 5, lines 18-30 of the specification, Figures 2 and 3*), wherein the summary window displays a limited list of at least one function offered within the first application (*page 5, lines 1-16 of the specification, Figures 2 and 3*), each function in the list being selectable to launch the first application and initiate the selected function (*page 5, lines 18-*

*30 of the specification*), and wherein the application summary window is displayed while the application is in an unlaunched state (*page 5, lines 1-30 of the specification*).

Respectfully submitted:

March 16, 2010

Date

/Mark D. Simpson/

Mark D. Simpson

Reg. No. 32,942

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Facsimile: 215 972 4169  
Email: MSimpson@saul.com

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	7216316
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Mark D. Simpson/Lynn White
<b>Filer Authorized By:</b>	Mark D. Simpson
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	16-MAR-2010
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	12:53:13
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	10343333_AmendedAppealBrief.pdf	34741 <small>5c6909e188ac1200ae559f29e0c11f125eea4cc0</small>	no	3

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.





As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the Assignee.

Assignee of Record:

**NOKIA CORPORATION**

By: Virpi Tognetty

Print Name: Virpi Tognetty  
Director, Patenting Operations  
Legal and Intellectual Property

Title: \_\_\_\_\_

Date: 25 March 2010

**CUSTOMER NO. 00826**  
**ALSTON & BIRD LLP**  
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101 South Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Tel Charlotte Office (704) 444-1000  
Fax Charlotte Office (704) 444-1111

LEGAL02/31372667v1

LGE0003766

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	7292651
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	78905
<b>Filer:</b>	Bruce J. Rose/Kim Shaul
<b>Filer Authorized By:</b>	Bruce J. Rose
<b>Attorney Docket Number:</b>	356952.00012-U1
<b>Receipt Date:</b>	26-MAR-2010
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	12:25:00
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

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Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA387289.pdf	86479 ec4bbc9b20a2ceaaf45f4c082ab8fb589f580803d	no	2

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/343,333	08/27/2003	Mathieu Kennedy Martyn	042933/387289

**CONFIRMATION NO. 1608**

**POA ACCEPTANCE LETTER**



826  
ALSTON & BIRD LLP  
BANK OF AMERICA PLAZA  
101 SOUTH TRYON STREET, SUITE 4000  
CHARLOTTE, NC 28280-4000

Date Mailed: 04/05/2010

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 03/26/2010.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/atesfai/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/343,333	08/27/2003	Mathieu Kennedy Martyn	356952.00012-U1

**CONFIRMATION NO. 1608**

**POWER OF ATTORNEY NOTICE**



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Date Mailed: 04/05/2010

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 03/26/2010.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/atesfai/

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	042933/387289	1608
826	7590	04/30/2010	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			VU, THANH T	
			ART UNIT	PAPER NUMBER
			2175	
			MAIL DATE	DELIVERY MODE
			04/30/2010	PAPER

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10343333	8/27/2003	MARTYN, MATHIEU KENNEDY	042933/387289

ALSTON & BIRD LLP  
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<b>EXAMINER</b>
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THANH T.. VU

ART UNIT	PAPER
2175	20100428

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**Commissioner for Patents**

The amended "Summary of the Claimed Subject Matter" in the supplemental appeal brief filed on 03/16/2010 is acknowledged by the examiner. Since an examiner's answer has been issued, the application is forwarded to the Board.

/Thanh T. Vu/  
Primary Examiner, Art Unit 2175

PTO-90C (Rev.04-03)

LGE0003772



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CHARLOTTE, NC 28280-4000

Appeal No: 2010-008003  
Application: 10/343,333  
Appellant: Mathieu Kennedy Martyn

## Board of Patent Appeals and Interferences Docketing Notice

Application 10/343,333 was received from the Technology Center at the Board on May 24, 2010 and has been assigned Appeal No: 2010-008003.

In all future communications regarding this appeal, please include both the application number and the appeal number.

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The facsimile number of the Board is 571-273-0052. Because of the heightened security in the Washington D.C. area, facsimile communications are recommended. Telephone inquiries can be made by calling 571-272-9797 and referencing the appeal number listed above.

By order of the Board of Patent Appeals and Interferences.

LGE0003774

Substitute for form 1449/PTO (Revised 04/2003)  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/343,333
				Filing Date	August 27, 2003
				First Named Inventor	Mathieu K. Martyn
				Group Art Unit	2175
Examiner Name	T. Vu				
Attorney Docket Number	042933/387289				
Sheet	1	of	1		

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached
	1	EP 0 946 028 A2	09-29-1999	Nokia Mobile Phones Ltd.		
	2	JP 2000-036856	02-02-2000	Nokia Mobile Phones Ltd.		Abstract

OTHER DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	3	Office Action for Japanese Patent Application No. 2002-515554; Date of Transmission: December 21,2010; 4 pages	X

Examiner Signature		Date Considered	
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Submitted: December 23, 2010

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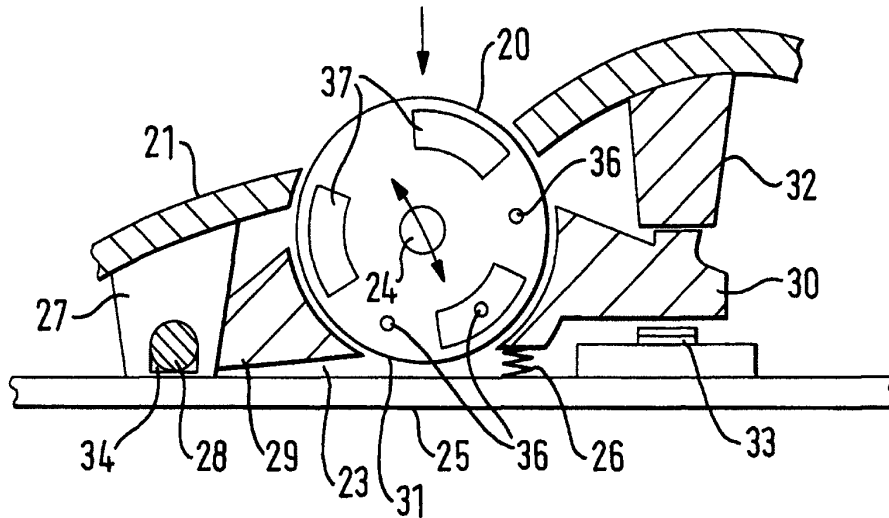
(30) Priority: **25.03.1998 GB 9806325**

(71) Applicant: **NOKIA MOBILE PHONES LTD.**  
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(54) **Context sensitive pop-up window for a portable phone**

(57) A portable phone has a display, input means for inputting information and instructions, and a control unit controlling the display in dependence on the operation of the input means. The input means includes navigation means for moving a marker in an active part of the display. The navigation means is provided with a roller body and includes means for detecting the rolling and depres-

sion of the roller body and for providing control signals in response thereto. In an information input mode, the control unit moves the marker in the display in dependence on the rolling control signal and generates a pop-up window upon reception of the depression control signal, said pop-up window covering a part of the active display and containing operations which are allowed in a position defined by said marker.



**FIG. 3**

## Description

[0001] The invention relates to a new and improved user interface (UI) for a telephone handset. The UI of hand portable phones for cellular or cordless systems does not just support the call handling alone. In the recent generations of hand portable phones more and more new applications have been integrated in the phones.

[0002] Navigation among the menu items, handling of the individual applications and editing of text as input for the applications are very difficult to perform, because the most commonly used type of navigation is carried out by an up/down scroll key. The number of operations that may be performed by a hand portable phone continues to increase. However, in order to make the phone more user-friendly it is desired to simplify the keypad, since many non-technical users take fright at keys if they do not know how to handle these keys. In general, customers are frightened when they see a keypad overwhelmed with special keys.

[0003] In order to reduce the number of keys on a handset more and more functions and operations are integrated in a reduced number of keys. A phone named Nokia 3110® marketed by the applicant has a very limited number of keys having the most commonly used functions and operations as default options, while the functions and operations not used so often are alternative options. This concept is described in a UK patent application 9624520.4 and was fully accepted by the user group when introduced.

[0004] Even though this concept makes it much easier for new phone users to become familiar with the most commonly used operations, such as making calls, handling the electronic phone book, etc., it does not improve the usability of the more rarely used operations, such as making conference calls, message handling, etc.

[0005] UK patent application 9703646.1 describes a concept according to which a window pops up when a soft key is depressed. This window contains a list including operations available through the soft key.

[0006] In accordance with the invention there is provided a portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means; said input means including means for moving a marker in the display; and means for providing a request to the control unit for displaying operations which are allowed in a position defined by said marker; said control unit generating a pop-up window which covers a part of the display upon reception of the request, and which includes said allowed operations. Hereby both the options normally present in the soft keys and the navigation of the cursor may be integrated in the roller body of the navigation means.

[0007] One important advantage is that the active part of the display may be increased, because one out of three to five text lines of the display does no longer have to be dedicated to the displaying of the soft key functionality. Another advantage is that a number of the keys may simply be left out. In a simple way, it is hereby easy to obtain a navigation and selection key with the desired properties.

[0008] An embodiment of the invention provides a new and improved user interface for a telephone hand set, wherein the default and alternative options available are displayed in a way giving the user a better view of the available options.

[0009] Advantageously, the means for moving a marker in the display comprises a navigation key means having a roller body whose rolling is detected by means of an encoder operatively connected to the control unit which controls the movement of the marker in the display in dependence thereon. Preferably, the request means comprises a sensor integrated in a support structure for the roller body, said moving and request means being integrated in the navigation key means. The contents of the pop-up window in an entry or editing mode show marker determined context sensitivity. At present, the LCD displays are the preferred type of displays used for e.g. phones, and this type of display is a dot matrix display in which the display signs are preferably arranged in a predetermined number of lines in the active part of the display, each of said lines may contain a plurality of signs, and said marker is provided as a gleaming bar which may be positioned between two of said signs. A new sign is entered to the right of the gleaming bar, and the gleaming bar is moved to the right of the newly entered sign.

[0010] Advantageously, the phone changes state upon the occurrence of the context sensitive pop-up window to a listing mode in which a plurality of allowable operations are listed in the pop-up window, and wherein said request providing input means changes functionality to a selection means which, when depressed, selects the operation marked by the cursor. Hereby the same key may be used for different types of navigation in dependence on the present mode of the phone.

[0011] By providing the phone with an editor not depending on an alphanumeric keypad, but controlled by the control unit and operated by the navigation key means, the alphanumeric keypad may simply be left out. Hereby it is possible to have the roller body based navigation key as the sole input key. A power on/off key may be present on the phone. The control unit defines for the editor a first display part in the display for displaying a string of entered information; a second display part in the display for displaying a string of a plurality of possible information candidates; one of the candidates in the candidate string being highlighted by the cursor whose movement through information candidates is controlled by the rolling of the navigation key means, and said highlighted candidate being selectable for entering into the string of entered information by pressing the navigation key means.

[0012] The invention therefore also relates to a portable phone having a display, input means for inputting information

and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means; said input means including a depressable roller body; a support structure for the roller body; an encoder operatively connected to the control unit for detecting the rolling of the roller body; and a sensor operatively connected to the control unit for detecting the depression of the roller body; said control unit generating a pop-up window which includes a set of allowed operations and which covers a part of the display upon reception of a request provided by depressing the roller body. According to a preferred embodiment of the invention, the navigation key is the only input means of the phone.

**[0013]** The pop-up window is demarcated from the active display area by means of borderlines defining a rectangular frame. When the text is black on a light (yellow or green) background, the rectangular frame may advantageously be black like the text and have a line width corresponding to 2-3 pixels or dots. When the pop-up window area covers from 30 percent to 70 percent of the full active display area, the user will always have the possibility of seeing a part of the background display which is sufficient to recognize the mode or display.

**[0014]** According to the preferred embodiment, the pop-up window contains two-four selectable operations within the rectangular frame. However, the control unit handles a list including a plurality of selectable operations arranged in a predetermined order with only a fractional set of the full set of operation shown simultaneously in the pop-up window. Rolling of the navigation key means causes scanning through the full set of operations. The window thereby moves along the full list.

**[0015]** Preferably, the full list is not provided as an endless loop. Preferably, the full set of operations is arranged with two operations defined as a first item and a last item in the list, respectively; and in the listing mode, when the cursor passes outside the first or the last item in the list, the pop-up window disappears and the phone goes from listing mode to the mode associated with the background display.

**[0016]** Preferably, the context sensitive pop-up window includes all available operations. These are available from a number of sub-menus according to the state of the art. Now the user does no longer have to remember the path to the sub-menu - he can just select from a list.

**[0017]** The invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

**[0018]** Figure 1 schematically illustrates a preferred embodiment of a hand portable phone according to the invention.

**[0019]** Figure 2 schematically shows the essential parts of a telephone for communication with a cellular or cordless network.

**[0020]** Figure 3 schematically and in cross-section shows the part of the phone shown in figure 1 included in the navigation and selection key according to the invention.

**[0021]** Figure 4 schematically illustrates a preferred embodiment of a display with a pop-up window according to the invention.

**[0022]** Figure 5 schematically illustrates one of the displays shown in figure 4 on an enlarged scale.

**[0023]** Figure 6 schematically illustrates an alternative embodiment of a hand portable phone according to the invention.

**[0024]** Figure 7 shows a state diagram for the hand portable phone according to the invention.

**[0025]** Figure 8 shows an example of the editor used in the hand portable phone according to the invention.

**[0026]** Figure 1 shows a preferred embodiment of a phone according to the invention, and it will be seen that the phone, which is generally designated by 1, comprises a user interface having a keypad 2, a display 3, an on/off button 4, an ear-piece 5, and a microphone 6. The phone 1 according to the preferred embodiment is adapted for communication via a cellular network, but could have been designed for e.g. a cordless network as well. The keypad 2 has a first group 7 of keys as alphanumeric keys, by means of which the user can enter a telephone number, write a text message (SMS), write a name (associated with the phone number), etc. Each of the twelve alphanumeric keys 7 is provided with a figure "0-9" or a sign "#" and "\*", respectively. In alpha mode each key is associated with a number of letters and special signs used in the text editing.

**[0027]** The keypad 2 additionally comprises a navigation and selection key 10 and a clear key 12. The clear key 12 may be used e.g. for erasing the digit or letter entered last by brief depression, while depression of a longer duration will erase the entire number or word.

**[0028]** The phone may comprise two call handling keys like in Nokia 8110™, but according to the preferred embodiment the call handling is included in the navigation and selection key 10. This means that depressing the navigation and selection key 10 once in idle mode with at least one digit in the display will cause a pop-up window having "call establishment" as one item to appear, and when the call has been established by selecting "call establishment" by pressing the navigation and selection key 10, the items in the pop-up window will change to "call termination", "conference call", etc.

**[0029]** The navigation and selection key 10 is placed centrally on the front surface of the phone between the display 3 and the group of alphanumeric keys 7. Hereby the user will be able to control this key with his thumb. This is the best site to place an input key requiring precise motoric movements. Many experienced phone users are used to one-

hand handling. They place the phone in the hand between the finger tips and the palm of the hand. Hereby the thumb is free for inputting information.

5 [0030] As will be seen from figure 3, the navigation and selection key 10 includes a roller body 20 which extends partly through an opening in the front cover 21 of the phone, and said roller body 20 is essentially cylindrical with a length and diameter of the same size as the width of the keys in the alphanumeric group of keys 7. When the axis of rotation of the roller body 20 is provided such that it extends perpendicularly to the longitudinal axis of the phone 1, the rolling of the roller body 20 will move a cursor in the display in an up/down direction corresponding to the movement of the thumb. For fulfilling this purpose the navigation and selection key is provided with encoder means (not shown) converting the rotation of the roller body into a train of electronic pulses fed to a processor 17 of the phone. The navigation and selection key structure is furthermore provided with a microswitch (not shown) for detecting the depression of the roller body 20, thereby providing a selection signal for the processor 17 indicating that the item pointed out in the display has been selected. The navigation and selection key is described in detail in GB patent applications 9727062.3, 9727058.1 and 9727060.7 filed by the applicant on 22 December 1997. These pending applications are hereby incorporated by reference.

15 [0031] When the navigation and selection key 10 is arranged as an extension of the central column of the alphanumeric keys 7, the navigation and selection key 10 can be accessed optimally by both left- and right-handed users.

[0032] Figure 2 schematically shows the most important parts of a preferred embodiment of a portable phone, said parts being essential to the understanding of the invention. The preferred embodiment of the phone of the invention is adapted for use in connection with the GSM network, but, of course, the invention may also be applied in connection with other phone networks, such as cellular networks and various forms of cordless phone systems. The microphone 6 records the user's speech, and the analog signals formed thereby are A/D converted in an A/D converter 15 before the speech is encoded in an audio codec unit 14. The encoded speech signal is transferred to a physical layer processor 17, which i.a. supports the GSM terminal software. The processor 17 also forms the interface to the peripheral units of the apparatus, including the memories (RAM, ROM), the display 3 and the keypad 2 (as well as SIM, data, power supply, etc.). The processor 17 communicates with the RF part 19 via a baseband converter 18 and a channel equalizer 16. The audio codec unit 14 speech-decodes the signal, which is transferred from the processor 17 to the ear-piece 5 via a D/A converter 13. The units 13-18 are usually integrated in a chip set - either a commercially available one or in a set of specially designed chips (ASIC's).

25 [0033] The processor 17, which serves as the controller unit in a manner known per se in the preferred embodiment, is connected to the user interface. Thus, it is the processor which monitors the activity in the phone and controls the display 3 in response thereto.

[0034] Therefore, it is the processor 17 which detects the occurrence of a state change event and changes the state of the phone and thus the display text. A state change event may be caused by the user when he activates the keypad including the navigation and selection key 10, and this type of events is called entry events or user events. The processor 17 is able to detect the rolling and depression of the roller body 20 by means of a microswitch and an encoder, as will be explained briefly with reference to figure 3. However, also the network in communication with the phone may cause a state change event. This type of events and other events beyond the user's control are called non user events. Non user events comprise status change during call set-up, change in battery voltage, change in antenna conditions, message on reception of SMS, etc.

40 [0035] Figure. 3 illustrates how the navigation and selection key structure according to the invention is placed in a hand portable phone. The navigation and selection key structure comprises a roller body 20 acting as a navigation and selection key and a carrier 23 for carrying the roller body 20. The carrier 23 comprises a beam 29 carrying the stub shaft 28 as hinge parts, a beam 30 and a shaft 24 carrying the roller body 20. The two beams 29, 30 and the shaft 24 are parallel and are interconnected by bearings 31, 35 at each end.

45 [0036] A part of the roller body 20 extends through a close fitting opening (no contact) of the front cover 21 of the phone. The rear side of the front cover 21 is provided with two gripping arms 27 having U-shaped recesses 34 for receiving stub shafts 28, thereby, as a supporting means, defining a hinge axis for the carrier 23. The gripping arms 27 act as spacer members between the front cover 21 of the phone and the printed circuit board (PCB) 25. The latter constitutes a locking member for the shaft bearing provided by the recesses 34 of the gripping arms 27. The distance between the gripping arms 27 is slightly smaller than the length of a shaft body 24 to avoid axial displacement of the carrier 23.

50 [0037] A spring 26 is provided as a biasing means for urging the carrier 23 away from the printed circuit board 25 towards the front cover 21 of the phone. The front cover 21 is provided with two stop legs 32 which cooperate with an upper surface of the part 30 of the carrier facing away from the hinge 28,34. The lower surface of the carrier part 30 is adapted for cooperation with a microswitch 33. The distance between the contact faces on the microswitch 33 and the stop legs 32 is slightly greater than the thickness of the corresponding carrier part. The coil 26 urges the carrier 23 towards the stop legs 32. When the user depresses the roller with a force greater than the coil force, the carrier will be urged against the microswitch 33 giving an output signal in dependence thereon. The microswitch 33 acts as a

detection means for detecting the force counteracting the biasing force provided by the coil 26.

**[0038]** When the roller body 20 is depressed, the whole navigation and selection key structure performs a swing movement around the hinge axis defined by the gripping means 28, 34.

5 **[0039]** The end wall of the roller body 20 is provided with a number of conducting areas 37. As indicated in figure 3, a number (three according to the preferred embodiment) of sliding shoes 36 (contact springs) of the metallic strips slide along a circular path passing the conductive areas. The sliding shoes 36 and the conducting areas 37 are the interacting part of the encoder by means of which the control unit 17 detects the rolling of the roller body 20. The sliding shoes are mounted on a surface of the carrier 23 facing towards the end face of the roller body 20.

10 **[0040]** The processor 17 handles a number of displays - normally one for each open application, and the display for the presently active application is actually displayed in the display 3. When the phone is in idle mode, it just monitors the network looking for an incoming call. The idle mode display, seen as the first display in figure 4, will include information identifying the network operator, here "Sonofon", and indicate that the depression of the roller body 20 of the navigation and selection key 10 will give access to the menu of the phone. The display may furthermore include some status indications informing the user about the battery level, the quality of the RF connection, local time, etc.

15 **[0041]** As will be seen from the second display in figure 4, pressing the navigation and selection key 10 will cause a pop-up window 40 to appear on top of the previous display. The pop-up window 40 covers the underlying display partly, but in a way so that the user will still be able to recognize the background display. The number of text lines that may occur in the pop-up display 40 depends on the font used, of course. But if the full display includes five text lines, the pop-up display may advantageously include three text lines. The number of options or items available at a certain cursor position will in general exceed the number of lines, but then only a part of the list will be displayed.

20 **[0042]** The list of menu items shown in the pop-up window 40 in figure 4 normally includes up to ten items or even more. The list could be as follows:

- 25
1. Phone book - FI
  2. Messages
  3. Call register
  4. Phone settings
  5. Call divert services
  6. Calendar
  - 30 7. Tone settings - LI

35 **[0043]** The functionality associated with the individual menu items is well known from commercial products, e.g. Nokia 3110™, from the applicant. As will be seen from figure 4, only the items 2-4 in the menu list are displayed in the pop-up window 40. It will be seen that one of the items in the list is marked by an icon acting as a cursor 42. Alternatively, the item could be marked by a bar with inverted colors. The cursor 42 is controlled by rolling the roller body 20 of the navigation and selection key 10, and the item pointed out by the cursor may be selected by pressing the roller body 20.

40 **[0044]** The items on the list are followed by an icon (here three dots) 41 when the selection of the item generates a new list of items to be displayed. This will basically be the situation for all items in the main menu list. It should be noted that the first and the last items in the list are marked by respective border icons 44 as FI (first item) and LI (last item). When the cursor 42 is moved outside the borders defined by these items (e.g. passing the first item in an upward direction), the pop-up window 40 will automatically disappear.

**[0045]** In the first display in the second row in figure 4 the user selects the "Message" menu item and this will cause a new menu list to pop up, and, as will be seen from the second display in the second row, this menu list will include standard message handling menus, such as:

- 45
1. Read messages
  2. Write messages
  3. Show delivery report
  4. Message Center number
  - 50 5. Reply via own center.
  6. Delivery reports.
  7. Voice mailbox number.

55 **[0046]** The idle mode display will still be present as a background display, and the phone will return to this idle mode display if no items are selected with a time-out of e.g. 5 seconds. If the user selects the "write message" item, the pop-up window will disappear and the background display will change from the "idle mode" display to the "text entry" display, as shown in the sole display in the third row of figure 4 with a status line 45 at the top of the display informing the user that the text entry is for a message sending application (write message), that the text entry application is in alpha mode

(ABC), and that the cursor 43 is in position 124 (an SMS message contains max. 160 characters, and position 124 means that max. 124 characters follow).

[0047] The display 3 is provided as a dot matrix display for displaying signs arranged in a predetermined number of lines, each of which may contain a plurality of signs. The cursor 43 or the marker is provided as a gleaming bar that may be positioned between two of said signs. When the roller body 20 is depressed with the cursor 43 placed in the text, the processor starts displaying a context sensitive pop-up window including a number of selectable items or operations. The context sensitive pop-up window 46 covers a part of the active display, and it contains operations that are allowed in a position defined by the cursor 43 prior to the depression of the roller body 20.

[0048] When the context sensitive pop-up window 46 appears in a part of the display, the list of selectable items may include both SMS message related items and text editing related items. The list could include items such as:

1. Insert
2. Mark text begin
3. Paste
4. Send
5. Save
6. Exit
7. Erase

[0049] If "Insert" is selected, the user will be requested in a new pop-up window to specify what he wants to insert and where to find it - e.g. an electronic business card (note pad), a name or a number (electronic phone book), etc.

[0050] If "Mark text begin" is selected by the user, as is the situation in the first display in the fourth row in figure 4, this cursor position will be handled as a first position. As will be seen in the second display in the fourth row in figure 4, the user is allowed to move the cursor 43 to a new position by rolling the roller body 20. It should be noted that the status line 45 indicates that the present status is marking text. When the cursor 43 has been moved to a new position by means of the navigation and selection key 10, a context sensitive pop-up window 46 will appear upon pressing the navigation and selection key 10, as will be seen in the third display in the fourth row of figure 4. The user may now select from the list in the pop-up window 40 which operation he wants to perform on the marked text. It does not matter whether the first cursor position is the first or the second one.

[0051] In response to the selection of the marked text the controller 17 generates a context sensitive pop-up window 46 (third display in the fourth row of figure 4) asking whether the user wants to cut or copy to the clipboard or replace (paste) the marked text with the content of the clipboard. If he copies the marked text to the clipboard, the paste operation allows the user to transfer the copied text to another application or to another file or record in the same application. The "Paste" option does not appear in the pop-up window when the clipboard memory is empty.

[0052] Upon selection of the "Send" option the processor 17 will generate a pop-up window (with the message beneath) asking for the receiving phone number, followed by a request for entering the message center number if that is not stored in the phone already.

[0053] When the user selects the "Save" option, the phone suggests saving the entered text and gives the record a name, such as 98.03.26-10:45 (point of time for saving "year.month.date-hour:minutes"). The "Exit" option will cause leaving the application without saving or sending the edited text, while the "Erase" option will erase the edited text but the user will remain in the application.

[0054] It should be noted that the pop-up window in the second row appears upon pressing the navigation and selection key 10 when it acts as a soft key. According to the preferred embodiment this will be the situation when the phone is in a mode without entry of a user input. There will be no cursor in the display during these modes without user input. This will typically be the situation when the user navigates in the menu structure, e.g. initiated in idle mode, until he needs to enter an input.

[0055] When the user is requested to enter an input, e.g. to write a message, as explained in relation to figure 4, the full active part of the display is available for the data entry. It will be seen from figure 4, third and fourth rows, how the antenna and battery indicator disappears. Also the soft key text disappears. In data entry mode, the navigation and selection key 10 will no longer have a special functionality or give access to the menu structure. When the navigation and selection key 10 is pressed in this mode, the context sensitive pop-up window 46 will appear, and the processor 17 will only allow operations which are allowable in the present application and with the present cursor position to be displayed in the context sensitive pop-up window 46.

[0056] Both the context sensitive pop-up window 46 and the ordinary menu item containing the pop-up window 40 may be escaped by moving the cursor 42 outside the borders of the window or by pressing the "clear" key 12. The phone will then go back to the application related to the underlying display partly visible behind the pop-up window.

[0057] A display for a phone according to the invention may e.g. be of the LCD type having a dot matrix display area of a size of 30 x 44 mm (height x width). The dots may preferably be rectangular, e.g. with a size of 0.42 x 0.34 mm



(height x width - corresponding to a resolution of 57 x 70 dpi in a vertical and a horizontal direction, respectively) and being arranged with a 0.02 mm spacing. This will approximately provide 68 x 120 dots (height x width) or pixels in the active part.

5 [0058] As will be seen from figure 4, the phone uses a number of e.g. three standard fonts in the display, and the processor 17 changes the fonts dynamically (without actions from the user) in dependence on predetermined rules. Typically, each sign uses (height x width) 10 x 7 pixels in the biggest font and 7 x 5 pixels in the smallest font. The fonts used in the embodiment shown in figure 4 do not have a fixed width - letters like "l" require less width than the letter "m". The height is the same for all the signs in the font, and the width varies from two pixels (for "i") up to seven pixels (for "M" and "W") with an average width in the range of about five pixels. Generally, two neighbor signs are spaced by a single pixel and two lines are spaced by three pixels. In the idle mode display, columns with a width of 10 pixels are used in each side of the display for the status bars 48, and a row with a height corresponding to thirteen pixels is used for the soft key text 49.

10 [0059] In text entry mode the full active display area will be available (here 68 x 120 pixels). The status line 45 has a width corresponding to 120 pixels, and with a font based on a width of approximately five pixels and a spacing of one pixel there between, approximately twenty characters will be allowed in the status line. The character height may be nine pixels. The status line 45 is separated from the text part by a line 47, whereby 51 x 120 pixels will be available for the text - and this will correspond to four lines with up to approximately twenty characters in each line.

15 [0060] The cursor 43 will be implemented as a gleaming bar (1 x 11 pixels) gleaming (pixels go on and off) approximately once per second. When the pop-up window 40 or 46 appears, it is surrounded by a rectangular borderline 50, as will be seen from fig 5. Outside this borderline 50 the underlying display is visible. The borderline 50 may have a width corresponding to two pixels. As will be seen from figure 5, a slightly smaller font is used, and this allows the pop-up window to contain three text lines with the status line 45 and the last line in the text part being fully visible. According to the preferred embodiment of the invention the pop-up window will use 40 x 84 pixels. With the present borderline width and a spacing of some pixels between the borderline and the text, the part of the pop-up window useable for displaying the functionality text may include 32 x 76 pixels. With a 7 x 5 font, three lines having 12-15 characters may be displayed. With the above-mentioned size of the display, the pop-up window will cover just above 40 percent of the full active display. It has been found that a pop-up window may advantageously cover from 30 percent to 60 percent, preferably between 35 and 50 percent, of the full active display when the display has a size corresponding to 50-100 x 75-200 pixels. When the pop-up window becomes too small, the text will be difficult to read, and when the pop-up window covers a substantial part of the display, the user will no longer be able to recognize the background display.

20 [0061] Figure 6 shows an alternative embodiment of a hand portable phone according to the invention, and this phone is remarkable in that the alphanumeric keys are left out, and that all functions are available via the navigation and selection key 10. The navigation and selection key 10 is actually the only input key of the phone. Today, all phones have between 15 and 20 keys or even a higher number of keys.

25 [0062] From idle mode, pressing the navigation and selection key 10 gives access to the menu of the phone. Here the menu list used in the embodiment explained with reference to figure 1 needs some further items. The list could be as follows:

- 30
1. Call - FI
  - 40 2. Phone book
  3. Editor
  4. Messages
  5. Call register
  6. Phone settings
  - 45 7. Call divert services
  8. Tone settings - LI

[0063] As will be seen from the list, only two new menu items are necessary, and these are "Call" and "Editor". Figure 7 illustrates how the applications interact in the phone shown in figure 6.

50 [0064] Advantageously, the phone is capable of assuming a plurality of states in which a group of predetermined functions or actions associated with the state concerned may be performed or accessed by means of the navigation and selection key 10. The processor 17 displays one of said group of functions as a default function. The default operation or function is executed upon pressing the navigation and selection key 10, and the full set of operations is available upon rolling the navigation and selection key 10.

55 [0065] Figure 7 illustrates how the one key phone according to an alternative embodiment of the invention may change state from idle mode 100 in two ways. If an in-coming call is detected, the phone changes to a call handling state 110 in which the user is allowed to answer the call by pressing the navigation and selection key 10. By rolling the navigation and selection key 10 the pop-up window with the full set of allowable actions will appear, whereby the user

is allowed to reject the incoming call or to manually divert the call.

[0066] Otherwise, the user has to access the menu by pressing and rolling the navigation and selection key 10, whereby he may select an item in a pop-up window (like in figure 4). Then the above-mentioned eight menu items are available. The phone is provided with a special editor allowing the user to input all kinds of data into e.g. a phone, and this editor is basically described in a British patent application serial no. 9800746.1 filed by the applicant on 14 January 1998. This application is hereby incorporated by reference into the present application.

[0067] This editor is very useful in relation to a one key phone, and the operation of the phone will be explained with reference to figures 7 and 8. When the user selects "Menu" in idle mode (see the display in the first row in figure 8) by pressing the navigation and selection key 10, the processor 17 displays a pop-up window 120 including the items available in the menu structure. According to this embodiment these items will be :

1. Call
2. Phone book
3. Notepad
4. Messages
5. Call register
6. Phone settings
7. Call divert services
8. Tone settings
9. Calendar

[0068] When the user moves a cursor 121 to the "Notepad" option and selects this option by rolling and pressing the navigation and selection key 10, as will be seen from the first display in the second row of figure 8, the processor 17 displays a new pop-up window (second display in the second row of figure 8) asking the user to specify the kind of entry he wants to make. The phone is in state 103 in figure 7.

[0069] He may enter a phone number for making a standard call, a phone number and a corresponding name for storing a record in the phone book, an alphanumeric string (Text") for a calendar, a message to be sent, etc. If the user selects the "Phone number" item in the second display in the second row of figure 8, the processor 17 changes the idle mode background display to an editor display shown as the first display in the third row of figure 8, and goes to the editing state 111 in figure 7.

[0070] A status line 123 indicates the kind of the present input activity, an auxiliary window 126 indicates a string of input candidates, and a candidate may be pointed out by a cursor 127. The movement of the cursor 127 is controlled by rolling the navigation and selection key 10, and the item is selected by pressing the navigation and selection key 10. When a candidate is selected, it is transferred to a character string 124 in the main part of the display in a position pointed out by a cursor 125. The auxiliary window 126 includes the numbers 0-9, a "+" sign and an "OK" icon indicating that the editing is to be terminated. If the user moves the cursor 126 outside this string (as is the case with the context sensitive pop-up window), the auxiliary window 126 will disappear and the navigation and selection key 10 will control the cursor 125 in the string 124. By pressing the navigation and selection key 10 the user may recall the auxiliary window 126 by selecting an "Insert" option in a context sensitive pop-up window including items such as: "Clear", "Insert", "Quit", "Call" and "Save".

[0071] If the user selects the "OK" icon in the auxiliary window 126, said window 126 and the cursor 125 will disappear with the entered character string 124 present in the display, as will be seen from the second display in the third row of figure 8. The navigation and selection key 10 will get the "Call" function as default option when pressed. If the navigation and selection key 10 is rolled, alternative options will appear in a new pop-up window. This pop-up window includes items such as: "Call", "Edit", "SMS", "Quit", and "Save".

[0072] With the selection of the "Edit" option the entered string will be re-opened for continued editing, the selection of the "SMS" option will request the user to enter a message text, and the selection of the "Quit" option will cause the phone to leave the editing mode and go back to idle mode without saving anything. The "call" option will initiate a call based on the phone number present in the display. The selection of the "Save" option will request the user to enter a name to be used as a label in the phone book. This is shown in the first display in the fourth row of figure 8. In the status line 123 it is indicated that the editor presently handles a name entry to the phone book. A part of a text string 124 has been entered.

[0073] It should be noted that the auxiliary window 126 contains the letters a-z (in the English language version), and an icon for switching between upper and lower cases, an icon giving access to a candidate string comprising the figures 0-9, and an icon giving access to a candidate string comprising the special characters such as the Greek letters and other signs presently used in phones. In general, the editor uses title case when used in combination with the phone book application and text case when used for entering text for a message or a calendar entry. The standard letter string displayed in the auxiliary window 126 acts as a basic character string. Selecting the "OK" icon in the figures

string or the special characters string recalls the basic character string, whereas selecting the "OK" icon in the basic character string will cause the editing to terminate.

5 **[0074]** In the second display in the fourth row in figure 8 the "OK" icon in the basic character string has been selected and the editing is terminated. Pressing the navigation and selection key 10 will save the entered name and number in a record in the phone book.

**[0075]** If, instead of selecting the "Save" option, the user had selected the "SMS" option in the pop-up window which appeared when the navigation and selection key 10 was rolled in the second display in the third row of figure 8, he would have been requested to write a message text. The "Write text" display is shown in the first display in the fifth row in figure 8. The status line 123 indicates the kind of text presently edited, and a cursor 125 is placed in the entered text string 124, indicating the position of the next character selected from the auxiliary window 126. When the "OK" icon is selected in the auxiliary window 126, the entered string becomes truncated, as is indicated by four dots 130, thereby creating space for a soft key text for the navigation and selection key 10. The default function will send an SMS message, but when rolling the navigation and selection key 10 the alternative options will appear. When the "send SMS" is selected, the phone number entered earlier will be used as the receiving number, and the user will be requested to enter his message center number if this number is not stored in the phone yet.

**[0076]** The basic idea of the one key phone is that the phone has a large number of applications, each of which uses the editor for entering new data. When the "Call" application 101 in figure 7 is selected in the menu, the "Call" application 101 uses the editor application 111 for entering the phone number and the call handling application for actually setting up a connection based on the entered phone number.

20 **[0077]** When the "Phone book" application 102 is selected, the editor application 111 is likewise used for entering a phone number and a name as a new record in the phone book. The editor application 111 is also used when an existing record has to be amended, and the operation will be the same as re-opening the string for continued editing, as explained with reference to figure 8. As will be seen from figure 7, a call may be initiated from a phone book record. This is already possible in Nokia 3110™.

25 **[0078]** The "Notepad" application 103 gives direct access to the editor application 111, and the entered data may be stored in other applications afterwards. However, records may be stored in the "Notepad" application when it is used as a kind of notebook.

**[0079]** Also the "Message" application 104 uses the editor application 111 for entering text and phone numbers. The "Message" application 104 also uses the call handling application 110 for transmitting and receiving messages.

30 **[0080]** The "Call register" application 105 just lists the latest ingoing, outgoing and missed calls. The application does not use editing, but outgoing calls may be initiated from this application. The "Phone setting" application 106 just sets some parameters for the phone, and no editing is required.

**[0081]** The "Call divert" application 107 uses the editor application 111 for entering phone numbers and the call handling application 110 for transferring the divert instructions to the network.

35 **[0082]** The "Tone setting" application 108 normally does not use the editor application 111, but if the editor application is prepared for handling the input of new ringing tunes, as described in the above-mentioned British patent application serial no. 9800746.1, the "Tone setting" application 108 may benefit from inputs from the editor application, too.

**[0083]** The "Calendar application" 109 depends on input from the editor application 111, too. However, inputs may come from e.g. the "Notepad" application 103 or the "Message application 104 - but via the editor application.

40 **[0084]** A context sensitive pop-up window allows soft keys to be left out. This increases the part of the display available for text editing, etc. However, all the options will be available in the window popping up when the navigation and selection key 10 is pressed. The alphanumeric keys normally used may be left out by using a new editor based on input candidates. The size of the phone may be reduced hereby.

45 **[0085]** The functionality of the navigation means for moving a marker in the display and the selection means for selecting items marked by the marker, e.g. integrated in a depressable roller based navigation key 10, as described above, varies in dependence on the mode of the phone. Table 1 gives an overview of the most basic modes of the phone according to the invention.

Table 1.

	Rolling the navigation key 10	Pressing the navigation key 10
50 Idle Mode	The phone will display one of two lists in dependence on the rolling direction, e.g. the phone book and the last-dialed stack.	The navigation key 10 has a functionality corresponding to a soft key known per se. The selection of "Menu" will cause a pop-up window including the sub-items of the Menu to appear.
55		

Table 1. (continued)

	Rolling the navigation key 10	Pressing the navigation key 10
5 Listing Mode	The cursor will scroll/browse through the items in the list.	The item highlighted by the cursor will be selected. If the selection of the item allows the user to select among sub-items, a pop-up window including these sub-items will appear in the window.
10 Call handling Mode	A list containing allowable operations will be accessed.	The default soft key operation will be selected, e.g. terminating an ongoing call.
15 Editing or Entry Mode	The cursor will be moved through the entered string of letters and numbers.	The context sensitive pop-up window will appear in dependence on the cursor position.

[0086] According to the two described embodiments of the invention the navigation key 10 will have a functionality known per se in "Idle Mode". By rolling the navigation key 10 the phone will display one of two lists in dependence on the rolling direction, e.g. the phone book and the last-dialed stack. This corresponds to pressing the Navy-key™ on the phone Nokia 3110™ in idle mode. The navigation key 10 has a functionality corresponding to a soft key on the phone Nokia 3110™. The "Menu" will be selected by pressing the navigation key 10. However, as a novel feature a pop-up window including the sub-items of the Menu will appear.

[0087] When the pop-up window occurs - either by selecting a soft key option or the context sensitive one - the phone will be in a "Listing Mode". Rolling the navigation key 10 will cause the cursor to scroll/browse through the items in the list, and pressing the navigation key 10 will cause selection of the item highlighted by the cursor. If the selection of the item allows the user to select among further sub-items, a pop-up window including these sub-items will appear in the window. Otherwise, an operation, e.g. establishing a call, will be performed.

[0088] When a call has been set up, the phone will be in a "Call handling Mode" in which the navigation key 10 will have a default soft key functionality (call termination) when depressed. Rolling the navigation key 10 will access a list containing allowable operations in the mode in question.

[0089] During editing - either by use of an editor based on an alphanumeric key set or by use of the editor described as the alternative embodiment, the phone will be in an "Editing or Entry Mode". The navigation and selection key 10 will not act as a soft key, whereby the part of the display normally reserved for the display of the soft key operation will be available for the entry. The cursor will be moved through the entered string of letters and numbers or the entry candidate string upon rolling the navigation and selection key 10. The context sensitive pop-up window will appear in dependence on the cursor position upon pressing the navigation and selection key 10. As long as the context sensitive pop-up window is present in the display, the phone will be in the "Listing Mode".

**Claims**

1. A portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means;

said input means including:

means for moving a marker in the display; and

means for providing a request to the control unit for displaying operations which are allowed in a position defined by said marker;

said control unit generating a pop-up window which covers a part of the display upon reception of the request, and which includes said allowed operations.

2. A portable phone according to claim 1, wherein said means for moving a marker in the display comprises a navigation key means having a roller body whose rolling is detected by means of an encoder operatively connected to the control unit which controls the movement of the marker in the display in dependence thereon.

3. A portable phone according to claim 2, wherein said request means comprises a sensor integrated in a support structure for the roller body, said moving and request means being integrated in the navigation key means.

4. A portable phone according to claims 1-3, wherein the contents of the pop-up window in an entry or editing mode show marker determined context sensitivity.
- 5 5. A phone according to claim 4, wherein the display is a dot matrix display for displaying signs arranged in a predetermined number of lines in the active part of the display, each of said lines may contain a plurality of signs, and said marker is provided as a gleaming bar which may be positioned between two of said signs.
6. A portable phone according to claim 4, wherein the phone changes state upon the occurrence of the context sensitive pop-up window to a listing mode in which a plurality of allowable operations are listed in the pop-up window, and wherein said request providing input means changes functionality to a selection means which, when depressed, selects the operation marked by the cursor.
- 10 7. A portable phone according to claims 3-5, comprising an editor controlled by the control unit and operated by the navigation key means, said control unit defining for the editor:
- 15 a first display part in the display for displaying a string of entered information;  
a second display part in the display for displaying a string of a plurality of possible information candidates;  
one of the candidates in the candidate string being highlighted by the cursor whose movement through information candidates is controlled by the rolling of the navigation key means, and said highlighted candidate being selectable for entering into the string of entered information by pressing the navigation key means.
- 20 8. A portable phone having a display, input means for inputting information and instructions to a control unit in the phone, said control unit controlling the display in dependence on the operation of the input means; said input means including:
- 25 a depressable roller body;  
a support structure for the roller body;  
an encoder operatively connected to the control unit for detecting the rolling of the roller body; and  
30 a sensor operatively connected to the control unit for detecting the depression of the roller body;  
said control unit generating a pop-up window which includes a set of allowed operations, and which covers a part of the display upon reception of a request provided by depressing the roller body.
- 35 9. A portable phone according to claim 8, comprising an editor controlled by the control unit and operated by the navigation key, said control unit defining for the editor:
- 40 a first display part in the display for displaying a string of entered information;  
a second display part in the display for displaying a string of a plurality of possible information candidates;  
one of the candidates in the candidate string being highlighted by the cursor whose movement through information candidates is controlled by the rolling of the roller body, and said highlighted candidate being selectable for entering into the string of entered information by pressing the roller body.
- 45 10. A portable phone according to claims 8-9, wherein the input means is the only input means of the phone.
11. A portable phone according to claim 7, wherein all inputs into the phone may be performed by rolling and pressing the navigation key means.
- 50 12. A portable phone according to claim 11, wherein the navigation key means is the only input means of the phone.
13. A portable phone according to claims 1-12, wherein the pop-up window is demarcated from the active display area by means of borderlines defining a rectangular frame.
- 55 14. A portable phone according to claim 13, wherein the pop-up window area covers from 30 percent to 70 percent of the full active display area.
15. A portable phone according to claim 13, wherein the pop-up window within the rectangular frame displays a number of selectable operations in a listing mode.

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16. A portable phone according to claim 15, wherein the pop-up window within the rectangular frame displays two to four selectable operations.
- 5 17. A portable phone according to claim 15, wherein the control unit handles a list including a plurality of selectable operations arranged in a predetermined order with only a fractional set of the full set of operations shown simultaneously in the pop-up window; and rolling of the navigation key means causes scanning through the full set of operation.
- 10 18. A portable phone according to claim 17, wherein the pop-up window displays three operations with the display updated for every step in the list, whereby the cursor will highlight the operation in the middle of the pop-up window.
- 15 19. A portable phone according to claim 17 or 18, wherein the full set of operations is arranged with two operations defined as a first item and a last item in the list, respectively; and in the listing mode, when the cursor passes outside the first or the last item in the list, the pop-up window disappears and the phone goes from listing mode to the mode associated with the background display.

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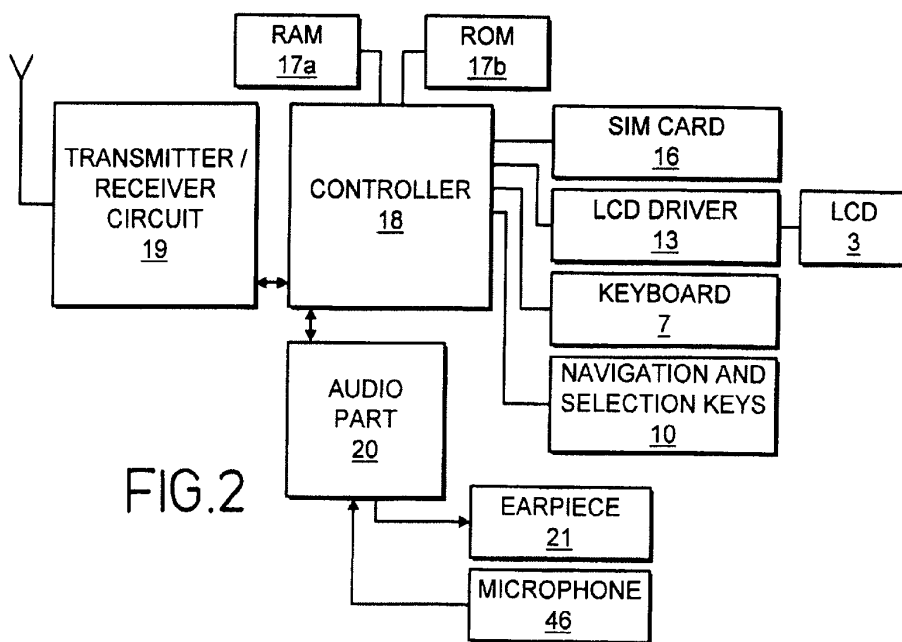
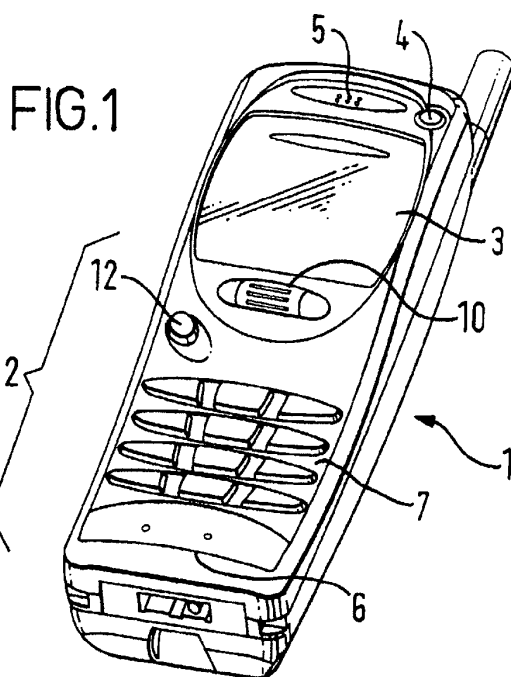
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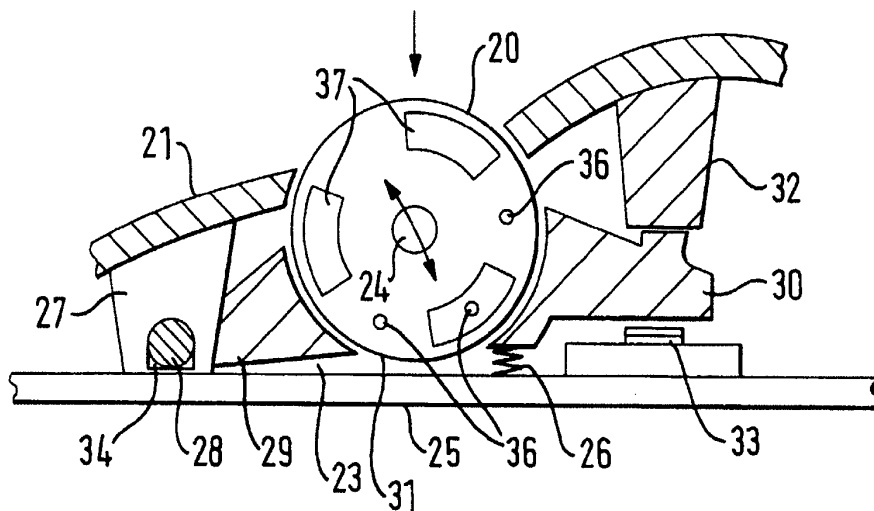


FIG. 3

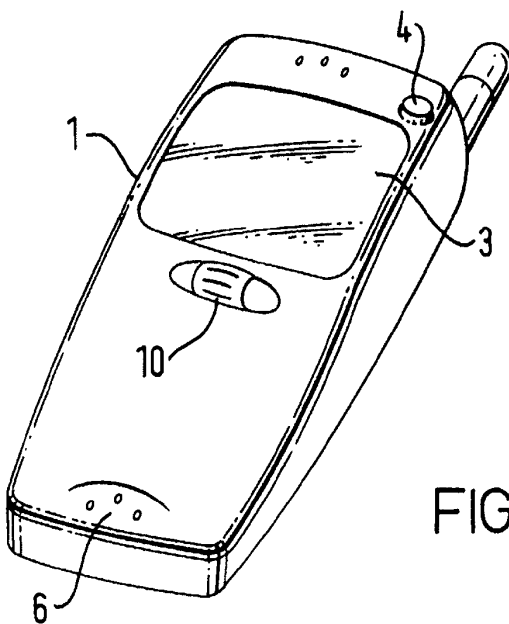


FIG. 6



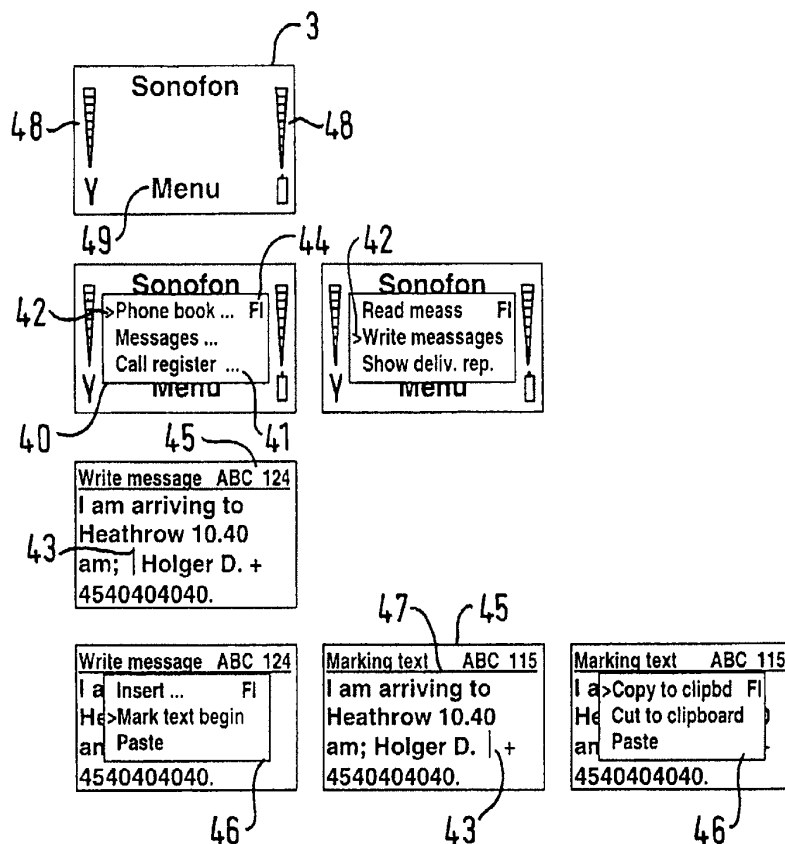


FIG. 4

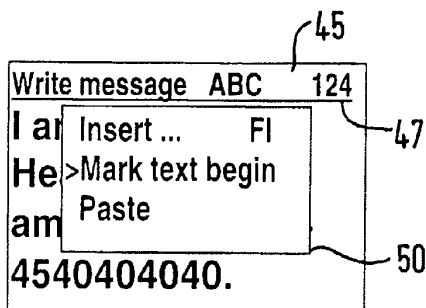


FIG. 5

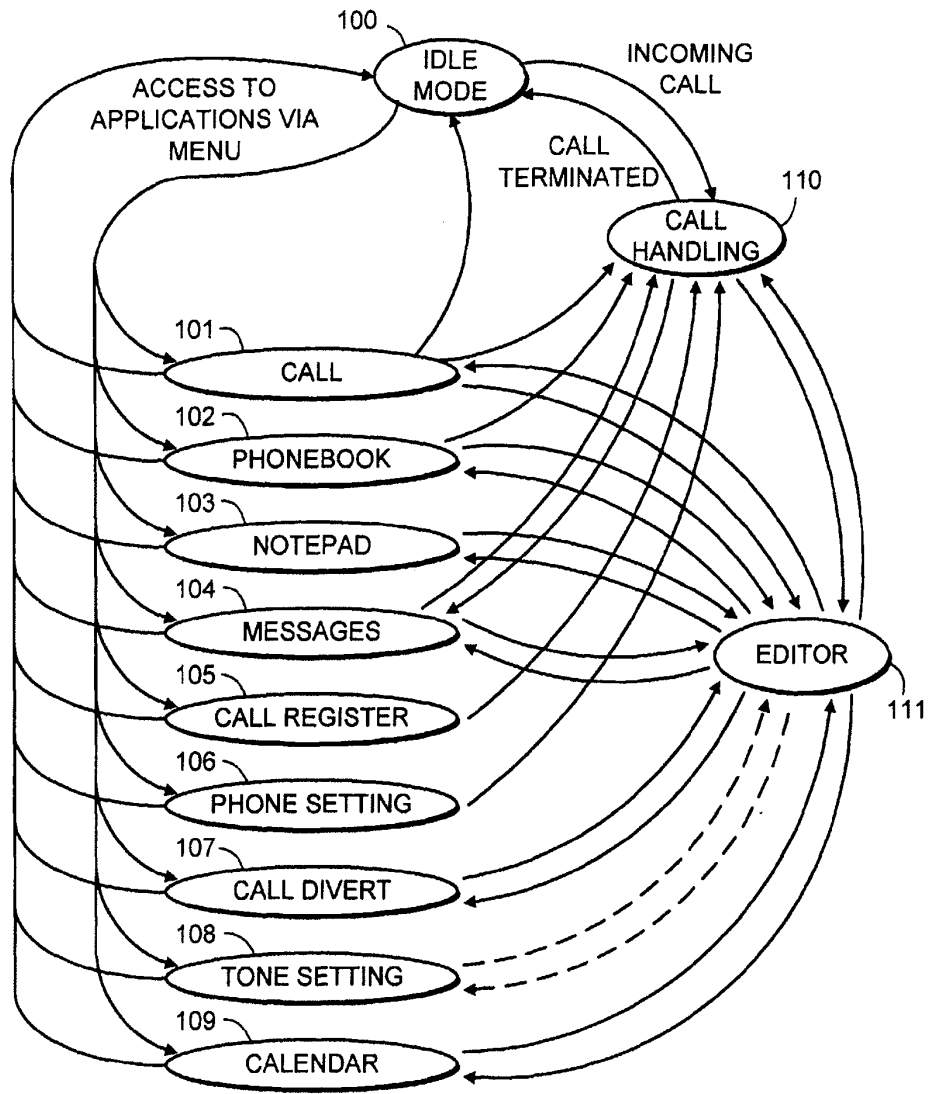


FIG. 7

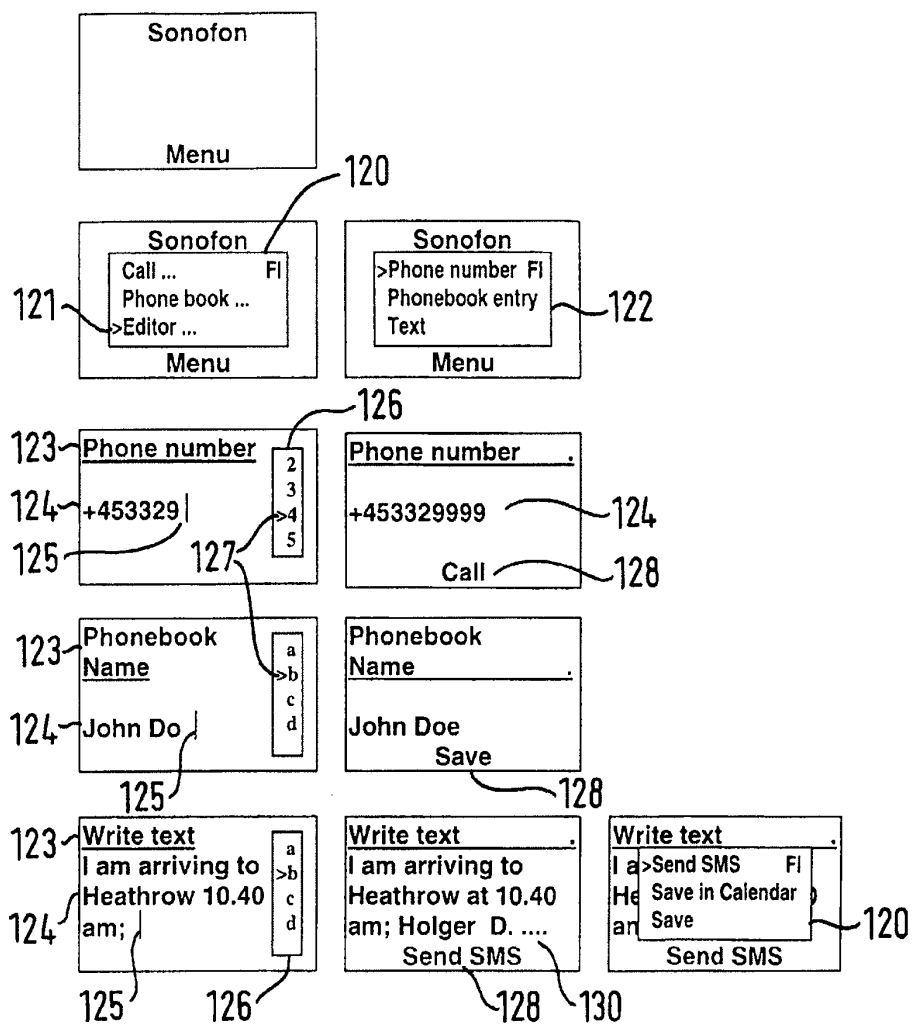


FIG. 8

**PATENT ABSTRACTS OF JAPAN**

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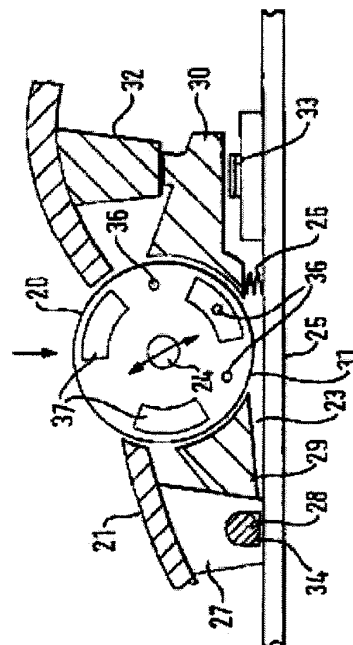
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(21)Application number : 11-078747 (71)Applicant : NOKIA MOBILE PHONES LTD  
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**(54) CONTEXT SENSING POPUP WINDOW FOR PORTABLE TELEPHONE SET**

(57)Abstract:  
**PROBLEM TO BE SOLVED:** To obtain a novel and enhanced user interface for a telephone handset by generating a popup window that shares part of a display menu and includes a permitted operation, when a control unit receives a request.  
**SOLUTION:** Part of a roller main body 20 is extended via a close contact fitting (without making contact) opening of a front face cover of the telephone set. When the roller main body 20 is depressed, the entire navigation and selection key structure executes a rocking motion around a hinge shaft decided by grip means 28, 34. When the roller main body 20 of the navigation and selection key is depressed, provision for making access to a telephone menu is instructed. The display includes some state indications such as a battery level, quality of RF connection and a local time. That is, both the option and the navigation are integrated in the roller main body 20.



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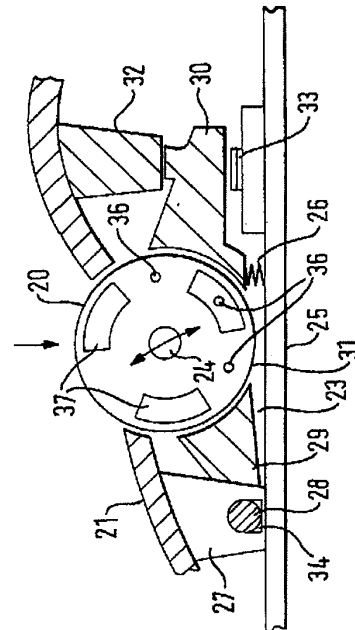
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(54) 【発明の名称】 携帯電話用のコンテキスト感知ポップアップウィンドウ

(57) 【要約】

【課題】 電話のハンドセット用の新規で且つ改良されたユーザインターフェイスを提供する。

【解決手段】 携帯電話は、ディスプレイ3と、情報及び命令を入力するための入力手段2と、入力手段の動作に基づいてディスプレイを制御する制御ユニット17とを有している。入力手段は、ディスプレイのアクティブな部分においてマーカー42を移動するためのナビゲーション手段10を備えている。ナビゲーション手段は、ローラ本体20と、該ローラ本体の回転及び押圧を検出してそれに応答して制御信号を与えるための手段とを備えている。情報入力モードにおいて、制御ユニット17は、回転制御信号に基づいてディスプレイ内でマーカー42を移動し、そして押圧制御信号を受け取ると、ポップアップウィンドウ40を発生し、このポップアップウィンドウ40は、アクティブなディスプレイの一部分をカバーし、そして上記マーカーにより定められた位置で許されるオペレーションを含む。



LGE0003794

## 【特許請求の範囲】

【請求項1】 ディスプレイと、情報及び命令を電話の制御ユニットに入力するための入力手段とを有し、制御ユニットが入力手段のオペレーションに基づいてディスプレイを制御するような携帯電話において、上記入力手段は、

ディスプレイにおいてマーカーを移動する手段と、上記マーカーにより定められた位置において許されるオペレーションを表示するために制御ユニットに要求を与える手段と、

を備え、そして上記制御ユニットは、上記要求を受け取ったときにディスプレイの一部分をカバーするポップアップウィンドウであって、上記許されたオペレーションを含むポップアップウィンドウを発生することを特徴とする携帯電話。

【請求項2】 ディスプレイにおいてマーカーを移動する上記手段は、ローラ本体を有するナビゲーションキー手段を備え、ローラ本体の回転が、上記制御ユニットに作動的に接続されたエンコーダによって検出され、上記制御ユニットは、それに基づいてディスプレイにおけるマーカーの移動を制御する請求項1に記載の携帯電話。

【請求項3】 上記要求手段は、上記ローラ本体の支持構造体に一体化されたセンサを備え、上記移動及び要求手段は、上記ナビゲーションキー手段に一体化される請求項2に記載の携帯電話。

【請求項4】 入力又は編集モードにおける上記ポップアップウィンドウの内容は、マーカーで決定されたコンテキスト感度を示す請求項1ないし3に記載の携帯電話。

【請求項5】 上記ディスプレイは、そのアクティブ部分において所定数の行に配列された符号を表示するためのドットマトリクスディスプレイであり、上記行の各々は、複数の符号を含み、そして上記マーカーは、2つの符号間に位置する微光バーとして形成される請求項4に記載の携帯電話。

【請求項6】 上記電話は、上記コンテキスト感知ポップアップウィンドウの発生時に、複数の許容し得るオペレーションがポップアップウィンドウにリストされるリストモードに状態を変え、そして上記要求発生入力手段は、押圧時にカーソルで指示されたオペレーションを選択する選択手段へと機能を変える請求項4に記載の携帯電話。

【請求項7】 上記制御ユニットにより制御されそしてナビゲーションキー手段により操作されるエディターを備え、上記制御ユニットは、このエディターに対して、一連の入力情報を表示するための上記ディスプレイにおける第1ディスプレイ部分と、一連の複数の考えられる情報候補を表示するための上記ディスプレイにおける第2ディスプレイ部分と、を定め、上記一連の候補における1つの候補がカーソルにより強調され、情報候補を通るカーソルの移動はナビゲーションキー手段の回転により制御され、そして上記強調された候補は、ナビゲーションキー手段を押すことにより一連の入力情報へ入力するように選択できる請求項3ないし5に記載の携帯電話。

【請求項8】 ディスプレイと、情報及び命令を電話の制御ユニットに入力するための入力手段とを有し、制御ユニットが入力手段のオペレーションに基づいてディスプレイを制御するような携帯電話において、上記入力手段は、  
10 押圧し得るローラ本体と、  
上記ローラ本体の支持構造体と、  
上記ローラ本体の回転を検出するために上記制御ユニットに作動的に接続されたエンコーダと、  
上記ローラ本体の押圧を検出するために上記制御ユニットに作動的に接続されたセンサと、を備え、上記制御ユニットは、1組の許されたオペレーションを含むポップアップウィンドウであって、上記ローラ本体を押圧することにより与えられる要求を受け取った際に上記ディスプレイの一部分をカバーするポップアップウィンドウを発生することを特徴とする携帯電話。

【請求項9】 上記制御ユニットにより制御されそしてナビゲーションキーにより操作されるエディターを備え、上記制御ユニットは、このエディターに対して、一連の入力情報を表示するための上記ディスプレイにおける第1ディスプレイ部分と、一連の複数の考えられる情報候補を表示するための上記ディスプレイにおける第2ディスプレイ部分と、を定め、上記一連の候補における1つの候補がカーソルにより強調され、情報候補を通るカーソルの移動は上記ローラ本体の回転により制御され、そして上記強調された候補は、上記ローラ本体を押すことにより一連の入力情報へ入力するように選択できる請求項8に記載の携帯電話。

【請求項10】 上記入力手段は、上記電話の唯一の入力手段である請求項8及び9に記載の携帯電話。

【請求項11】 上記電話への全ての入力は、ナビゲーションキー手段を回転しそして押すことにより行なわれる請求項7に記載の携帯電話。

【請求項12】 上記ナビゲーションキー手段は、上記電話の唯一の入力手段である請求項11に記載の携帯電話。

【請求項13】 上記ポップアップウィンドウは、長方形フレームを画成する境界線によりアクティブなディスプレイエリアから区切られる請求項1ないし12に記載の携帯電話。

【請求項14】 上記ポップアップウィンドウエリアは、アクティブなディスプレイエリア全体の30%ないし70%をカバーする請求項13に記載の携帯電話。

【請求項15】 上記長方形フレーム内のポップアップ

ウインドウは、リストモードにおいて多数の選択可能なオペレーションを表示する請求項13に記載の携帯電話。

【請求項16】 上記長方形フレーム内のポップアップウインドウは、2つないし4つの選択可能なオペレーションを表示する請求項15に記載の携帯電話。

【請求項17】 上記制御ユニットは、所定の順序で配置された複数の選択可能なオペレーションを含むリストを取り扱い、全組のオペレーションのうちの部分組のみがポップアップウインドウに同時に示され、そしてナビゲーションキー手段が回転すると、全組のオペレーションを通して走査が行なわれる請求項15に記載の携帯電話。

【請求項18】 上記ポップアップウインドウは、リストにおける各ステップごとにディスプレイが更新されるようにして3つのオペレーションを表示し、これにより、カーソルは、ポップアップウインドウの中央のオペレーションを強調する請求項17に記載の携帯電話。

【請求項19】 全組のオペレーションは、2つのオペレーションがリストにおいて各々最初の項目及び最後の項目として定められるように配列され、そしてリストモードにおいて、カーソルがリストの最初の項目又は最後の項目以外を通過するときに、ポップアップウインドウが消失し、そして電話がリストモードから、背景表示に関連したモードに入る請求項17又は18に記載の携帯電話。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、電話ハンドセットのための新規で且つ改良されたユーザインターフェイス (UI) に係る。セルラー又はコードレスシステム用の携帯電話のUIは、コールの取り扱いのみをサポートするのではない。最新世代の携帯電話においては、益々多数の新たなアプリケーションが電話に組み込まれている。

【0002】

【従来の技術】 メニュー項目、個々のアプリケーションの取り扱い、及びアプリケーションに対する入力としてのテキストの編集の中で、ナビゲーションは実行が非常に困難である。というのは、最も一般的に使用される形式のナビゲーションは、アップ/ダウンスクロールキーにより実行されるからである。携帯電話により実行できるオペレーションの数は、増加し続けている。しかしながら、電話をよりユーザになじみ易いものにするためには、キーパッドを単純化するのが望ましい。というのは、技術に精通しない多くのユーザは、キーをいかに取り扱うか知らない場合にキーに驚くからである。一般に、顧客は、特殊なキーで圧倒されたキーパッドを見たときに驚かされる。

【0003】 ハンドセット上のキーの数を減少するため

に、益々多くのファンクション及びオペレーションが少数のキーに一体化されている。本出願人により市場に出されているNokia 3110 (登録商標) という名前の電話は、最も一般的に使用されるファンクション及びオペレーションをデフォルトオプションとして有する非常に限定された数のキーを備え、あまり頻繁に使用されないファンクション及びオペレーションは、代替オプションとされる。この概念は、英国特許出願第9624520、4号に開示されており、紹介時点でユーザグループにより完全に受け入れられている。

【0004】

【発明が解決しようとする課題】 この概念は、新たな電話ユーザが、コールの発信、電子的な電話帳の取り扱い等の最も一般的に使用されるオペレーションに非常に容易に馴染むようにするが、会議通話、メッセージの取り扱い等の稀に使用されるオペレーションの使い易さを改善するものではない。

【0005】 英国特許出願第9703646、1号は、ソフトキーを押したときにウインドウをポップアップする概念について開示している。このウインドウは、ソフトキーを介して使用できるオペレーションを含むリストを備えている。

【0006】

【課題を解決するための手段】 本発明によれば、ディスプレイと、情報及び命令を電話の制御ユニットに入力するための入力手段とを有し、制御ユニットが入力手段のオペレーションに基づいてディスプレイを制御するような携帯電話において、上記入力手段は、ディスプレイにおいてマーカーを移動する手段と、このマーカーにより定められた位置において許されるオペレーションを表示するために制御ユニットに要求を与える手段とを備え、そして上記制御ユニットは、上記要求を受け取ったときにディスプレイの一部分をカバーするポップアップウインドウであって、上記許されたオペレーションを含むポップアップウインドウを発生するような携帯電話が提供される。従って、ソフトキーに通常存在するオプションと、カーソルのナビゲーションとの両方をナビゲーション手段のローラ本体に一体化することができる。

【0007】 1つの重要な効果は、ディスプレイの3ないし5のテキスト行の1つをもはやソフトキーファンクションの表示に専用になくてもよいので、ディスプレイのアクティブ部分を増加できることである。別の効果は、多数のキーを単純に省けることである。従って、所望の特性をもつナビゲーション及び選択キーを簡単に得ることができる。

【0008】 本発明の実施形態は、使用できるオプションがユーザに良く見えるやり方で、使用できるデフォルト及び代替オプションが表示される電話ハンドセット用の新規で且つ改良されたユーザインターフェイスを提供する。

【0009】ディスプレイにおいてマーカーを移動する上記手段は、ローラ本体を有するナビゲーションキー手段を備え、ローラ本体の回転が、制御ユニットに作動的に接続されたエンコーダによって検出され、制御ユニットは、それに基づいてディスプレイにおけるマーカーの移動を制御するのが効果的である。上記要求手段は、ローラ本体の支持構造体に一体化されたセンサを備え、上記移動及び要求手段は、上記ナビゲーションキー手段に一体化されるのが好ましい。入力又は編集モードにおける上記ポップアップウィンドウの内容は、マーカーで決定されたコンテキスト感度を示す。現在、例えば、電話に使用されるディスプレイの好ましい形式は、LCDディスプレイであり、そしてこの形式のディスプレイは、ドットマトリクスディスプレイである。このディスプレイでは、符号がディスプレイのアクティブな部分において所定数の行に配列されるのが好ましく、各行は複数の符号を含み、そして上記マーカーは、2つの符号間に配置される微光バーとして形成される。新たな符号は、微光バーの右へ入力され、そして微光バーは、新たに入力された符号の右へ移動される。

【0010】電話は、コンテキスト感知（文脈依存）ポップアップウィンドウの発生時に、複数の許容し得るオペレーションがポップアップウィンドウにリストされるリストモードへと状態を変え、そして上記要求発生入力手段は、押圧時にカーソルで指示されたオペレーションを選択する選択手段へと機能を変えるのが効果的である。従って、電話の現在モードに基づいて異なる形式のナビゲーションに対し同じキーを使用することができる。

【0011】アルファニューメリックキーパッドに依存せず、制御ユニットにより制御され且つナビゲーションキー手段により動作されるエディタを電話に設けることにより、アルファニューメリックキーパッドを単純に省くことができる。従って、ローラ本体をベースとするナビゲーションキーを唯一の入力キーとしてもつことができる。電源オン/オフキーは電話に存在する。制御ユニットは、エディタに対し、一連の入力情報を表示するための上記ディスプレイにおける第1ディスプレイ部分と、一連の複数の考えられる情報候補を表示するための上記ディスプレイにおける第2ディスプレイ部分とを定め、一連の候補における1つの候補がカーソルにより強調され、情報候補を通るカーソルの移動はナビゲーションキー手段の回転により制御され、そして上記強調された候補は、ナビゲーションキー手段を押すことにより一連の入力情報へ入力するように選択できる。

【0012】それ故、本発明は、ディスプレイと、情報及び命令を電話の制御ユニットに入力するための入力手段とを有し、制御ユニットが入力手段のオペレーションに基づいてディスプレイを制御するような携帯電話において、上記入力手段は、押圧し得るローラ本体と、この

ローラ本体の支持構造体と、ローラ本体の回転を検出するために上記制御ユニットに作動的に接続されたエンコーダと、ローラ本体の押圧を検出するために上記制御ユニットに作動的に接続されたセンサとを備え、上記制御ユニットは、1組の許されたオペレーションを含むポップアップウィンドウであって、ローラ本体を押圧することにより与えられる要求を受け取った際にディスプレイの一部分をカバーするポップアップウィンドウを発生するような携帯電話にも係る。本発明の好ましい実施形態によれば、ナビゲーションキーは、電話の唯一の入力手段である。

【0013】ポップアップウィンドウは、長方形フレームを画成する境界線によりアクティブなディスプレイエリアから区切られる。テキストが明るい（イエロー又はグリーン）背景上の黒であるときには、長方形フレームが、テキストと同様に黒であって、その行巾が2ないし3ピクセル又はドットに対応するのが効果的である。ポップアップウィンドウのエリアがアクティブなディスプレイエリア全体の30%ないし70%をカバーするときには、ユーザは、常に、背景表示の一部分を見ることができ、これは、モード又は表示を確認するのに充分である。

【0014】好ましい実施形態によれば、ポップアップウィンドウは、2ないし4個の選択可能なオペレーションを長方形フレーム内に含む。しかしながら、制御ユニットは、所定の順序で配列された複数の選択可能なオペレーションを含むリストを取り扱い、全組のオペレーションのうちの部分組のみがポップアップウィンドウに同時に示される。ナビゲーションキー手段を回転すると、全組のオペレーションを通して走査が行なわれる。従って、ウィンドウは、全リストに沿って移動する。

【0015】全リストは、エンドレスループとして与えられないのが好ましい。全組のオペレーションは、2つのオペレーションが各々リストの最初の項目及び最後の項目として定められるように配列され、そしてリストモードにおいて、カーソルがリストの最初の項目又は最後の項目以外を通過するときに、ポップアップウィンドウが消失し、そして電話がリストモードから、背景表示に関連したモードに入るのが好ましい。

【0016】コンテキスト感知ポップアップウィンドウは、使用可能な全てのオペレーションを含むのが好ましい。これらは、技術現状に基づき多数のサブメニューから得られる。従って、ユーザは、もはやサブメニューへの経路を覚える必要はなく、リストから単に選択することができる。

【0017】

【発明の実施の形態】以下、添付図面を参照して、本発明の好ましい実施形態を詳細に説明する。

【0018】図1は、本発明による電話の好ましい実施形態を示し、参照番号1で一般的に示された電話は、キ



ーパッド2、ディスプレイ3、オン/オフボタン4、イヤホン5及びマイクロホン6を有するユーザインターフェイスを備えていることが明らかである。好ましい実施形態の電話1は、セルラーネットワークを経て通信するが、例えば、コードレスネットワーク用に設計することもできる。キーパッド2は、アルファニューメリックキーとして第1キーグループ7を有し、これにより、ユーザは、電話番号を入力し、テキストメッセージ(SMS)を書き込み、名前(電話番号に関連した)を書き込み、等々を行うことができる。12個のアルファニューメリックキーの各々には、数字「0-9」又は符号「#」及び「\*」が各々設けられている。アルファモードにおいて、各キーには、テキスト編集に使用される多数の文字及び特殊な符号が関連される。

【0019】キーパッド2は、更に、ナビゲーション及び選択キー10と、クリアキー12とを備えている。クリアキー12は、例えば、これを短時間押すことにより最後に入力された数字又は文字を消去するのに使用され、一方、これを長時間押すと、数字又はワード全体が消去される。

【0020】この電話は、Nokia 8110(登録商標)と同様に2つのコール取り扱いキーを含むことができるが、好ましい実施形態によれば、コールの取り扱いは、ナビゲーション及び選択キー10に含まれる。これは、少なくとも1つの数字がディスプレイにある状態でアイドルモードにおいてナビゲーション及び選択キー10を一度押すと、「コール確立」を有するポップアップウィンドウが1つの項目として現れ、そしてナビゲーション及び選択キー10を押すことにより「コール確立」を選択することによってコールが確立されると、ポップアップウィンドウの項目は、「コール終了」、「会議コール」、等々に変化する。

【0021】ナビゲーション及び選択キー10は、電話の前面の中央においてディスプレイ3とアルファニューメリックキーのグループ7との間に配置される。従って、ユーザは、親指でこのキーを制御することができる。これは、正確な原動力移動を必要とする入力キーを配置する最良の場所である。経験のある多くの電話ユーザは、片手での取り扱いを使用する。これらのユーザは、指先と手のひらとの間で電話を手にもつ。従って、情報入力のために親指を自由に使えることになる。

【0022】図3から明らかなように、ナビゲーション及び選択キー10は、電話の前面カバー21の開口を通して部分的に延びるローラ本体20を備え、このローラ本体20は、本質的に円筒状であって、その長さ及び直径は、アルファニューメリックキーグループ7におけるキーの中と同じサイズである。ローラ本体20の回転軸が電話1の長手軸に垂直に延びるように設けられたときには、ローラ本体20を回転すると、ディスプレイのカーソルが親指の移動に対応してアップ/ダウン方向に移

動する。この目的を満足するために、ナビゲーション及び選択キーには、ローラ本体の回転を、電話のプロセッサ17に送られる電子パルス列に変換するエンコーダ手段(図示せず)が設けられる。更に、ナビゲーション及び選択キーの構造体には、ローラ本体20の押圧を検出するためのマイクロスイッチ(図示せず)が設けられ、これにより、ディスプレイに指示された項目が選択されたことを示すプロセッサ17のための選択信号が発生される。ナビゲーション及び選択キーは、本出願人により1997年12月22日に出願された英国特許出願第9727062、3号、第9727058、1号及び第9727060、7号に詳細に説明されている。これらの特許出願は、参考としてここに援用する。

【0023】ナビゲーション及び選択キー10がアルファニューメリックキー7の中央欄の延長部として配列されたときには、左利き及び右利きの両方のユーザによりナビゲーション及び選択キー10を最適にアクセスすることができる。

【0024】図2は、携帯電話の好ましい実施形態の最も重要な部分を示す図で、これらの部分は、本発明を理解するために重要である。本発明の電話の好ましい実施形態は、GSMネットワークに関連して使用されるが、もちろん、本発明は、セルラーネットワークのような他の電話ネットワーク及び種々の形態のコードレス電話システムに関連して使用することもできる。マイクロホン6は、ユーザのスピーチを記録し、それにより形成されたアナログ信号は、A/Dコンバータ15においてA/D変換された後に、音声コーデックユニット14においてスピーチがエンコードされる。エンコードされたスピーチ信号は、GSMターミナルソフトウェアをサポートする物理レイヤプロセッサ17へ転送される。このプロセッサ17は、メモリ(RAM、ROM)、ディスプレイ3及びキーパッド2(並びにSIM、データ、電源等)を含む装置の周辺ユニットへのインターフェイスも形成する。プロセッサ17は、基本帯域コンバータ18及びチャンネルイコライザー16を経てRF部分19と通信する。音声コーデックユニット14は、信号をスピーチデコードし、これは、プロセッサ17からD/Aコンバータ13を経てイヤホン5へ転送される。ユニット13ないし18は、通常、市場で入手できるチップ又は1組の特殊設計チップ(ASIC)のいずれかであるチップセットに一体化される。

【0025】好ましい実施形態ではそれ自体知られたようにコントローラユニットとして働くプロセッサ17は、ユーザインターフェイスに接続される。従って、電話のアクティビティを監視しそしてそれに応答してディスプレイ3を制御するのは、プロセッサである。

【0026】それ故、状態変化事象の発生を検出し、そして電話の状態、ひいては、表示テキストを変更するのは、プロセッサ17である。状態変化事象は、ナビゲ-

ション及び選択キー10を含むキーパッドをユーザが操作したときにユーザによって生じ、従って、この形式の事象は、入力事象又はユーザ事象と称する。プロセッサ17は、図3について簡単に述べるように、マイクロスイッチ及びエンコーダにより、ローラ本体20の回転及び押圧を検出することができる。しかしながら、電話と通信するネットワークが状態変化事象を生じることもある。この形式の事象、及びユーザの制御を越える他の事象は、非ユーザ事象と称する。非ユーザ事象は、コール設定中の状態変化、バッテリー電圧の変化、アンテナ状態の変化、SMSの受信におけるメッセージ等を含む。

【0027】図3は、本発明によるナビゲーション及び選択キー構造体を携帯電話に如何に配置するかを示す。ナビゲーション及び選択キー構造体は、ナビゲーション及び選択キーとして働くローラ本体20と、このローラ本体20を支持するキャリア23とを備えている。キャリア23は、スタブシャフト28をヒンジ部分として支持するビーム29と、ビーム30と、ローラ本体20を支持するシャフト24とを備えている。2つのビーム29、30及びシャフト24は、平行であり、そして各端においてベアリング31、35によって相互接続される。

【0028】ローラ本体20の一部分は、電話の前面カバー21の密接嵌合（非接触）開口を経て延びる。前面カバー21の後側には、キャリア23用のヒンジ軸を定める支持手段としてスタブシャフト28を受け入れるU字型くぼみ34を有する2つのグリップアーム27が設けられている。グリップアーム27は、電話の前面カバー21とプリント回路板（PCB）25との間のスペーサ部材として働く。プリント回路板は、グリップアーム27のくぼみ34により形成されるシャフトベアリングに対するロック部材を形成する。グリップアーム27間の距離は、キャリア23の軸方向変位を回避するためにシャフト24の長さよりも若干小さくなっている。

【0029】キャリア23をプリント回路板25から電話の前面カバー21に向かって押しやるためのバイアス手段としてスプリング26が設けられている。前面カバー21には、2つのストップ脚32が設けられ、これらは、ヒンジ28、34から離れる方を向いた部分30の上面と協働する。キャリア部分30の下面は、マイクロスイッチ33と協働する。マイクロスイッチ33の接触面とストップ脚32との間の距離は、対応するキャリア部分の厚みより若干大きい。コイル26は、キャリア23をストップ脚32に向けて押しやる。ユーザがコイルの力より大きな力でローラを押圧すると、キャリアがマイクロスイッチ33に押しつけられ、それに基づいて出力信号が与えられる。マイクロスイッチ33は、コイル26により与えられるバイアス力に反作用する力を検出するための検出手段として働く。

【0030】ローラ本体20が押圧されると、全ナビゲ

ーション及び選択キー構造体は、グリップ手段28、34により定められたヒンジ軸の周りで揺動運動を実行する。

【0031】ローラ本体20の端壁には、多数の導電性領域37が設けられている。図3に示すように、金属ストリップの多数（好ましい実施形態では、3個）のスライドシュー36（接触スプリング）が、導電性領域を通る円経路に沿ってスライドする。このスライドシュー36及び導電性領域37は、制御ユニット17がローラ本体20の回転を検出するところのエンコーダの相互作用部分である。スライドシューは、ローラ本体20の端面を向いたキャリア23の面に取り付けられる。

【0032】プロセッサ17は、通常、各オープンアプリケーションに1つづつ多数の表示を取り扱い、そしてそのときアクティブなアプリケーションに対する表示がディスプレイ3に示される。電話がアイドルモードにあるときには、入呼びを探してネットワークを監視するだけである。図4に第1の表示として示されたアイドルモード表示は、ネットワークオペレータ、ここでは「Softon」を識別する情報を含み、そしてナビゲーション及び選択キー10のローラ本体20を押圧すると、電話のメニューへのアクセスが与えられることを指示する。表示は、更に、バッテリーレベル、RF接続の質、ローカル時刻等をユーザに知らせる幾つかの状態指示を含むことができる。

【0033】図4の第2の表示から明らかなように、ナビゲーション及び選択キー10を押すと、ポップアップウィンドウ40が以前の表示の上に現れる。ポップアップウィンドウ40は、その下の表示を部分的にカバーするが、ユーザが依然としてその背景表示を確認できるようにカバーする。ポップアップ表示40に生じるテキストの行数は、当然、使用するフォントに依存する。しかし、表示全体が5つのテキスト行を含む場合には、ポップアップ表示は、3つのテキスト行を含むのが効果的である。あるカーソル位置で使用できるオプション即ち項目の数は、一般に、行数より多いが、リストの一部分しか表示されない。

【0034】図4のポップアップウィンドウ40に示されたメニュー項目のリストは、通常、10項目まで又はそれ以上を含む。リストは、次の通りである。

- 【0035】1. 電話帳-F I
2. メッセージ
3. コール登録
4. 電話の設定
5. コール転送サービス
6. カレンダー
7. 音量設定-L I

個々のメニュー項目に関連した機能は、例えば、本出願人の商品Nokia 3110（登録商標）から良く知られている。図4から明らかなように、ポップアップウイ

ンドウ40には、メニューリストの項目2ないし4のみが示されている。リスト内の項目の1つは、カーソル42として働くアイコンで示されていることが明らかである。或いは又、反転したカラーのバーで項目を示すこともできる。カーソル42は、ナビゲーション及び選択キー10のローラ本体20を回転することにより制御され、そしてカーソルで指示された項目は、ローラ本体20を押すことにより選択できる。

【0036】リストの項目は、項目の選択により、表示されるべき新たな項目リストが発生されたときに、アイコン（ここでは3つのドット）41により追従される。これは、基本的に、メインメニューリストにおける全ての項目に対する状態である。リストにおける最初と最後の項目は、各境界アイコン44によりFI（最初の項目）及びLI（最後の項目）として指示されることに注意されたい。カーソル42がこれら項目により定められた境界を外れて移動する（例えば、アップ方向に最初の項目を通過する）ときには、ポップアップウィンドウ40が自動的に消失する。

【0037】図4の第2行目における第1表示において、ユーザは、「メッセージ」メニュー項目を選択し、これは、次のメニュー項目をポップアップし、第2行目の第2表示から明らかなように、このメニューリストは、次のような標準的なメッセージ取り扱いメニューを含む。

【0038】

1. メッセージ読み取り
2. メッセージ書き込み
3. 発送報告の表示
4. メッセージセンター番号
5. 自分のセンターを經ての応答
6. 発送報告
7. 音声メールボックス番号

アイドルモード表示は、依然、背景表示として存在し、そして電話は、例えば5秒の時間切れで何の項目も選択されない場合には、このアイドルモード表示に復帰する。ユーザが「メッセージ書き込み」項目を選択した場合には、ポップアップウィンドウが消え、そして背景表示が、図4の第3行目の1つの表示に示すように、「アイドルモード」表示から「テキスト入力」表示へと変化し、表示の最も上の状態行45は、テキスト入力がメッセージ送信アプリケーション（メッセージ書き込み）に対するものであり、テキスト入力アプリケーションがアルファモード（ABC）にあり、そしてカーソル43が位置124にある（SMSメッセージは、最大160キャラクタを含み、そして位置124は、最大124キャラクタが続くことを意味する）ことをユーザに知らせる。

【0039】表示3は、所定数の行に配列された符号を示すためのドットマトリクス表示として形成され、各行

は複数の符号を含むことができる。カーソル43又はマーカーは、2つの符号間に配置できる微光バーとして形成される。カーソル43がテキストに配置された状態でローラ本体20が押圧されたときに、プロセッサは、多数の選択可能な項目又はオペレーションを含むコンテキスト感知ポップアップウィンドウを表示し始める。コンテキスト感知ポップアップウィンドウ46は、アクティブなディスプレイの一部分をカバーし、そしてローラ本体20を押圧する前にカーソル43により定められた位置において許されるオペレーションを含む。

【0040】コンテキスト感知ポップアップウィンドウ46がディスプレイの一部分に現れるときには、選択可能な項目のリストは、SMSメッセージ関連項目及びテキスト編集関連項目の両方含むことができる。このリストは、次の項目を含むことができる。

- 【0041】
1. 挿入
  2. テキストマーク開始
  3. ペースト
  4. 送信
  5. セーブ
  6. 退出
  7. 消去

「挿入」が選択された場合には、ユーザは、新たなポップアップウィンドウにおいて、何を挿入したいかそしてどこで見つけるか、例えば、電子ビジネスカード（ノートパッド）、名前又は番号（電子電話帳）等を特定するように要求される。

【0042】図4の第4行目における第1表示の状態のように、「テキストマーク開始」がユーザにより選択された場合には、このカーソル位置が最初の位置として取り扱われる。図4の第4行目における第2表示から明らかなように、ユーザは、ローラ本体20を回転することによりカーソル43を新たな位置に移動することが許される。状態行45は、現在状態がテキストマーク中であることを示すことに注意されたい。カーソル43がナビゲーション及び選択キー10により新たな位置に移動されたときには、図4の第4行目における第3表示から明らかなように、ナビゲーション及び選択キー10を押したときに、コンテキスト感知ポップアップウィンドウ46が現れる。ここで、ユーザは、ポップアップウィンドウ40のリストから、そのマークされたテキストに対してどのオペレーションを実行したいかを選択できる。最初のカーソル位置が第1位置であるか第2位置であるかは問題でない。

【0043】マークされたテキストの選択に応答して、コントローラ17は、コンテキスト感知ポップアップウィンドウ46（図4の第4行目の第3表示）を発生して、ユーザがそのマークされたテキストをカットしたいか、クリップボードにコピーしたいか、又はクリップボードの内容に置き換えたい（ペーストしたい）かを尋ね

る。マークされたテキストをクリップボードにコピーする場合には、ペーストオペレーションにより、ユーザは、コピーされたテキストを別のアプリケーションに転送するか又は同じアプリケーションの別のファイル又は記録に転送することができる。「ペースト」オプションは、クリップボードメモリが空であるときにはポップアップウィンドウに現れない。

【0044】「送信」オプションを選択すると、プロセッサ17は、受信電話番号を尋ねるポップアップウィンドウ（下にメッセージを伴う）を形成した後に、メッセージセンター番号が電話にまだ記憶されていない場合にはそれを入力する要求を發する。

【0045】ユーザが「セーブ」オプションを選択するときには、電話は、入力されたテキストをセーブするよう示唆し、そして98, 03, 26-10:45（セーブの時刻「年、月、日-時:分」）のような名前を記録に与える。「退出」オプションは、編集されたテキストをセーブも送信もせずアプリケーションを去り、一方、「消去」オプションは、編集されたテキストを消去するが、ユーザはアプリケーションに留まる。

【0046】第2行のポップアップウィンドウは、ナビゲーション及び選択キー10がソフトキーとして働くときにこれを押すと、現れることに注意されたい。好ましい実施形態によれば、これは、電話がユーザ入力のエントリをもたないモードにあるときの状態である。ユーザ入力をもたないモード中にはディスプレイにカーソルが存在しない。これは、通常、ユーザが、入力が必要とするまで、メニュー構造体においてナビゲートし、例えば、アイドルモードにおいて開始したときの状態である。

【0047】ユーザが入力を行うように要求され、例えば、図4について述べたようにメッセージを書き込むことが要求されたときには、ディスプレイのアクティブな部分全体をデータ入力に使用できる。図4の第3及び第4行目から、アンテナ及びバッテリーインジケータがいかに消失するか明らかである。ソフトキーテキストも消失する。データ入力モードにおいて、ナビゲーション及び選択キー10は、もはや特殊な機能ももたないし、メニュー構造体へのアクセスも与えない。このモードにおいてナビゲーション及び選択キー10が押されたときには、コンテキスト感知ポップアップウィンドウ46が現れ、そしてプロセッサ17は、現在アプリケーションにおいて許容できるオペレーションであって、現在カーソル位置でコンテキスト感知ポップアップウィンドウ46に表示されるべきオペレーションのみを許す。

【0048】コンテキスト感知ポップアップウィンドウ46と、ポップアップウィンドウ40を含む通常のメニュー項目の両方は、ウィンドウの境界線の外にカーソル42を移動するか又は「クリア」キー12を押すことによりエスケープすることができる。次いで、電話は、ポ

ップアップウィンドウの後方に部分的に見えるその下の表示に関連したアプリケーションへ戻る。

【0049】本発明による電話のディスプレイは、例えば、30×44mm（高さ×巾）のサイズのドットマトリクス表示領域を有するLCD型のものである。ドットは、好ましくは、長方形で、例えば、サイズが0.42×0.34mm（高さ×巾、これは垂直及び水平方向に各々57×70dpiの解像度に対応する）であり、そして0.02mm間隔で配列される。これは、アクティブな部分においてほぼ68×120ドット（高さ×巾）即ちピクセルを与える。

【0050】図4から明らかなように、電話は、多数の、例えば、3つの標準的なフォントをディスプレイに使用しており、そしてプロセッサ17は、所定のルールに基づいてフォントを動的に変更する（ユーザからの操作を伴わずに）。通常、各符号は、最も大きなフォントにおいて10×7ピクセル（高さ×巾）を、そして最も小さなフォントにおいて7×5ピクセルを使用する。図4に示す実施形態に使用されるフォントは、固定の巾をもたず、「I」のような文字は、文字「m」よりも小さな巾しか必要としない。高さは、フォントにおける全ての符号に対して同じであり、そして巾は、2ピクセル（「i」の場合）から7ピクセル（「M」及び「W」の場合）まで変化し、平均巾は、約5ピクセル程度である。一般に、2つの隣接する符号は、1ピクセルだけ離間され、そして2つの行は、3ピクセルだけ離間される。アイドルモード表示においては、10ピクセルの巾をもつ列が状態バー48に対する表示の各側に使用され、そして13ピクセルに対応する高さをもつ行がソフトキーテキスト49に対して使用される。

【0051】テキスト入力モードでは、アクティブな表示領域全体を使用できる（ここでは、68×120ピクセル）。状態行45は、120ピクセルに対応する巾を有し、そしてフォントの巾が約5ピクセルで、それらの間の間隔が1ピクセルの状態では、約20個の文字が状態行に許される。文字の高さは9ピクセルである。状態行45は、テキスト部分から行47で分離され、従って、テキストに対して51×120ピクセルが使用でき、これは、各行に約20個までの文字で、4つの行に対応する。

【0052】カーソル43は、1秒当たり約1回微光を發する（ピクセルがオン及びオフになる）微光バー（1×11ピクセル）として実施される。ポップアップウィンドウ40又は46が現れると、図5から明らかなように、長方形の境界線50によってそれが包囲される。この境界線50の外では、その下の表示が見える。境界線50は、2ピクセルに対応する巾を有する。図5から明らかなように、若干小さなフォントが使用され、これは、状態行45及びテキスト部分の最後の行が完全に見える状態でポップアップウィンドウが3つのテキスト行

を包含できるようにする。本発明の好ましい実施形態によれば、ポップアップウィンドウは、40×84ピクセルを使用する。この境界線の巾、及び境界線とテキストとの間に幾つかのピクセルという間隔では、機能テキストを表示するのに使用できるポップアップウィンドウの部分が32×76ピクセルを含む。7×5のフォントでは、12ないし15文字を有する3つの行を表示することができる。上記サイズのディスプレイでは、ポップアップウィンドウは、アクティブなディスプレイ全体の40%以上をカバーする。ポップアップウィンドウは、ディスプレイのサイズが50-100×75-200ピクセルであるときに、アクティブなディスプレイ全体の30%ないし60%、そして好ましくは35%ないし50%をカバーするのが効果的である。ポップアップウィンドウがあまり小さくなると、テキストを読み取るのが困難となり、ポップアップウィンドウがディスプレイの相当の部分カバーするときには、ユーザは、もはや背景表示を確認することができない。

【0053】図6は、本発明による携帯電話の別の実施形態を示しており、この電話は、アルファニューメリックキーが省かれそして全ての機能がナビゲーション及び選択キー10を経て使用できるという点で注目すべきものである。ナビゲーション及び選択キー10は、実際に、電話の唯一の入力キーである。今日、あらゆる電話が15ないし20個のキーを有し、或いはそれ以上の多数のキーを有する。

【0054】アイドルモードから、ナビゲーション及び選択キー10を押すと、電話のメニューにアクセスできる。ここでは、図1を参照して説明した実施形態に使用されたメニューリストは、更に別の幾つかの項目を必要とする。このリストは、次の通りである。

- 【0055】1. コール-F I  
2. 電話帳  
3. エディタ  
4. メッセージ  
5. コール登録  
6. 電話の設定  
7. コール転送サービス  
8. 音量設定-L I

このリストから明らかなように、2つの新たなメニュー項目のみが必要であり、それらは、「コール」及び「エディタ」である。図7は、図6に示す電話においてアプリケーションが互いに相互作用するかを示している。

【0056】電話は、当該状態に関連した所定の機能又は動作のグループをナビゲーション及び選択キー10によって実行又はアクセスできるような複数の状態をとれるのが効果的である。プロセッサ17は、このグループの機能の1つをデフォルト機能として表示する。デフォルトオペレーション又は機能は、ナビゲーション及び選択キー10を押したときに実行され、そしてナビゲ

ーション及び選択キー10を回転したときに全組のオペレーションを使用できる。

【0057】図7は、本発明の別の実施形態による1キー型電話がアイドルモード100から2つの方法でいかに状態を変えるかを示している。入呼びが検出された場合には、電話がコール取り扱い状態110へ変化し、ユーザは、ナビゲーション及び選択キー10を押すことによりコールに応答することが許される。ナビゲーション及び選択キー10を回転することにより、全組の許容し得る動作を伴うポップアップウィンドウが現れ、これにより、ユーザは、入呼びを拒絶するか又はコールを手動で転送することが許される。

【0058】さもなくば、ユーザは、ナビゲーション及び選択キー10を押して回転することによりメニューをアクセスしなければならず、これにより、ポップアップウィンドウの項目を選択することができる(図4のように)。次いで、上記の8個のメニュー項目を使用できる。電話には、ユーザが全ての種類のデータを例えば電話の入力できるようにする特殊なエディタが設けられ、このエディタは、1998年1月14日に本出願人により出願された英国特許出願第9800746、1号に基本的に説明されている。この出願は、参考としてここに援用する。

【0059】このエディタは、1キー型電話に関連して非常に有用であり、電話のオペレーションは、図7及び8を参照して説明する。ユーザがアイドルモードにおいてナビゲーション及び選択キー10を押すことにより「メニュー」を選択すると(図8の第1行目の表示を参照)、プロセッサ17は、メニュー構造において使用できる項目を含むポップアップウィンドウ120を表示する。この実施形態によれば、これら項目は、次の通りである。

- 【0060】1. コール  
2. 電話帳  
3. ノートパッド  
4. メッセージ  
5. コール登録  
6. 電話の設定  
7. コール転送サービス  
8. 音量設定  
9. カレンダー

図8の第2行目の第1表示から明らかなように、ユーザがカーソル121を「ノートパッド」オプションへ移動し、そしてナビゲーション及び選択キー10を回転して押すことによりこのオプションを選択したときには、プロセッサ17は、新たなポップアップウィンドウ(図8の第2行目の第2表示)を表示して、ユーザが行おうとする入力の種類を特定するように求める。電話は、図7の状態103にある。

【0061】ユーザは、標準的なコールを発するための

電話番号、電話帳に記録を記憶するための電話番号及びそれに対応する名前、カレンダー用のアルファニューメリックストリング(テキスト)、送信されるべきメッセージ、等を入力することができる。ユーザが図8の第2行目の第2表示において「電話番号」の項目を選択した場合には、プロセッサ17は、アイドルモードの背景表示を、図8の第3行目の第1表示として示されたエディタ表示へと変更し、図7のエディタ状態111へ進む。

【0062】状態行123は、現在の入力アクティビティの種類を指示し、補助ウインドウ126は、一連の入力候補を指示し、そしてカーソル127により候補が指摘される。カーソル127の移動は、ナビゲーション及び選択キー10を回転することにより制御され、そしてナビゲーション及び選択キー10を押すことにより項目が選択される。候補が選択されると、それは、カーソル125で指摘された位置においてディスプレイのメイン部分の文字ストリング124へ転送される。補助ウインドウ126は、数字0-9、「+」符号、及び編集を終了すべきであることを指示する「OK」アイコンを含む。ユーザがカーソル126をこのストリングの外に移動した場合には(コンテキスト感知ポップアップウインドウの場合のように)、補助ウインドウ126が消失し、そしてナビゲーション及び選択キー10はストリング124においてカーソル125を制御する。ナビゲーション及び選択キー10を押すことにより、ユーザは、「クリア」、「挿入」、「クイット」、「コール」及び「セーブ」のような項目を含むコンテキスト感知ポップアップウインドウにおいて「挿入」オプションを選択することにより補助ウインドウ126を呼び戻すことができる。

【0063】ユーザが補助ウインドウ126において「OK」アイコンを選択した場合には、図8の第3行目の第2表示から明らかのように、補助ウインドウ126及びカーソル125が消失し、入力された文字ストリング124が表示に存在する。ナビゲーション及び選択キー10は、これを押したときに「コール」機能をデフォルトオプションとして得る。ナビゲーション及び選択キー10を回転した場合には、新たなポップアップウインドウに別のオプションが現れる。このポップアップウインドウは、「コール」、「編集」、「SMS」、「クイット」及び「セーブ」のような項目を含む。

【0064】「編集」オプションを選択すると、入力されたストリングが編集継続のために再オープンされ、「SMS」オプションを選択すると、ユーザがメッセージテキストを入力するよう要求され、そして「クイット」オプションを選択すると、電話は編集モードを退出し、何もセーブせずにアイドルモードに復帰する。「コール」オプションは、ディスプレイに存在する電話番号に基づいてコールを開始する。「セーブ」オプションを選択すると、ユーザが電話帳の名称として使用されるべ

き名前を入力するよう要求される。これは、図8の第4行目の第1表示に示されている。状態行123には、エディタが電話帳への名前の入力を現在取り扱っていることが指示される。テキストストリング124の一部が入力されている。

【0065】補助ウインドウ126は、文字a-z(英語版)と、大文字と小文字との間を切り換えるためのアイコンと、数字0-9を含む候補ストリングへのアクセスを与えるアイコンと、現在電話に使用されているギリシャ文字や他の符号のような特殊文字を含む候補ストリングへのアクセスを与えるアイコンとを備えている。一般に、エディタは、電話帳アプリケーションと組合せて使用されるときタイトルケースと、メッセージ又はカレンダー入力のためのテキストを入力するのに使用されるときテキストケースとを使用する。補助ウインドウ126に表示される標準的な文字ストリングは、基本的な文字ストリングとして働く。数字ストリング又は特殊文字ストリングにおいて「OK」アイコンを選択すると、基本的文字ストリングが呼び戻され、一方、基本的文字ストリングにおいて「OK」ストリングを選択すると、編集が終了となる。

【0066】図8の第4行目の第2表示では、基本的文字ストリングにおける「OK」アイコンが選択されており、編集が終了される。ナビゲーション及び選択キー10を押すと、入力された名前及び番号が電話帳の記録にセーブされる。

【0067】図8の第3行目の第2表示においてナビゲーション及び選択キー10を回転したときに現れたポップアップウインドウにおいて、ユーザが「セーブ」オプションを選択するのではなく、「SMS」オプションを選択した場合には、メッセージテキストの書き込みを要求される。図8の第5行目の第1表示に「テキスト書き込み」表示が示される。状態行123は、現在編集されているテキストの種類を指示し、そしてカーソル125は、入力されたテキストストリング124に配置され、補助ウインドウ126から選択される次の文字の位置を指示する。補助ウインドウ126において「OK」アイコンが選択されたときには、入力されたストリングが、4つのドット130で示すように切断され、従って、ナビゲーション及び選択キー10に対しソフトキーテキストのためのスペースが形成される。デフォルト機能は、SMSメッセージを送信するが、ナビゲーション及び選択キー10を回転すると、別のオプションが現れる。「SMS送信」が選択されたときには、初期に入力された電話番号が受信番号として使用され、ユーザは、自分のメッセージセンター番号がまだ電話に記憶されていない場合にはそれを入力するよう要求される。

【0068】1キー型電話の基本的な考え方は、電話が多数のアプリケーションを有し、その各々が新たなデータを入力するためにエディタを使用するというものであ

る。図7の「コール」アプリケーション101がメニューにおいて選択されたときには、「コール」アプリケーション101は、エディタアプリケーション111を使用して電話番号を入力すると共に、コール取り扱いアプリケーションを使用して、その入力された電話番号に基づき接続を実際に設定する。

【0069】「電話帳」アプリケーション102が選択されたときには、エディタアプリケーション111が同様に使用されて、電話番号及び名前を電話帳に新たな記録として入力する。又、エディタアプリケーション111は、既存の記録を修正しなければならないときにも使用され、そのオペレーションは、図8を参照して述べたものと同じである。図7から明らかなように、電話帳の記録からコールを開始することができる。これは、Nokia 3110（登録商標）において既に可能である。

【0070】「ノートパッド」アプリケーション103は、エディタアプリケーション111への直接的なアクセスを与え、入力されたデータをその後別のアプリケーションに記憶することができる。しかしながら、「ノートパッド」アプリケーションが一種のノートブックとして使用されるときには、そこに記録を記憶することができる。

【0071】又、「メッセージ」アプリケーション104は、エディタアプリケーション111を使用して、テキスト及び電話番号を入力する。又、「メッセージ」アプリケーション104は、コール取り扱いアプリケーション110を使用して、メッセージの送受信を行う。

【0072】「コール登録」アプリケーション105は、最後の入呼び、出呼び及び未到達コールのみをリストする。アプリケーションは、編集を使用せず、このアプリケーションから出呼びを開始することができる。

「電話の設定」アプリケーション106は、電話の幾つかのパラメータのみを設定し、編集は必要とされない。

【0073】「コール転送」アプリケーション107 \*

テーブル1

	ナビゲーションキー10の回転	ナビゲーションキー10の押圧
アイドルモード	電話は、回転方向に基づき、例えば、電話帳及び最終ダイヤルスタックの2つのリスト	ナビゲーションキー10は、良く知られたソフトキーに対応する機能を有する。「メニュー」
	の一方を表示する。	を選択すると、メニューのサブ
		項目を含むポップアップウィンドウが現れる。
リストモード	カーソルは、リスト内の項目を経てスクロール/ブラウズする。	カーソルで強調された項目が選択される。項目の選択によりユーザがサブ項目を選択できる場合には、これらのサブ項目を含むポップ

\*は、エディタアプリケーション111を使用して電話番号を入力すると共に、コール取り扱いアプリケーション110を使用して、転送命令をネットワークに転送する。

【0074】「音量設定」アプリケーション108は、通常、エディタアプリケーション111を使用しないが、上記の英国特許出願第9800746、1号に開示されたように、新たなリングングトーンの入力を取り扱うようにエディタアプリケーションが準備された場合には、「音量設定」アプリケーション108は、エディタアプリケーションからの入力からも有効である。

【0075】「カレンダーアプリケーション」109も、エディタアプリケーションからの入力に依存する。しかしながら、入力、例えば、「ノートパッド」アプリケーション103又は「メッセージ」アプリケーション104からも、エディタアプリケーションを経て到来する。

【0076】コンテキスト感知ポップアップウィンドウは、ソフトキーを省くことができる。これは、テキスト編集等に使用できるディスプレイの部分を増加する。しかしながら、全てのオプションは、ナビゲーション及び選択キー10を押したときにポップアップするウィンドウにおいて使用できる。通常使用されるアルファニューメリックキーは、入力候補に基づく新たなエディタを使用することにより省くことができる。これにより、電話のサイズを減少することができる。

【0077】ディスプレイにおいてマーカーを移動するためのナビゲーション手段及びマーカーにより指示された項目を選択するための選択手段の機能であって、例えば、上記のように押圧可能なローラベースのナビゲーションキー10に一体化される機能は、電話のモードに基づいて変化する。テーブル1は、本発明による電話の最も基本的なモードの概要を示す。

【0078】

		アップウィンドウがウィンドウに現れる。
コール 取扱い モード	許容し得るオペレーションを含むリストがアクセスされる。	デフォルトソフトキーオペレーションが選択され、例えば、進行中のコールを終了する。
編集又 は入力 モード	入力された文字及び番号のストリングを経てカーソルが移動される。	カーソル位置に基づいてコンテキスト感知ポップアップウィンドウが現れる。

本発明の2つの上記実施形態によれば、ナビゲーションキー10は、「アイドルモード」においてそれ自体知られた機能を有する。ナビゲーションキー10を回転することにより、電話は、回転方向に基づいて、例えば、電話帳及び最終ダイヤルスタックの2つのリストの一方を表示する。これは、アイドルモードにおいて電話Nikia3110（登録商標）のNavy-key（登録商標）を押すことに対応する。ナビゲーションキー10は、電話Nikia3110（登録商標）のソフトキーに対応する機能を有する。「メニュー」は、ナビゲーションキー10を押すことにより選択される。しかしながら、新規な特徴として、メニューのサブ項目を含むポップアップウィンドウが現れる。

【0079】ソフトキーオプション又はコンテキスト感知オプションを選択することによりポップアップウィンドウが発生するときには、電話が「リスト」モードとなる。ナビゲーションキー10を回転すると、カーソルがリストの項目を通してスクロール/ブラウズし、そしてナビゲーションキー10を押すと、カーソルで強調された項目が選択される。項目の選択によりユーザが更に別のサブ項目を選択できる場合には、これらサブ項目を含むポップアップウィンドウがウィンドウに現れる。さもなくば、例えば、コールを確立するようなオペレーションが実行される。

【0080】コールが設定されたときには、電話が「コール取扱いモード」となり、ナビゲーションキー10は、これを押したときにデフォルトソフトキー機能（コール終了）をもつことになる。ナビゲーションキー10を回転すると、当該モードにおいて許容し得るオペレーションを含むリストがアクセスされる。

【0081】アルファニューメリックキーセットをベースとするエディタを使用するか又は別の実施形態として説明したエディタを使用することによる編集中に、電話は、「編集又は入力モード」となる。ナビゲーション及び選択キー10は、ソフトキーとして働かず、従って、ソフトキーオペレーションの表示のために通常指定されるディスプレイの部分は、入力に使用できるようになる。カーソルは、ナビゲーション及び選択キー10を回転すると、文字及び番号の入力ストリング、又は入力候補ストリングを通して移動される。ナビゲーション及び選択キーを押すと、カーソルの位置に基づいてコンテ

10 スト感知ポップアップウィンドウが現れる。コンテキスト感知ポップアップウィンドウがディスプレイに存在する限り、電話は、「リストモード」となる。

【図面の簡単な説明】

【図1】本発明による携帯電話の好ましい実施形態を示す概略図である。

【図2】セルラー又はコードレスネットワークと通信する電話の重要な部分を示す図である。

【図3】図1に示す電話の一部であって、本発明によるナビゲーション及び選択キーに含まれる部分を示す概略断面図である。

【図4】本発明によるポップアップウィンドウを伴うディスプレイの好ましい実施形態を示す概略図である。

【図5】図4に示すディスプレイを拡大スケールで示す図である。

【図6】本発明による携帯電話の別の実施形態を示す図である。

【図7】本発明による携帯電話の状態図である。

【図8】本発明による携帯電話に使用されるエディタを例示する図である。

【符号の説明】

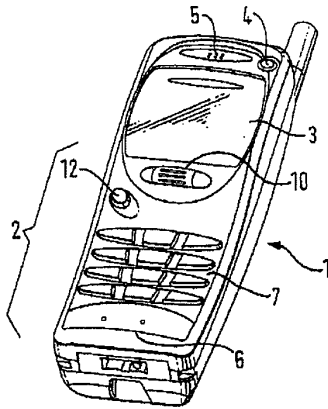
- 1 電話
- 2 キーパッド
- 3 ディスプレイ
- 4 オン/オフボタン
- 5 イヤホン
- 6 マイクロホン
- 7 アルファニューメリックキーのグループ
- 10 ナビゲーション及び選択キー
- 12 クリアキー
- 14 音声コーデックユニット
- 15 A/Dコンバータ
- 16 チャンネルイコライザー
- 17 プロセッサ
- 18 基本帯域コンバータ
- 19 RF部分
- 20 ローラ本体
- 21 前面カバー
- 23 キャリア
- 24 シャフト
- 50 25 プリント回路板



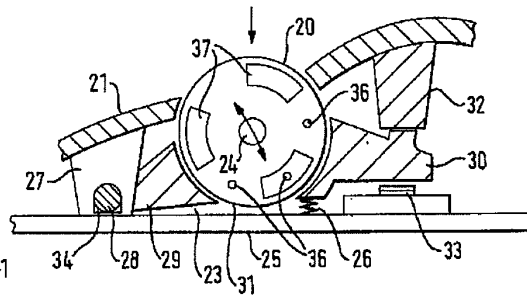
- 27 グリップアーム
- 29、30 ビーム
- 32 ストップ脚

- (13)
- 24
- \* 33 マイクロスイッチ
- 34 くぼみ
- \* 40 ポップアップウィンドウ

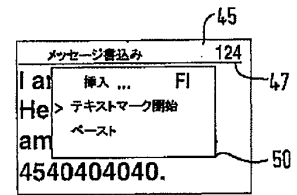
【図1】



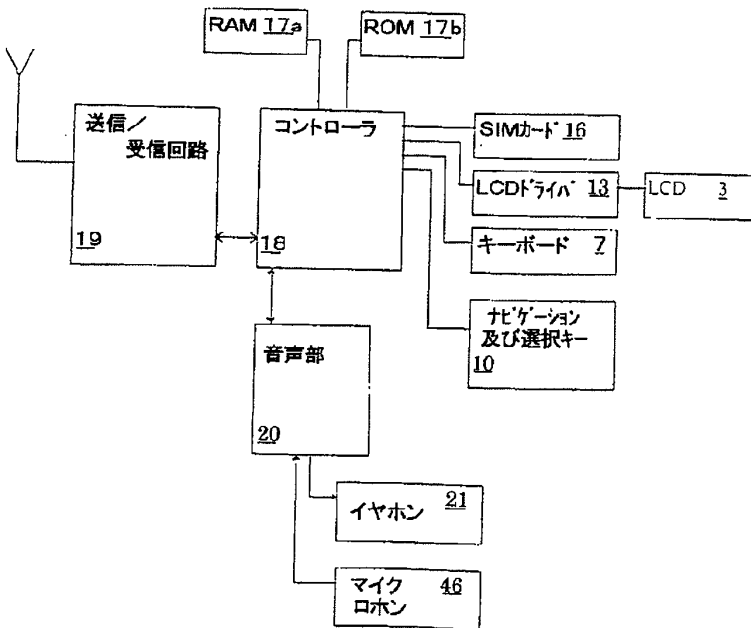
【図3】



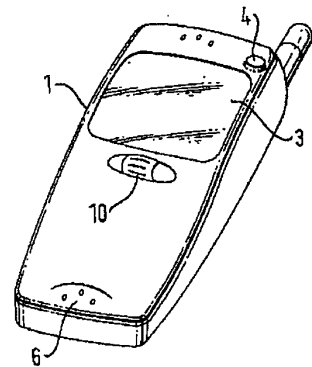
【図5】



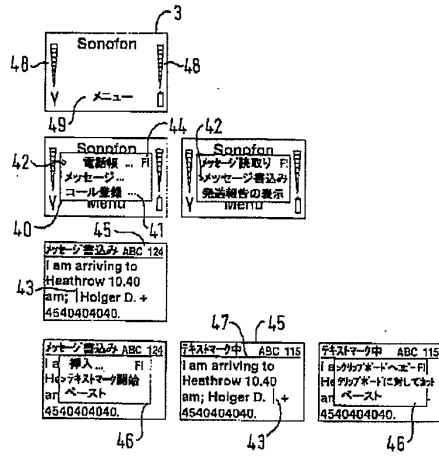
【図2】



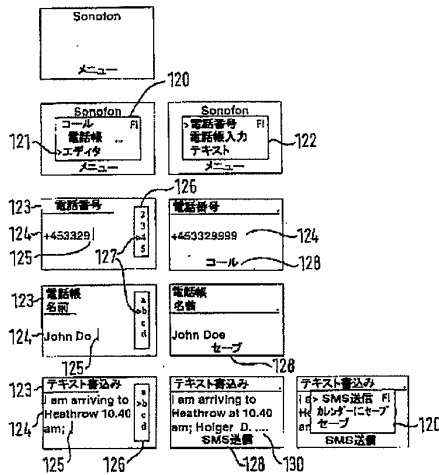
【図6】



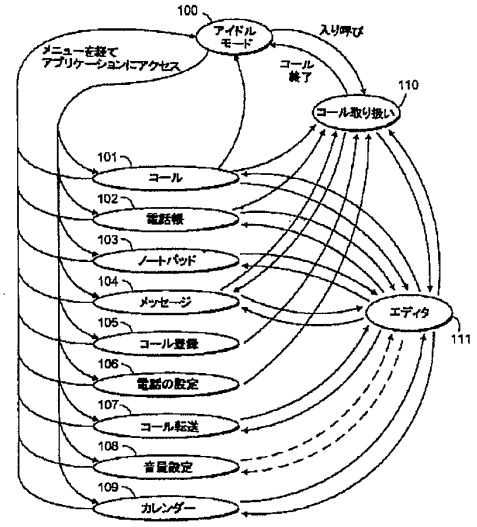
【図4】



【図8】



【図7】



Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Chad L. Thorson/Judy Creel			
<b>Attorney Docket Number:</b>	042933/387289			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

LGE0003808

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Submission- Information Disclosure Stmt	1806	1	180	180
<b>Total in USD (\$)</b>				<b>180</b>

LGE0003809

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	9109983
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	10949
<b>Filer:</b>	Chad L. Thorson/Judy Creel
<b>Filer Authorized By:</b>	Chad L. Thorson
<b>Attorney Docket Number:</b>	042933/387289
<b>Receipt Date:</b>	23-DEC-2010
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	15:05:13
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
RAM confirmation Number	2091
Deposit Account	160605
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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LGE0003810

1		387289_IDS.PDF	115078	yes	3
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		<b>Document Description</b>	<b>Start</b>	<b>End</b>	
		Transmittal Letter	1	2	
		Information Disclosure Statement (IDS) Filed (SB/08)	3	3	
<b>Warnings:</b>					
<b>Information:</b>					
2	Foreign Reference	387289_EP0946028A2.PDF	1025655	no	17
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<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			2458949		

LGE0003811

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re:	Mathieu K. Martyn	<b>APPEAL NO.</b>	<b>2010-008003</b>
Appl No.:	10/343,333	Confirmation No.:	1608
Filed:	August 27, 2003	Group Art Unit:	2175
For:	COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS	Examiner:	T. Vu

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97(d)**

This Information Disclosure Statement is being filed after a Final Office Action under 37 C.F.R. § 1.113, but before payment of the Issue Fee. The Final Office Action was mailed on December 31, 2008.

Attached is a list of documents on form PTO-1449 along with any cited foreign patent documents and non-patent literature documents in accordance with 37 CFR 1.98(a)(2). By identifying the listed documents, Applicant in no way makes any admission as to the prior art status of the listed documents, but is instead identifying the listed documents for the sake of full disclosure.

In accordance with the requirements of 37 C.F.R. § 1.97(d)(2), the following statement as specified in 37 C.F.R. § 1.97(e) is made:

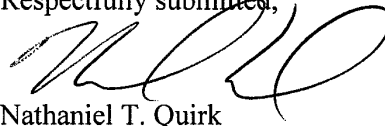
Each item of information contained in this statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this statement. In this regard, Applicant notes that the communication from the foreign patent office was not received by any individual designated by 37 CFR 1.56(c) more than thirty (30) days prior to the filing of this Information Disclosure Statement.



In re: Mathieu K. Martyn  
Appl. No.: 10/343,333  
Filed: August 27, 2003  
Page 2

The \$180.00 fee specified in 37 C.F.R. § 1.17(p) is being paid at the time of e-filing. The Commissioner is authorized to charge any additional fee, or credit any refund, to our Deposit Account No. 16-0605.

Respectfully submitted,



Nathaniel T. Quirk  
Registration No. 60,676

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UNITED STATES PATENT AND TRADEMARK OFFICE

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www.uspto.gov

APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
10/343,333		2175	21M1



**Correspondence Address/Fee Address Change**

The following fields have been set to Customer Number 10949 on 11/26/2010

- Correspondence Address
- Power of Attorney Address

The address of record for Customer Number 10949 is:

**10949**

**Nokia Corporation and Alston & Bird LLP  
c/o Alston & Bird LLP  
Bank of America Plaza, 101 South Tryon Street  
Suite 4000  
Charlotte, NC 28280-4000**

Substitute for form 1449/PTO (Revised 07/2007)  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>		
				Application Number	10/343,333	
				Filing Date	August 27, 2003	
				First Named Inventor	Martyn	
				Art Unit	2175	
Examiner Name	T. Vu					
Sheet	1	of	1	Attorney Docket Number	042933/387289	
<b>U. S. PATENT DOCUMENTS</b>						
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear	
		US-				
		US-				
		US-				
		US-				
<b>FOREIGN PATENT DOCUMENTS</b>						
Examiner Initials	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached
	1	JP 3-149666 A	06-26-1991	Matsushita Electric Ind Co Ltd		*
	2	JP 11-74985 A	03-16-1999	Sharp KK		*
		*Abstract only				
<b>OTHER DOCUMENTS</b>						
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			English Language Translation Attached	
	3	Office Action for Japanese Application No. 2002-515554 dated August 8, 2011			Yes	
Examiner Signature				Date Considered		

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. LEGAL02/32811780v1

**Submitted August 25, 2011**

LGE0003816



**Espacenet**

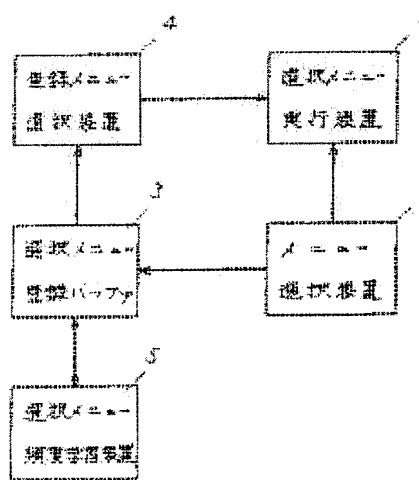
**Bibliographic data: JP 3149666 (A)**

**INFORMATION PROCESSOR**

**Publication date:** 1991-06-26  
**Inventor(s):** SHIRAISHI YUJI +  
**Applicant(s):** MATSUSHITA ELECTRIC IND CO LTD +  
**Classification:**  
 - international: G06F3/048; G06F3/14; G06T11/80; (IPC1-7): G06F15/62; G06F3/14  
 - European:  
**Application number:** JP19890289505 19891107  
**Priority number(s):** JP19890289505 19891107  
**Cited documents:** JP64007122 (A) JP64076218 (A) View all

**Abstract of JP 3149666 (A)**

**PURPOSE:**To obtain an information processor with high operability by storing function menus to be usually frequently used by users or previously selected function menus and selectively executing the stored contents. **CONSTITUTION:**Function menus selected from a menu selecting device 1 for selecting a function menu displayed on a display device by a user and executed are stored in a selected menu registering buffer 3 for temporarily storing the function menus together with the using frequency information as the list of the limited number of function menus. The function menus to be usually frequently used by the user or previously selected function menus are displayed in the using frequency order so as to be displayed. Consequently, a required function menu can be simply selected and executed.



Last updated:  
 26.04.2011 Worldwide  
 Database 5.7.23; 92p

⑩ 日本国特許庁(JP)

⑪ 特許出願公開

⑫ 公開特許公報(A) 平3-149666

⑬ Int.Cl.<sup>5</sup>

G 06 F 15/62  
3/14

識別記号

3 2 0 K  
3 4 0 B

庁内整理番号

8125-5B  
8323-5B

⑭ 公開 平成3年(1991)6月26日

審査請求 未請求 請求項の数 1 (全4頁)

⑮ 発明の名称 情報処理装置

⑯ 特 願 平1-289505

⑰ 出 願 平1(1989)11月7日

⑱ 発 明 者 白石 裕 司 大阪府門真市大字門真1006番地 松下電器産業株式会社内  
⑲ 出 願 人 松下電器産業株式会社 大阪府門真市大字門真1006番地  
⑳ 代 理 人 弁理士 栗野 重孝 外1名

明 細 書

1、発明の名称

情報処理装置

2、特許請求の範囲

表示装置上に選択可能な機能メニューを表示しメニューが選択されると所定の機能を実行する情報処理装置において、

前記表示装置上に表示された機能メニューを選択するメニュー選択装置と、選択された機能メニューに対して所定の機能を実行する選択メニュー実行装置と、選択された機能メニューを使用頻度情報とともに一時的に記憶する選択メニュー登録バッファと、前記選択メニュー登録バッファに登録された機能メニューを使用頻度順に学習し機能メニューのリストを並び替える選択メニュー頻度学習装置と、前記選択メニュー登録バッファに記憶された有限個の機能メニューのリストを前記表示装置に表示し選択する登録メニュー選択装置を具備し、前記メニュー選択装置から選択し前記選択メニュー登録バッファに記憶した後、選択メニ

ュー頻度学習装置で学習され並び替えられた機能メニューの有限個のリストを前記登録メニュー選択装置を用いて表示し選択させることによって前記選択メニュー実行装置を駆動することを特徴とする情報処理装置。

3、発明の詳細な説明

産業上の利用分野

本発明は、選択可能な機能メニューを表示しメニューが選択されると所定の機能を実行する情報処理装置に関する。

従来技術

従来、表示装置上に選択可能な機能メニューを表示し選択する情報処理装置においては、プルダウン方式やポップアップ方式などのメニューシステムに予め登録された機能メニューのリストを表示し選択していた。

発明が解決しようとする課題

そのため、従来技術の情報処理装置においては、機能メニュー選択時に通常の利用者では使用する機会が極端に少ない機能メニューについても毎回表

示されたり、必要とする機能メニューがメニューリストの深い位置にある場合には使用者がメニューリストを順にたどっていく必要がある、といった操作上の問題があった。

本発明は、かかる点に鑑みてなされたもので、使用者の使用した機能メニューを使用頻度順に表示し選択させることで、簡便で操作性の良いメニュー選択が行える情報処理装置を提供することを目的とする。

課題を解決するための手段

本発明は上記問題点を解決するために、表示装置上に表示された機能メニューを選択するメニュー選択装置と、選択された機能メニューに対して所定の機能を実行する選択メニュー実行装置と、選択された機能メニューを使用頻度情報とともに一時的に記憶する選択メニュー登録バッファと、前記選択メニュー登録バッファに登録された機能メニューを使用頻度順に学習し機能メニューのリストを並び替える選択メニュー頻度学習装置と、前記選択メニュー登録バッファに記憶された有限

一登録バッファに記憶された有限個の機能メニューを前記表示装置に表示し選択する登録メニュー選択装置、5は選択メニュー登録バッファに登録された機能メニューを使用頻度順に学習し機能メニューのリストを並び替える選択メニュー頻度学習装置である。

以上のように構成された本実施例の情報処理装置について、第2図に示すフローチャートを用いてその動作を説明する。

まず、メニュー選択装置1はプルダウン方式やポップアップ方式などの既定のメニューシステムから所望の機能メニューを選択し、選択メニュー実行装置2に通知して所定の機能を実行すると同時に、選択された機能メニューを選択メニュー登録バッファ3へ登録し記憶する(ステップ1、2)。次に選択メニュー頻度学習装置5を用いて選択メニュー登録バッファ3に登録し記憶された機能メニューのリストを使用頻度情報を元に学習し使用頻度の高いものを優先する並び替えを行なった後、機能メニューのリストを再登録する(ス

tep3)。

作用

上記のように構成された本発明の情報処理装置では、使用者がメニュー選択装置から選択し実行した機能メニューを選択メニュー登録バッファに有限個の機能メニューのリストとして記憶しておき、使用者が通常頻繁に使用する機能メニューや従前に選択した機能メニューを使用頻度順に表示し選択させることによって簡便に所望の機能メニューを選択実行することができる。

実施例

第1図は本発明の実施例における情報処理装置の構成を示すブロック図である。

第1図において、1は表示装置上に表示された機能メニューを選択するメニュー選択装置、2は選択された機能メニューに対して所定の機能を実行する選択メニュー実行装置、3は選択された機能メニューを使用頻度情報とともに一時的に記憶する選択メニュー登録バッファ、4は選択メニ

ュー登録バッファに記憶された有限個の機能メニューを前記表示装置に表示し選択する登録メニュー選択装置、5は選択メニュー登録バッファに登録された機能メニューを使用頻度順に学習し機能メニューのリストを並び替える選択メニュー頻度学習装置である。

使用者が次の機能メニューを選択しようとする際に、従前に選択し実行したことがある機能メニューであるかどうかに応じて、従前に選択し実行したことがない機能メニューの場合にはメニュー選択装置1および選択メニュー頻度学習装置5を用いてステップ1、2、3を繰り返す。従前に選択し実行したことがある機能メニューの場合には登録メニュー選択装置4を用いてメニュー登録バッファ3から登録メニューのリストを呼び出して選択し、選択メニュー実行装置2に通知して所定の機能を実行する(ステップ5、6)。

この実施例の情報処理装置によって第3図(a)のようなメニューシステムの場合に、文字列複写、センタリング、直線描画の順に機能メニューを選択し実行したとすると、選択メニュー登録バッファ3には第3図(b)の上段のように機能メニューのリストが登録される。更に、センタリング、円描画の順に機能メニューを選択し実行したとすると、選択し実行された回数が2回目のセン

タリングメニューが文字列複写メニューよりも優先されて再登録される。同様に、直線描画、直線描画の順に機能メニューを選択し実行したとすると、使用頻度情報に従って並び替えが行われ、直線描画、センタリング、文字列複写、円描画の順に機能メニューのリストが再登録される。

発明の効果

以上説明したように、本発明によれば、使用者が通常頻繁に使用する機能メニューや従前に選択した機能メニューを簡便に選択実行でき、操作性のよい情報処理装置を実現でき、その実用的な効果は大きい。

4、図面の簡単な説明

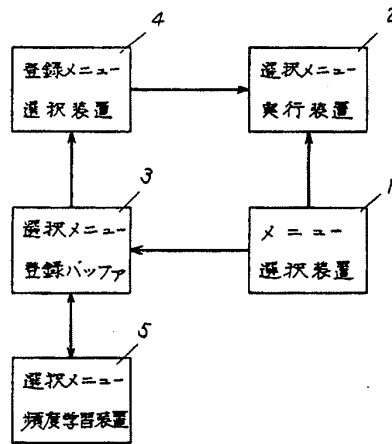
第1図は本発明の情報処理装置の一実施例を示す構成図、第2図は同実施例装置の動作を示すフローチャート、第3図は選択される機能メニューと選択メニュー登録バッファに登録され記憶される機能メニューのリストとの関係を示す図で、第3図(a)は既定のメニューシステムの例を示す図、第3図(b)は選択された機能メニューが登

録された選択メニュー登録バッファの例を示す図である。

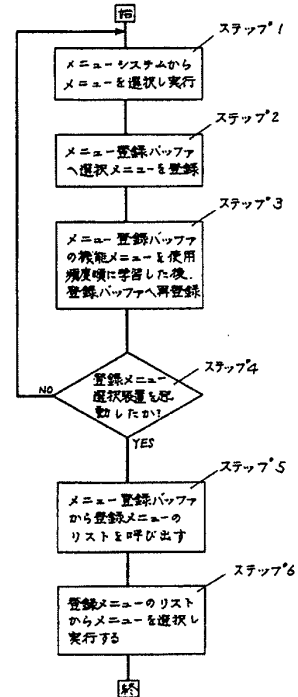
1…メニュー選択装置、2…選択メニュー実行装置、3…選択メニュー登録バッファ、4…登録メニュー選択装置、5…選択メニュー頻度学習装置。

代理人の氏名 弁理士 栗野重孝 ほか1名

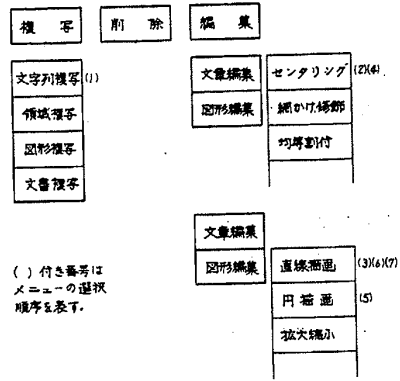
第1図



第2図

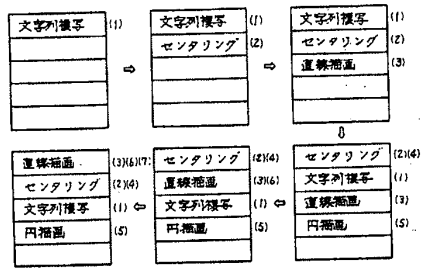


第3図 (a)



( ) 付き番号はメニューの選択順序を表す。

(b)







**Espacenet**

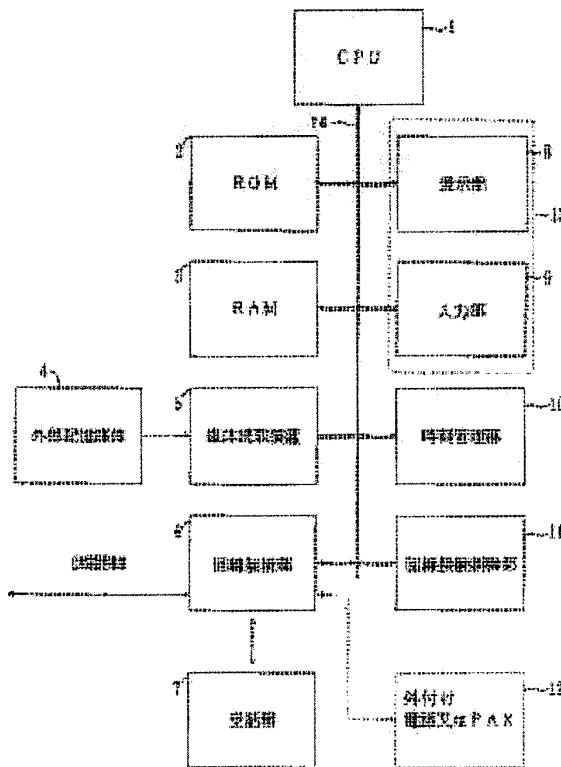
**Bibliographic data: JP 11074985 (A)**

**COMMUNICATION DEVICE AND MEDIUM RECORDING COMMUNICATION DEVICE CONTROLLING PROGRAM**

**Publication date:** 1999-03-16  
**Inventor(s):** SENOO SEIICHI; HAMA KENTARO; SASAOKA TAKAYOSHI +  
**Applicant(s):** SHARP KK +  
**Classification:** - international: H04M1/274; H04M1/2745; H04M1/56; H04M11/00; (IPC1-7): H04M1/274; H04M1/56; H04M11/00  
 - European:  
**Application number:** JP19970232690 19970828  
**Priority number (s):** JP19970232690 19970828

**Abstract of JP 11074985 (A)**

**PROBLEM TO BE SOLVED:** To preferentially display only line connection information that has high use probability in order of history or frequency without showing unnecessary line connection information by preliminarily setting a display condition of display/non-display to each line connection information and storing it. **SOLUTION:** An external storage medium 4 stores a program which controls a communication device through a computer 1. This controlling program makes the computer 1 send line connection information to a line connecting part 6 through a line connection instruction of an inputting part 9 and connect a speech/communication line. It adds the display condition of display/non-display according to the setting of the part 9 and stores line connection information in RAM 3 in different items of history and a frequency. It receives a retrieval instruction of the line connection information through the part 9, decides a display condition of the line connection information which is stored in the RAM 3, reads the line connection information that is performed display setting from the RAM 3 and shows it in a list in different items on a display part 8.



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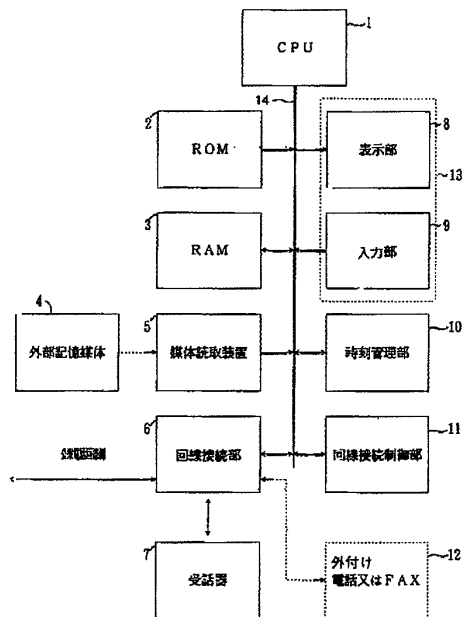
(74) 代理人 弁理士 野河 信太郎

(54) 【発明の名称】 通信装置及び通信装置制御プログラムを記憶した媒体

(57) 【要約】

【課題】 回線接続を検索する際、不必要な回線接続情報は非表示にして、履歴情報及び頻度情報から使用確率の高い回線接続情報を優先してディスプレイに一覧表示する。

【解決手段】 キー部と、回線接続部と、前記キー部の回線接続指示により回線接続情報を前記モデムに送信して通話/通信回線を接続する回線接続制御CPUと、RAMと、前記キー部により設定される表示/非表示設定の表示条件を付加して前記回線接続情報を履歴及び頻度の項目別に前記RAMに記憶する記憶制御CPUと、ディスプレイと、前記キー部により回線接続情報の検索指示を受け、前記RAMに記憶された回線接続情報の表示条件を判断し、表示設定された回線接続情報を前記RAMから読み出して前記項目別に前記ディスプレイに一覧表示する表示制御CPUとから構成される。



LGE0003823

## 【特許請求の範囲】

【請求項1】 入力部と、回線接続部と、前記入力部の回線接続指示により回線接続情報を前記回線接続部に送信して通話／通信回線を接続する回線接続制御部と、記憶部と、前記入力部の設定により表示／非表示の表示条件を付加して前記回線接続情報を履歴及び頻度の項目別に前記記憶部に記憶する記憶制御部と、表示部と、前記入力部により回線接続情報の検索指示を受け、前記記憶部に記憶された回線接続情報の表示条件を判断し、表示設定された回線接続情報を前記記憶部から読み出して前記項目別に前記表示部に一覧表示する表示制御部とを備えたことを特徴とする通信装置。

【請求項2】 前記記憶制御部は、最新の回線接続情報を先頭にした履歴順及び最も使用回数の多い回線情報を先頭にした頻度順の項目別に前記記憶部に更新記憶し、前記表示制御部は、前記表示条件の設定に従って前記記憶部から前記回線接続情報を前記履歴順及び頻度順の項目別に読み出し前記表示部に一覧表示することを特徴とする請求項1記載の通信装置。

【請求項3】 前記記憶制御部は、前記入力部に設けた特定キーに対し特定条件を回線接続情報に付加して前記記憶部に記憶し、前記入力部の特定キーにより回線接続情報の検索指示を受け、前記記憶部に記憶された回線接続情報の特定条件を判断し、非表示設定された回線接続情報も含めて前記記憶部から読み出して前記項目別に前記表示部に一覧表示することを特徴とする請求項1記載の通信装置。

【請求項4】 前記入力部は、回線接続を個別に指定する個別キー、回線接続を短縮して指定する短縮キーと、前記個別キー及び短縮キーに対応した回線接続情報を確定する登録キーとを備え、前記記憶制御部は、前記個別キー及び短縮キーと対応が確定した回線接続情報に表示／非表示設定の表示条件を付加して前記記憶部に記憶することを特徴とする請求項1記載の通信装置。

【請求項5】 前記入力部は、パソコン／インターネット通信を指定する通信キーをさらに備え、前記回線接続制御部は、前記通信キーにより指定されたパソコン／インターネット通信の通信アプリケーションを起動しその通信アプリケーションで発生する回線接続情報を前記回線接続部に送信してパソコン／インターネット通信の通信回線を接続することを特徴とする請求項1記載の通信装置。

【請求項6】 前記入力部は、操作者を指定する操作者キーをさらに備え、前記記憶制御部は、前記操作者キーに対応する回線接続情報にパスワードを付加して前記記憶部に記憶し、前記表示制御部は、前記操作者キーが入力された際にパスワードを求め、そのパスワードと一致した前記操作者キーに対応する回線接続情報のうち表示設定された回線接続情報を前記項目別に前記表示部に一覧表示することを特徴とする請求項1記載の通信装置。

【請求項7】 前記入力部は、操作者を指定する操作者キーをさらに備え、前記記憶制御部は、前記操作者キーに対応する回線接続情報にパスワードを付加して前記記憶部に記憶し、前記表示制御部は、前記操作者キーが入力された際にパスワードを求め、そのパスワードの一致した前記操作者キーに対応する回線接続情報うち、非表示設定された回線接続情報も含めて前記項目別に前記表示部に一覧表示することを特徴とする請求項1記載の通信装置。

【請求項8】 前記記憶制御部は、前記入力部の指示により前記個別キー及び前記短縮キーに対応させた回線接続情報を削除する際、回線接続情報に付加した表示条件を判断し、表示条件が非表示設定ならば、表示設定に変更して前記記憶部に回線接続情報を残し、表示条件が表示設定ならば、設定に係わる全ての情報を前記記憶部から削除することを特徴とする請求項4記載の通信装置。

【請求項9】 前記記憶制御部は、前記入力部の指示により前記通信キーに対応させた通信アプリケーションを削除する際、回線接続情報に付加した表示条件を判断し、表示条件が非表示設定ならば、非表示設定された回線接続情報を前記記憶部に残し、表示条件が表示設定ならば、設定に係わる全ての情報を前記記憶部から削除することを特徴とする請求項5記載の通信装置。

【請求項10】 前記記憶制御部は、前記入力部の前記個別キー、前記短縮キー及び通信キーに対応する回線接続情報を変更する際、前記回線接続情報が履歴と関連するか否かを判断し、履歴と関連するならば、前記回線接続情報の履歴の順位を入れ替え、履歴と関連しないならば、新規の回線接続情報を履歴の順位に設定することを特徴とする請求項4または請求項5記載の通信装置。

【請求項11】 前記記憶制御部は、前記パスワード指定付きの操作者キーに対応する回線接続情報をパスワード無指定の操作者キーの対応に変更する際、前記回線接続情報が前記無指定の操作者キーに対応した回線接続情報と一致する場合、前記パスワード指定付きの操作者キーに対応する回線接続情報の履歴及び頻度情報を前記無指定の操作者キーに対応する回線接続情報の履歴及び頻度に加えて前記記憶部に記憶することを特徴とする請求項7記載の通信装置。

【請求項12】 回線接続部と、入力部と、記憶部と、表示部とを備えた通信装置をコンピュータによって制御するためのプログラムを記憶した媒体であって、前記制御プログラムはコンピュータに、前記入力部の回線接続指示により回線接続情報を前記回線接続部に送信して通話／通信回線を接続させ、前記入力部の設定により表示／非表示の表示条件を付加して前記回線接続情報を履歴及び頻度の項目別に前記記憶部に記憶させ、前記入力部により回線接続情報の検索指示を受け、前記記憶部に記憶された回線接続情報の表示条件を判断し、表示設定された回線接続情報を前記記憶部から読み出して前記項目

別に前記表示部に一覧表示させる通信装置制御プログラムを記憶した媒体。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、電話器／ファクシミリ装置などの端末、パソコン／インターネット機器などの端末との回線接続情報（ダイヤル番号）を選択的に一覧表示する通信装置及び通信装置制御プログラムを記憶した媒体に関する。

【0002】

【従来の技術】従来、電話器／ファクシミリ装置において、相手先に発信するダイヤル番号の操作性を改善した先行技術が知られている。例えば、特公平3-32255号公報によれば、ダイヤルした相手電話番号を記憶して、使用回数を計数記憶し、使用回数順に配列して表示することにより複数の人で一台の電話器を使用する際でも自動ダイヤルを有効に利用することのできる自動ダイヤル装置が提案されている。

【0003】また、特開昭64-7751号公報によれば、複数回、過去にダイヤル発信したダイヤル番号を記憶し、これらの中から所望のダイヤル番号を選択してダイヤル発信部に呼び出して再ダイヤルを可能にしたヒストリー機能付再ダイヤル装置が提案されている。

【0004】また、特開平5-14472号公報によれば、ダイヤル番号を送出した回数毎にカウントして、使用頻度の高いダイヤル番号を自動的に登録し、かつ表示しておき、タッチパネルに操作者が触れることにより発呼を可能とし、短縮ダイヤル機能と同様の機能を有する電話番号学習機能付電話送受信機が提案されている。

【0005】また、特開平7-143219号公報によれば、ワンタッチダイヤルの登録において、一定回数以上の電話接続において、ワンタッチダイヤル登録の要否確認を行い、必要とする相手先電話番号のみを登録し、不要な電話番号がワンタッチダイヤルに登録されないようにする通信装置が提案されている。

【0006】

【発明が解決しようとする課題】上記の先行技術の電話やファクシミリなどの端末は、パソコンやインターネット機器などの端末と装置が異なるために、パソコンやインターネット機器などの端末との電話番号との接続は発生しないので、先行技術の端末が有する電話接続回数順位管理機能や電話接続履歴管理機能は、使用頻度の高いダイヤル番号を検索したり、必要とする相手先電話番号のみを登録できるので有効である。

【0007】しかしながら、近年、通信環境は各種サービスの変化により、パソコンやインターネット機器などの通信端末が発達して、多くのアクセスポイントが各々のサービスに合わせて装置内に設けられている。従って、将来、パソコンからも電話器やファクシミリ装置の通話端末との回線接続が可能となり、電話器やファクシ

ミリ装置の通話端末でもパソコンやインターネット機器の通信端末と回線接続が可能になる状況が生まれつつある。

【0008】一方、交換機側から見れば、電話接続回数順位管理機能や電話履歴管理機能は、通常の電話器やファクシミリ装置の通話端末より、パソコンやインターネット機器の通信端末とのアクセスポイントの方が回線接続回数が多くなり通信環境が変化しつつある。このような通信環境の変化において、上記の特公平3-32255号公報、特開昭64-7751号公報、特開平5-14472号公報に記載されている電話接続回数順位管理機能や電話履歴管理機能は、例えば、通話端末からの回線接続と通信端末からの回線接続情報を予め分類して管理する機能がないため有効に利用できないという状況が発生する。

【0009】また、特開平7-143219号公報によれば、ワンタッチダイヤルの登録に際して一定回数に至ると、登録するか否かの判断が求められるので、その都度、判定して操作する必要があり非常に面倒である。

【0010】本発明は、以上の事情を考慮してなされたものであり、例えば、電話器／ファクシミリ装置の通話端末と接続した回線接続情報や、パソコン／インターネット機器の通話端末と接続した回線接続情報を履歴及び頻度の項目別に記憶部に記憶し、各端末と接続を行う際の回線接続情報を表示して検索する際、各回線接続情報に表示／非表示の表示条件を予め設定して記憶することにより、不必要な回線接続情報は表示することなく、履歴順又は頻度順から使用確率の高い回線接続情報のみを優先して表示することができる通信装置及び通信装置制御プログラムを記憶した媒体を提供するものである。

【0011】

【課題を解決するための手段】本発明は、入力部と、回線接続部と、前記入力部の指示により回線接続情報を前記回線接続部に送信して通話／通信回線を接続する回線接続制御部と、記憶部と、前記入力部の設定により表示／非表示の表示条件を付加して前記回線接続情報を履歴及び頻度の項目別に前記記憶部に記憶する記憶制御部と、表示部と、前記入力部により回線接続情報の検索指示を受け、前記記憶部に記憶された回線接続情報の表示条件を判断し、表示設定された回線接続情報を前記記憶部から読み出して前記項目別に前記表示部に一覧表示する表示制御部とを備えたことを特徴とする通信装置である。

【0012】なお、本発明において、入力部は、キーボード、タブレットなどの入力装置で構成されることが好ましい。回線接続部は、例えば、モデムで構成されることが好ましい。記憶部は、電池でバックアップしたRAM、EEPROMなどの不揮発性RAMで構成されることが好ましい。記憶部には、回線接続情報（電話番号、通信アドレスなど）と、その履歴情報、頻度情報からな

る電話帳が更新記憶することができる。また、前記電話帳を一覧表示する表示データ、入力部のキーに対応したキーデータが記憶される。

【0013】また、記憶部に記憶される電話帳としては、例えば、接続した回線接続情報、接続回数、最終接続日時、入力する操作者（指定無し／操作者A／操作者B）の指定、表示条件（非表示／表示）、登録条件（登録無し／個別登録／短縮登録／通信登録）の項目で構成される。

【0014】表示部は、LCD（液晶ディスプレイ）、PDP（プラズマ・ディスプレイ・パネル）で構成されることが好ましい。また、表示部の画面上にタブレットを一体形成して入力部を画面上で操作するように構成してもよい。

【0015】通常、通話／通信するとき、第1の一覧表示として、現在まで接続した電話番号を履歴順にリストアップした履歴ダイヤル、及び現在まで接続した電話番号の回数順にリストアップしたベストダイヤルを、操作者、表示条件の指定に従って電話帳から読み出し表示部に表示する。また、電話帳を変更／消去するときに、第2の一覧表示して、履歴ダイヤル及びベストダイヤルを、操作者、登録条件の指定に従って電話帳から読み出し表示部に表示する。

【0016】回線接続制御部、記憶制御部、表示制御部は、CPU、ROM、RAM、I/Oポートからなるマイクロコンピュータで構成されることが好ましい。このROMには、CPUが、本発明の回線接続制御部、記憶制御部、表示制御部として機能する制御プログラムが格納されている。

【0017】本発明によれば、電話器／ファクシミリ装置の通話端末と接続した回線接続情報や、パソコン／インターネット機器の通話端末と接続した回線接続情報を履歴及び頻度の項目別に記憶部に記憶し、各端末と接続を行う際の回線接続情報を表示して検索する際、各回線接続情報に表示／非表示の表示条件を予め設定して記憶することにより、不必要な回線接続情報は表示することなく、履歴順又は頻度順から使用確率の高い回線接続情報のみを優先して表示することができる。

【0018】前記記憶制御部は、最新の回線接続情報を先頭にした履歴順及び最も使用回数の多い回線情報を先頭にした頻度順の項目別に前記記憶部に更新記憶し、前記表示制御部は、前記表示条件の設定に従って前記記憶部から前記回線接続情報を前記履歴順及び頻度順の項目別に読み出し前記表示部を一覧表示するよう構成してもよい。

【0019】前記構成によれば、通話／通信するとき、例えば、現在まで接続した回線接続情報（ダイヤル番号）を履歴順にリストアップした履歴ダイヤル、及び現在まで接続した回線接続情報の回数順にリストアップしたベストダイヤルを、表示条件の設定に従っ

て記憶部から読み出し表示部に表示するので、接続する頻度が高い回線接続情報を検索することができる。

【0020】前記記憶制御部は、前記入力部に設けた特定キーに対し特定条件を回線接続情報に付加して前記記憶部に記憶し、前記入力部の特定キーにより回線接続情報の検索指示を受け、前記記憶部に記憶された回線接続情報の特定条件を判断し、非表示設定された回線接続情報も含めて前記記憶部から読み出して前記項目別に前記表示部を一覧表示するよう構成してもよい。

【0021】前記構成によれば、特定キーに対応した回線接続情報は、非表示に設定されていても項目別に表示部を一覧表示することができる。

【0022】前記入力部は、回線接続を個別に指定する個別キー、回線接続を短縮して指定する短縮キーと、前記個別キー及び短縮キーに対応した回線接続情報を確定する登録キーとを備え、前記記憶制御部は、前記個別キー及び短縮キーと対応が確定した回線接続情報に表示／非表示設定の表示条件を付加して前記記憶部に記憶するよう構成してもよい。

【0023】前記構成によれば、個別キー（ワンタッチダイヤルキー）や短縮キー（短縮ダイヤルキー）は、使用頻度が高いが、各回線接続情報によっては、他人に対し非表示する必要がある。予め非表示したい回線接続情報を決めておくことができる。

【0024】前記入力部は、パソコン／インターネット通信を指定する通信キーをさらに備え、前記回線接続制御部は、前記通信キーにより指定されたパソコン／インターネット通信の通信アプリケーションを起動しその通信アプリケーションで発生する回線接続情報を前記回線接続部に送信してパソコン／インターネット通信の通信回線を接続するよう構成してもよい。

【0025】前記構成によれば、通信キーでパソコン通信やインターネット通信を指定すると、通信アプリケーション（通信プログラム）を起動し、その通信アプリケーションで発生する回線接続情報でパソコン通信やインターネット通信のアクセスが可能となる。従って、各通信アプリケーションを起動して回線接続情報を送信する際、改めて回線接続情報を一覧表示する必要はない。

【0026】前記入力部は、操作者を指定する操作者キーをさらに備え、前記記憶制御部は、前記操作者キーに対応する回線接続情報にパスワードを付加して前記記憶部に記憶し、前記表示制御部は、前記操作者キーが入力された際にパスワードを求め、そのパスワードと一致した前記操作者キーに対応する回線接続情報のうち表示設定された回線接続情報を前記項目別に前記表示部を一覧表示するよう構成してもよい。

【0027】前記入力操作部は、操作者を指定する操作者キーをさらに備え、前記記憶制御部は、前記操作者キーに対応する回線接続情報にパスワードを付加して前記記憶部に記憶し、前記表示制御部は、前記操作者キーが

入力された際にパスワードを求め、そのパスワードの一致した前記操作者キーに対応する回線接続情報うち、非表示設定された回線接続情報も含めて前記項目別に前記表示部に一覧表示するよう構成してもよい。

【0028】前記構成によれば、操作者キーとパスワードを入力してパスワードが一致したら、操作者キーに対応する回線接続情報を履歴及び頻度の項目別に表示部に一覧表示することができるので、他の操作者に知られたくない回線接続情報を一台の通信装置に記憶させ、複数の操作者で運用することができる。さらに、非表示設定された回線接続情報も含めて表示部に一覧表示することができるので、操作者に必要な情報を効率的に表示することができる。

【0029】前記記憶制御部は、前記入力部の指示により前記個別キー及び前記短縮キーに対応させた回線接続情報を削除する際、回線接続情報に付加した表示条件を判断し、表示条件が非表示設定ならば、表示設定に変更して前記記憶部に回線接続情報を残し、表示条件が表示設定ならば、設定に係わる全ての情報を前記記憶部から削除するよう構成してもよい。

【0030】前記構成によれば、個別キー（ワンタッチダイヤルキー）や短縮キー（短縮ダイヤルキー）に対応する回線接続情報を削除に伴って回線接続情報に付加した表示条件も変更し、表示条件の設定に係わる全ての情報を消去して再登録することができる。

【0031】前記記憶制御部は、前記入力部の指示により前記通信キーに対応させた通信アプリケーションを削除する際、回線接続情報に付加した表示条件を判断し、表示条件が非表示設定ならば、非表示設定された回線接続情報を前記記憶部に残し、表示条件が表示設定ならば、設定に係わる全ての情報を前記記憶部から削除するよう構成してもよい。

【0032】前記構成によれば、通信キーに対応する通信アプリケーションを削除に伴って、回線接続情報に付加した表示条件も変更し、表示条件の設定に係わる全ての情報を消去して再登録することができる。

【0033】前記記憶制御部は、前記入力部の前記個別キー、前記短縮キー及び通信キーに対応する回線接続情報を変更する際、前記回線接続情報が履歴と関連するか否かを判断し、履歴と関連するならば、前記回線接続情報の履歴の順位を入れ替え、履歴と関連しないならば、新規の回線接続情報を履歴の順位に設定するよう構成してもよい。

【0034】前記構成によれば、回線接続情報を変更に伴って、過去の履歴情報を引き継いで回線接続情報を管理することができるので、回線接続を行う場合、この履歴情報から確率の高い回線接続情報を優先して表示することができる。

【0035】前記記憶制御部は、前記パスワード指定付きの操作者キーに対応する回線接続情報をパスワード無

指定の操作者キーの対応に変更する際、前記回線接続情報が前記無指定の操作者キーに対応した回線接続情報と一致する場合、前記パスワード指定付きの操作者キーに対応する回線接続情報の履歴及び頻度情報を前記無指定の操作者キーに対応する回線接続情報の履歴及び頻度に加えて前記記憶部に記憶するよう構成してもよい。

【0036】前記構成によれば、例えば、機密保持が不要になった回線接続情報に対応するパスワード指定付きの操作者キーを、パスワード無指定の操作者キーに変更する際、パスワード指定付きの回線接続情報と、パスワード無指定の操作者キーの回線接続情報が一致するとき、現在の無指定の操作者キーに対応する回線接続情報の履歴及び頻度情報に、パスワード指定付きの操作者キーの回線接続情報の履歴及び頻度情報を加えて、新たな無指定キーの履歴及び頻度情報とすることができる。従って、パスワード無指定の操作者キーに対応する回線接続情報を検索するとき、この履歴及び頻度情報から確率の高い回線接続情報を優先して表示することができる。

【0037】

【発明の実施の形態】以下、図に示す実施例に基づいて本発明を詳述する。なお、これによって本発明は限定されるものではない。

【0038】図1は本発明の一実施例である通信装置のハード構成を示すブロック図である。図1において、1は本発明の通信装置の制御を司るCPUであり、CPU、ROM、RAM、I/OポートからなるマイクロコンピュータのCPUが用いられる。2はCPU1を起動させる制御プログラム、固定データなどを格納しているROMであり、マイクロコンピュータのROMが用いられる。3は電池でバックアップしたRAM、EEPROMで構成されるRAM（記憶部）であり、回線接続情報の履歴情報、頻度情報などの登録領域として機能する。また、このRAM3は、外部記憶媒体に記憶されたプログラムをインストールして、CPU1が制御プログラムを動作させる領域を備えている。

【0039】4はCD-ROMやフロッピーディスク（FD）などで構成される外部記憶媒体である。5は媒体読取装置であり、外部記憶媒体4に記憶された本発明のプログラムをRAM3にロードして実行可能にするプログラム入力部として機能する。小規模の装置では、本発明のプログラムは、ROM2に格納されているが、通信装置がパソコンなどの汎用機の場合には、通信管理プログラムとして外部記憶媒体4から媒体読取装置5を介してRAM3にプログラムをインストールして実行する。

【0040】6は回線接続部であり、例えば、送受信する通信信号を変調／復調するモデム（変復調回線）、公衆電話回線と接続する電氣的接続回路、PHSや携帯電話などの電話回線を接続する無線送受信回路などで構成される。7は受話器（ハンドセット）であり、電話接続

の場合の送受信口に当たる。

【0041】8はLCDディスプレイ、プラズマディスプレイなどの表示装置で構成される表示部であり、回線接続情報（電話番号、通信アドレス）及びその履歴情報や頻度情報からなる電話帳、操作アイコンなどを表示する。9はキーボード、タブレットで構成される入力部であり、キー入力、回線接続情報の検索指示、電話接続及びインターネット接続の指示をする。13は、操作性と小型化を実現するため、表示部8のディスプレイ上に入力部9のタブレットを一体形成した操作入力部として構成してもよい。

【0042】10は時計回路（RTC）で構成される時刻管理部であり、例えば、回線接続情報の履歴を管理する。11は通信プログラム、通信用CPUなどで構成される回線接続制御部であり、例えば、入力部9の回線接続指示により回線接続情報を回線接続部6に送信して公衆電話回線やインターネット回線と接続するようを制御する。12は回線接続部6に接続される電話器／ファクシミリ装置であり、回線接続制御部11の制御により、公衆電話回線と接続される。パソコン通信／インターネット通信時には回線接続部6に接続していなくてもよい。14はバスラインであり、CPU1がバスライン14を介してROM2の制御プログラムにより各部を制御する。

【0043】本実施例のCPU1は、入力部9の設定により表示／非表示の表示条件を付加して回線接続情報を履歴及び頻度の項目別にRAM3（記憶部）に記憶する記憶制御部、入力部9により回線接続情報の検索指示を受けた際、RAM3に記憶された回線接続情報の表示条件を判断し、表示設定された回線接続情報をRAM3から読み出して履歴及び頻度の項目別に表示部8に一覧表示する表示制御部として機能する。

【0044】本実施例では、電話器／ファクシミリ装置12が回線接続部6の後段接続口に接続されている場合、電話器／ファクシミリ装置12からの発呼動作の回線接続情報を公衆電話回線側に送信すると同時に、発呼情報を回線接続情報としてRAM3に取り込み、回線接続情報の履歴情報、頻度情報を表示部8に一覧表示して活用する。本実施例の通信装置は情報処理装置として機能する。

【0045】図1において、本発明によれば、回線接続部6と、入力部9と、記憶部3と、表示部8とを備えた通信装置をコンピュータ1によって制御するためのプログラムを記憶した媒体4であって、前記制御プログラムはコンピュータ1に、前記入力部9の回線接続指示により回線接続情報を前記回線接続部6に送信して通話／通信回線を接続させ、前記入力部9の設定により表示／非表示の表示条件を付加して前記回線接続情報を履歴及び頻度の項目別に前記記憶部3に記憶させ、前記入力部により回線接続情報の検索指示を受け、前記記憶部3に記憶された回線接続情報の表示条件を判断し、表示設定さ

れた回線接続情報を前記記憶部3から読み出して前記項目別に前記表示部8に一覧表示させる通信装置制御プログラムを記憶した媒体4が提供される。

【0046】図2は図1の操作入力部の操作画面を示す図である。図2において、DISP1は、履歴順表示や回数順表示を行う領域である。DISP2は、現在接続の電話番号を表示する領域である。ダイヤルKEYは、「0」、「1」、「2」、「3」、「4」、「5」、「6」、「7」、「8」、「9」、「\*」、「#」の各KEYからなり、電話番号入力用の操作ボタンである。F1からF11の各KEYは、以下に示す各機能を持つ操作ボタンである。

【0047】F1は主に接続する代表電話番号の第1番目をワンタッチでダイヤルする個別登録1KEYである。F2は主に接続する代表電話番号の第2番目をワンタッチでダイヤルするワンタッチダイヤル用の個別登録2KEYである。F3は主に接続する代表電話番号の第3番目をワンタッチでダイヤルするワンタッチダイヤル用の個別登録3KEYである。F4は短縮登録指示KEYであり、このF4KEYをタッチした後、事前に登録している短縮番号をダイヤルKEYで2桁入力することで接続電話番号に置き換えてダイヤルすることが可能となる。

【0048】F5はパソコン通信を行う場合の通信アプリケーションを開始するKEYであり、パソコン通信先へのダイヤル発信は、この通信アプリケーションの中で行われる。F6はインターネット接続を行う場合の通信アプリケーションを開始するKEYであり、インターネット接続先へのダイヤル発信は、この通信アプリケーションの中で行われる。F7は各種KEYへの設定情報の登録、及び接続情報の非表示登録を行う場合の最初に指示する操作KEYである。F7KEYのタッチ後の操作によっては、他に表示条件、登録条件の表示も可能となる。

【0049】F8はDISP1の接続時間順（履歴順）／接続回数順（回数順）の表示を交互に切り替える表示切替指示KEYである。DISP1の冒頭には、F8KEYで指示される接続時間順／接続回数順の何れかを示す表示が行われ、順位、電話番号、回数、最終接続日時の項目が表示され、順位の1位から10位までの情報が表示される。回線接続の場合には、各々の順位の何れかの領域をタッチするとタブレットが機能して、表示している電話番号、または接続先が示す電話番号の送出して回線を接続する。

【0050】F9は操作者未指定（解除）のKEYである。F10は操作者（A）を指定するKEYである。F11は操作者（B）を指定するKEYである。

【0051】図3は本実施例の回線接続履歴情報管理登録部の登録内容を示す図である。図3に示す回線接続履歴情報管理登録部は、図1のRAM3の領域内に構成さ

れ、その管理情報は、接続電話番号、接続回数、最終接続日時及び時間、操作者、表示条件、及び登録条件の各情報からなり、RAMのメモリ用量が許す限り多くの件数を登録することが可能である。ここでは、操作者が異なれば同じ接続電話番号でも異なって登録される。

【0052】図4は本実施例の操作者情報管理登録部の登録内容を示す図である。図4に示す操作者情報管理登録部は、図1のRAM3の領域内に構成され、操作者のパスワードを管理している。操作者毎の短縮番号は、図3の回線接続履歴情報管理登録部のどの行NO.に対象情報が登録されているかを示し、ここには、詳細な電話番号は重複して登録されない。

【0053】図5は図1の外部記憶媒体に格納されたプログラムのRAMへのインストール処理を示す図である。図5に示すように、外部記憶媒体4に格納されている通信/通話制御プログラムや通信/通話情報管理プログラムが、媒体読取装置5を介して装置側記憶部であるRAM3にインストール（入力）されて、RAM3の中で、通信/通話制御プログラムや通信/通話情報管理プログラムによって、新たに情報管理登録領域が発生して、図3、図4に示す各情報管理登録部として運用される。

【0054】ここで、通信/通話制御プログラムとは、電話やFAX、およびパソコン通信やインターネットの各種通信アプリケーションを示し、通信/通話情報管理プログラムは、図3、図4の各情報管理登録部で運用管理するプログラムを示している。これらのプログラムを外部記憶媒体4からインストールすることにより、本発明の機能を実現する。なお、ROM2に前記プログラムが格納されている場合、外部記憶媒体は特に必要とはしない。

【0055】図6は本実施例の回線接続履歴情報及び操作者情報の登録操作の手順を示す説明図である。図6において、本発明を機能するためには、図2のF1～F11KEYの操作ボタンによって、図3の回線接続履歴情報管理登録部、図4の操作者情報管理登録部に登録する情報を管理する。

【0056】図6において、「登録」は図2の登録KEY（F7）を示す。「無指定」は図2の無指定KEY（F9）を示す。「操作者A」は、図2の操作者AKEY（F10）を示す。「操作者B」は、図2の操作者BKEY（F11）を示す。「個別1」は、図2の個別1KEY（F1）を示す。「個別2」は、図2の個別2KEY（F2）を示す。「個別3」は、図2の個別3KEY（F3）を示す。

【0057】「短縮nn」は、図2の短縮nnKEY（F4）を示す。「nn入力」は、図2のダイヤルKEYの2桁の数字入力を示す。「表示切替」は、図2の表示切替KEY（F8）を示す。「項目指定」は、図2のDISP1中の表示項目を示す。「電話番号入力」また

は「表示入力条件」は、ダイヤルKEYによる入力データを示す。この登録操作の手順は、図8のフローチャートを用いて後述する。

【0058】図7は本発明の通信装置の全体動作を示すメインフローチャートである。図7において、図2の操作入出力部に履歴の表示を実施する際、操作者指定がされている場合は、その操作者の情報を、操作者指定がされていない場合は、操作者無指定の情報を図2のDISP1に表示する。「操作者A」のKEYが入力されると（S7-1）、操作者Aのパスワードの確認を行い（S7-3）、一致すれば、操作者Aの情報を抽出し（S7-4）、「操作者B」のKEYが入力されると（S7-2）、操作者Bのパスワードの確認を行い（S7-5）、一致すれば、操作者Bの情報の抽出を行う（S7-6）。

【0059】そして、操作者A、操作者B以外の状態の場合、つまり「無指定」KEYが入力されている場合、無指定の情報の抽出を行う（S7-7）。S7-3やS7-5において、パスワードが不一致の場合も無指定と判断して無指定の情報の抽出を行う（S7-7）。

【0060】図11は図7のS7-3及びS7-5のパスワード確認処理の手順を示すサブフローチャートである。図11において、操作者A、Bの登録情報の確認を行い（S11-1）、登録がない場合は、操作者受入OK（一致と合格）として、改めてパスワードの一致確認を行わないでS11-4に進み、登録がある場合（S11-1）、パスワードを入力する（S11-2）。このパスワードの対象は、図4に示す各操作者が事前に登録しているパスワード情報欄で管理する。S11-2でのパスワード入力は、図2のダイヤルKEYで行い、一致すれば（S11-3）、OKと判断してS11-4に進み、不一致の場合には、S11-5に進む。

【0061】図11において、S11-4の処理に進んだ場合、図7のS7-3では、S7-4に進み、S7-5ではS7-6に進む。また、図11において、S11-5の処理に進んだ場合、図7のS7-3では、S7-2に進み、S7-5ではS7-7に進む。これによって、操作者自信であることの確認ができた場合のみ、S7-4、またはS7-6において、その操作者の情報が抽出される。S7-4、S7-6、S7-7での情報抽出とは、図3の回線接続履歴情報管理登録部に登録された操作者情報において、目的の操作者の行の情報のみを表示対象にすることを意味している。

【0062】図3に示す操作者欄には、操作者Aの場合には「1」、操作者Bの場合には「2」、指定がない場合（無指定KEY指定又はパスワードが不一致も含む）は「0」で管理されている。

【0063】図7に示すS7-4、S7-6、S7-7の各処理において、情報抽出されたならば、履歴表示フラグを見る（S7-8）。この履歴表示フラグは、図2



の表示切替KEYで切り替えられるRAM3の領域内に設けたフラグであり、その切り替えられた内容が、接続時間順と判断される場合(例えば、フラグ=0)は、接続時間順データを作成して表示する(S7-9)。また、そのトグルされた内容が、接続回数順と判断される場合(例えば、フラグ=1)は、接続回数順データを作成して表示される(S7-20)。

【0064】図12は図7のS7-9の接続時間順データ作成処理の手順を示すサブフローチャートである。図12において、先の操作者毎の情報抽出した回線接続履歴情報管理登録部の情報から、さらに、表示条件=1の情報を抽出して(S12-1)、それを最近の接続時間順に並び替える(S12-2)。そして上位情報を図2のDISP1に表示する(S12-3)。接続時間情報は、図3の最終接続日時の項目に記録される情報であり、図1の時刻管理部10から通信/通話接続活用時に自動的に更新される。図2のDISP1は、1位から10位までが表示される。

【0065】図13は図7のS7-20の接続回数順データ作成処理の手順を示すサブフローチャートである。図13において、先の操作者毎の情報抽出した回線接続履歴情報管理登録部の情報から、表示条件=1の情報を抽出して(S13-1)、それを接続回数の多い順に並び替える(S13-2)。そして上位情報を図2のDISP1に表示する(S13-3)。接続回数情報は図3の接続回数の項目に記録される情報であって、通信/通話接続活用時に自動的に更新される。図2のDISP1は1位から10位までが表示される。

【0066】さて、図7のS7-9及びS7-20において、操作者の目的データを、図2のDISP1に表示することができる。そして、表示内容の変更は、S7-11において、表示切替KEY(図2のF8)を入力することにより、表示切替フラグを反転させて再度S7-8で表示を目的データに合合わせることができる。

【0067】その上で通信/通話の操作を行うか否かを求めたり(S7-10~S7-16)、各種登録の作業を行うか否かを求めたり(S7-17)、電話着信か否かの確認をして(S7-18)、S7-10~S7-18の処理が、一定時間経過している場合(S7-19)、S7-7に戻り、無指定情報での表示に切り替え、一定時間内の場合(S7-19)、S7-8に戻り、表示データの変更(表示切替フラグ確認)を行う。

【0068】S7-11において、個別KEY(図2のF1、F2、F3)の何れかが指示されると、対象の電話番号を抽出して(S7-22)、ダイヤル送出行い(S7-23)、S7-12において、短縮nnKEY(図2のF4)が指示されると、2桁の番号をダイヤルKEYから入力を行い、図4の操作者情報管理登録部に登録されているか否かの判断を行い(S7-21)、正しく登録されている場合、対象の電話番号を抽出して

(S7-22)、ダイヤル送出行い(S7-23)。

【0069】S7-21において、正しく登録されていない場合は、S7-13に進み、ダイヤルを入力する。S7-22の登録電話番号抽出は、図2のF1、F2、F3の各個別KEYの場合、図4に示す個別登録1、2、3に合わせた各操作者情報が、図3の何れの行NO.に登録されているかを確認して、その行の接続電話番号を対象としてその電話番号を抽出し、通信回線へ送出する。

【0070】短縮nnKEY(図2のF4)の場合にも、図4より各々の短縮登録nnに合わせた各々の操作者情報が、図3の何れの行NO.に登録されているかを確認して、その行の接続電話番号を対象としてその電話番号を抽出し通信回線へ送出する。そして、S7-23において、図9に示すダイヤル送出行い処理のサブフローチャートへ進む。

【0071】もし、S7-12において、短縮nnKEYの入力がない場合には、ダイレクトにダイヤル入力があるか否かの判断を持ち(S7-13)、ここで、通信回線へ直接電話番号が送出される場合や、S7-14において、図1の電話やFAX12(後段端末)でダイヤル入力が行われた場合(この場合は後段からの回線使用状況を監視することで可能)などは、そのダイヤル送出行い確認を持ってS7-23で図9のフローチャートへ進む。

【0072】図9は図7のS7-23のダイヤル送出行い処理の手順を示すサブフローチャートである。図9において、先のS7-22で抽出された電話番号、若しくはダイヤルの送出行い(S9-1)、相手との回線接続が有効になった場合は、そのときの操作者指定の確認を行行(S9-2)。この操作者指定は、先の図7のS7-4やS7-6において処理した情報抽出の条件を見れば確認できる。そして、操作者Aで電話が接続された場合には、操作者Aの現在接続中の電話番号の履歴情報の接続回数のカウントを+1する(S9-3)。

【0073】そして、操作者Bで電話が接続された場合には、操作者Bの現在接続中の電話番号の履歴情報の接続回数のカウントを+1する(S9-4)。そして、操作者が無指定で電話が接続された場合には、無指定の現在接続中の電話番号の履歴情報の接続回数のカウントを+1する(S9-5)。各々、対象電話番号が履歴情報の中に入らない場合には初めての接続情報として、それに見合う情報を新たに追加する。

【0074】このとき、図3の接続電話番号欄には、現在接続中の電話番号を登録し、接続回数は1を登録し、最終接続日時は現在の時間を登録し、操作者は現在の操作者情報を登録し、表示条件は通信/通話中に操作者A若しくは操作者BのKEYが入力されると「0」を登録して、何ら指示が無いと「1」を表示条件として登録する。そして登録条件が新たな場合には「0」として登録

する（新たでない場合には既に登録されているから変更しない）。

【0075】このように処理することで、ダイヤル送出される情報は改めて更新が可能となる。これらS9-3、S9-4、S9-5の処理が終われば、S9-6にて履歴の表示に移り、図7のS7-1に戻る。図7のS7-15とS7-16において、パソコン通信やインターネット接続の場合の処理を示している。パソコン通信の場合には、図2のF5KEYを入力し（S7-15）、パソコン通信のアプリケーションプログラムを実行する（S7-25）。

【0076】そしてインターネットの場合には、図2のF6KEYを入力し（S7-16）インターネットのアプリケーションプログラムを実行する（S7-24）。各々のアプリケーションプログラムの実行内容は、ここでは触れないが、各々のアプリケーションプログラムの中で発生する各々のアクセスポイントに向けた電話接続情報は、改めて図3の回線接続履歴情報管理登録部の領域内には登録を行わない。よってDISP1の表示部に表示されることは無い。

【0077】しかしながら、各々のアプリケーションプログラムの中で接続回数のみをカウントすることは求めるならば可能としている。この場合には、図3の回線接続履歴情報管理登録部に、先に接続電話番号（アクセスポイント）を登録して、表示条件を非表示=0にして、かつ登録条件を通信登録=3にしておく必要がある。

【0078】図3の回線接続履歴情報管理登録内容の確認は通常の履歴表示ではなく、登録内容の確認画面で行う。これによって、本発明のアクセスポイントは非表示にして管理することが可能となる。また、S7-15、S7-16において、パソコン通信やインターネット接続でない場合には、図2のF7の登録KEYの入力確認を行い（S7-17）、登録KEYが入力されると、登録作業に入る（S7-27）。

【0079】そして、登録KEYが入力されていないと、通信回線先の相手から電話着信が有るか否かの確認を行い（S7-18）、電話着信があれば（S7-26）、図10のS10-1に進む。電話着信がなければ、一定時間経過の判断に合わせて後の動作が決まる（S7-19）。

【0080】図10は図7のS7-26の電話着信処理の手順を示すサブフローチャートである。図10において、相手から送出される電話番号情報、図2のDISP1に表示される情報から相手を選択して相手を特定する（S10-1）。相手が特定された場合には、そのときの操作者を確認して（S10-2）、S10-3、S10-4、S10-5の処理を行う。

【0081】S10-1において、相手が不特定の場合には何も管理せずに、図7のS7-1へ戻る。S10-2の操作者確認は、図2のF9、F10、F11KEY

入力により指示する。そして、操作者Aで電話が接続された場合には、操作者Aの現在接続中の電話番号の履歴情報の接続回数のカウントを+1する（S10-3）。そして、操作者Bで電話が接続された場合には、操作者Bの現在接続中の電話番号の履歴情報の接続回数のカウントを+1する（S10-4）。そして、操作者が無指定で電話が接続された場合には、無指定の現在接続中の電話番号の履歴情報の接続回数のカウントを+1する（S10-5）。これらS10-3、S10-4、S10-5の処理が終われば、履歴の表示に移り、図7のS7-1に戻る。

【0082】ここで、登録時のDISP1の表示は履歴の表示である図2の順位、電話番号、回数、最終接続日時、の替わりに図3の通信接続履歴情報管理登録部の項目であるところ該当操作者の情報のみを抽出して、そのNO.と接続時間番号、接続回数、最終接続日時、表示条件、登録条件のすべてが表示される。この場合のDISP1の縦横画面スクロールは、画面上で指またはペンを、上下または左右に動かす入力情報の軌跡に基づいて行われ、図3の全領域より小さい表示であるDISP1で確認可能となる。そして、各々の指定領域を選択入力することで、対象領域を決めて、ダイヤルKEYから目的情報の入力が可能となる。

【0083】図8は図7のS7-27の登録操作処理の手順を示すサブフローチャートである。図8のフローチャートを、図6を用いて説明する。登録操作は、図7のS7-17において、登録KEYが入力されることにより、図8のフローチャートに入り、次のKEY入力の判断を待つ（S8-1）。ここで、無指定と操作者A、操作者Bの判断を行う。「無指定」の場合には「登録」KEYの直後、「個別1」、「個別2」、「個別3」、「短縮nn」、「表示切替」のKEYが入力された場合にも「無指定」KEYが入力されたものとして次の動作に移る。

【0084】つまり、「操作者A」の入力の場合には、S8-1からS8-3に移り、S8-5に進む。「操作者B」の入力の場合には、S8-1からS8-4に移り、S8-23に進む。そして、「個別1」、「個別2」、「個別3」、「短縮nn」、「表示切替」KEYの場合には、S8-1からS8-2に移りS8-18に進む。しかし、それ以外の場合には「登録」KEYは無効と判断して、図7の履歴の表示に戻りS7-1に進む。

【0085】ここで、「無指定」の場合で考えると、図3の回線接続履歴情報管理登録部から操作者指定無し=0の無指定情報を抽出して（S8-18）、「個別1」、「個別2」、「個別3」、「短縮nn」、「表示切替」の入力KEYを確認し（S8-19）、「個別1」の場合には、個別1の情報入力を行う（S8-11）。個別1の情報入力とは、「個別1」KEYが入力

された後のダイヤル入力情報を、図3の一覧の中で検索して、もし操作者指定無しの中で登録が有れば、その行の登録条件を個別登録の「1」に設定して、図4の操作者情報管理登録部の指定無しの個別登録1に、その行NO.を登録する。

【0086】図3及び図4では行NO. = 1が登録された状態を示している。「個別2」の場合、「個別3」の場合も、図4の個別登録先が異なるだけで登録方法は同じである。「短縮nn」の場合は、電話番号入力の前に短縮登録番号2桁を先に入力するのが異なるのみで、基本的には個別1～3の場合と同じである。

【0087】このとき、図8のフローチャートでは、詳細に説明してないが、図3の回線接続履歴情報管理登録部（電話帳）に対して、これら個別1～3及び短縮nnのデータを削除するときには、電話帳から通信接続情報を削除するか残すかの判断をDISP1へウインドウ表示で問いかけ、判断と関係なく、S8-16で、「登録」KEYが入力されると、その通信接続履歴情報は残して、非表示設定がされていれば、表示設定に自動で変更をする。

【0088】そして、改めて削除の指示があれば、その回線接続履歴情報は全て削除する。また、残す指示があれば、改めて非表示要否の判断を同じくウインドウ表示で問いかけ、それに合わせて、その回線接続履歴情報の表示をするか否かの設定を行う。そして、S8-16で、「登録」KEYが押されて確定する（図8のフローチャートに示していない操作例1）。

【0089】それとは別に、「表示切替」KEYの場合には、必要な行へカーソルを移動して、その行の表示条件を非表示の場合には「0」、表示の場合には「1」を入力することにより、図3の回線接続履歴情報管理登録部を書き換えることが可能となる。そして、S8-16で、再度「登録」KEYを入力をすることで確定してよいと判断し、S8-17で、図3及び図4のデータを更新して、図7のS7-1へ進む。

【0090】また、「登録」KEYが入力されない場合には、ここまでの登録情報は無効としてデータ更新は行わずに図7のS7-1へ進む。「操作者A」の場合、「操作者B」の場合は、これら作業の前にパスワードの登録及び確認作業が発生するが、他は同じである。つまり、「操作者A」の場合には、S8-5で、パスワード登録されているか否かを判断するが、この判断は図4の操作者Aのパスワードが登録されているかを見ることで可能となる。

【0091】今、既にパスワードが登録されている場合には、S8-20で、パスワードを入力して、S8-21で、不一致の場合には、受け付けず登録の操作を中止して、図7のS7-1へ進む。S8-21で、一致の場合には、パスワードの変更をするか否かを問い、変更があれば、S8-7で、次のパスワードを入力してパスワ

ードの書き換えを行い、S8-8へ進む。S8-22で、パスワードの変更を行わない場合には、S8-8へ進み、他の情報を入力するか否かの確認を行い、他の情報を入力する場合には、S8-9へ進み、操作者Aの情報を抽出して、S8-10で、次のKEY入力を待って、「個別1」から「表示切替」KEYの入力を待って、S8-11からS8-15の情報入力に移る。

【0092】そして、S8-8で、他の入力が無い場合には、図7のS7-1へ進む。S8-9の操作者Aの情報抽出は、図3の回線接続履歴情報管理登録部から操作者Aの情報のみを抽出する。操作者Bの場合は、S8-4からS8-23～S8-31の処理を行い、その詳細は、操作者AのS8-3からS8-5～S8-10及びS8-20～S8-22と同じであり、操作者Aが操作者Bに置き換わっただけで他は同じであるので説明は省略する。

【0093】このように処理することで、図3の回線接続履歴情報管理登録部の内容は、必要に応じて削除、変更が可能となり、その登録情報の状態に応じてDISP1の接続時間順、接続回数順の表示対象を目的に合わせて管理することが可能となる。なお、パソコン通信やインターネットのアプリケーションの中で通信接続情報が削除された場合には、DISP1で回線接続履歴情報（電話帳の情報）を削除するか否かの要否をウインドウで表示して求め、削除すると判断される場合にはその設定に関するすべての回線接続履歴情報を削除し、残す場合には非表示設定の状態でも回線接続履歴情報は残す（図8のフローチャートに示していない操作例2）。

【0094】また、上記操作例1と操作例2の場合に、削除でなく変更の場合には、改めて新たな電話番号と差し替えるが、電話番号を入力した時に新規か置換かの判断をDISP1へウインドウ表示で求め、新規の場合には従来の情報の登録条件は登録なし=0として新たな情報の行を回線接続履歴情報に追加し、置換の場合には従来の情報の登録条件の場所の電話番号を置換する。

【0095】そして、図8のS8-11、S8-12、S8-13、S8-14、S8-15などの情報入力画面で操作者指定が削除された場合には、無指定者の回線接続履歴情報の中に同じ情報が有るか否かの検索を行い、有る場合には、その操作者の接続回数と無指定者の接続回数とし、操作者の最終接続日時と無指定者の最終接続日時の最近の最終接続日時を無指定者の最終接続日時として、操作者回線履歴情報は削除する。

【0096】このように処理することで、図3の回線接続履歴情報管理登録部の内容は、必要に応じて削除、変更が可能となり、その登録情報の状態に応じてDISP1の接続時間順、接続回数順の表示対象を目的に合わせて管理が可能となる。

【0097】

【発明の効果】本発明によれば、電話器/ファクシミリ

装置の通話端末と接続した回線接続情報や、パソコン／インターネット機器の通信端末と接続した回線接続情報を履歴及び頻度の項目別に記憶部に記憶し、各端末と接続を行う際の回線接続情報を表示して検索する際、各回線接続情報に表示／非表示の表示条件を予め設定して記憶することにより、不必要な回線接続情報は表示することなく、履歴順又は頻度順から使用確率の高い回線接続情報のみを優先して表示することができる。

【図面の簡単な説明】

- 【図1】本発明の一実施例である通信装置のハード構成を示すブロック図である。
- 【図2】図1の操作入力部の操作画面を示す図である。
- 【図3】本実施例の回線接続履歴情報管理登録部の登録内容を示す図である。
- 【図4】本実施例の操作者情報管理登録部の登録内容を示す図である。
- 【図5】図1の外部記憶媒体に格納されたプログラムのRAMへのインストール処理を示す図である。
- 【図6】本実施例の登録操作の手順を示す説明図である。
- 【図7】本発明の通信装置の全体動作を示すメインフローチャートである。
- 【図8】図7のS7-27の登録操作処理の手順を示すサブフローチャートである。
- 【図9】図7のS7-23のダイヤル送出処理の手順を示すサブフローチャートである。
- 【図10】図7のS7-26の電話着信処理の手順を示すサブフローチャートである。
- 【図11】図7のS71-3及びS7-5のパスワード確認処理の手順を示すサブフローチャートである。

【図12】図7のS7-9の接続時間順データ作成処理の手順を示すサブフローチャートである。

【図13】図7のS7-20の接続回数順データ作成処理の手順を示すサブフローチャートである。

【符号の説明】

- 1 CPU
- 2 ROM
- 3 RAM（記憶部）
- 4 外部記憶媒体
- 5 媒体読取装置
- 6 回線接続部
- 7 受話器
- 8 表示部
- 9 入力操作部
- 10 時刻管理部
- 11 回線接続制御部
- 12 外付け電話/FAX
- 13 操作入力部
- 14 バスライン
- DISP1 履歴／接続順表示部
- DISP2 現在接続番号表示部
- F1、F2、F3 「個別」操作KEY
- F4 「短縮」操作KEY
- F5 「パソコン通信」起動KEY
- F6 「インターネット」起動KEY
- F7 「登録」KEY
- F8 「表示切替」KEY
- F9 「無指定」KEY
- F10 「操作者A」KEY
- F11 「操作者B」KEY

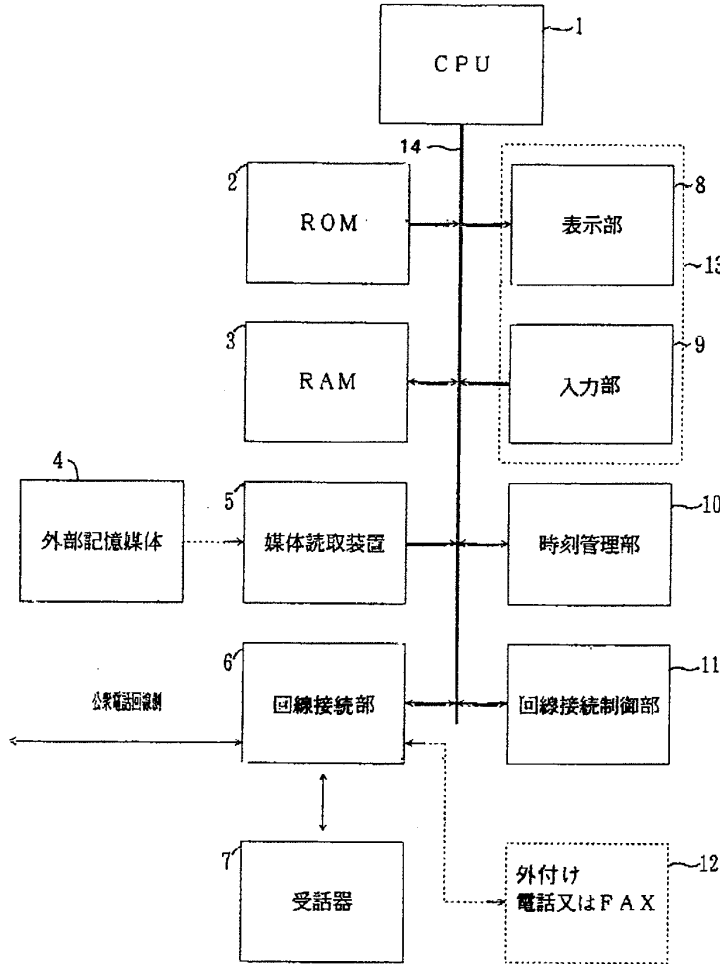
【図3】

NO	接続電話番号	接続回数	最終接続日時	登録条件		
				操作者	表示条件	登録条件
1	07435-3-xxxx	15	1997/05/30-11:23:03	0	0	1
2						
3	07443-2-xxxx	20	1997/04/20-08:00:32	1	1	2
4						
5						
n-4	0878-65-xxxx	3	1997/01/15-13:20:11	2	0	0
n-3						
n-2	07442-2-xxxx	38	1997/06/03-09:21:34	0	0	3
n-1						
n						

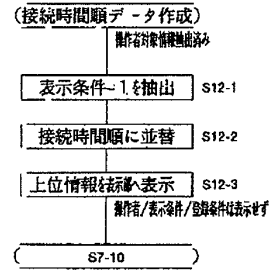
【図4】

	指定無し	操作者A	操作者B
個別登録1	NO-1		
個別登録2			
個別登録3			
短縮登録1			
短縮登録02		NO-3	
短縮登録09			
パスワード	-----	*****	*****

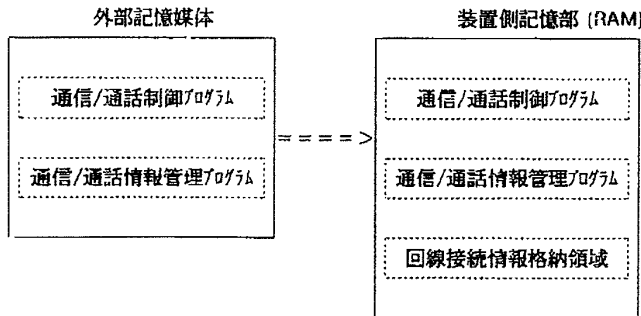
【図1】



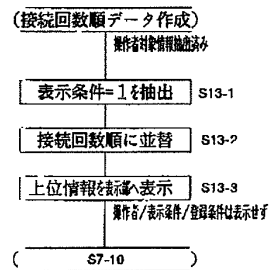
【図12】



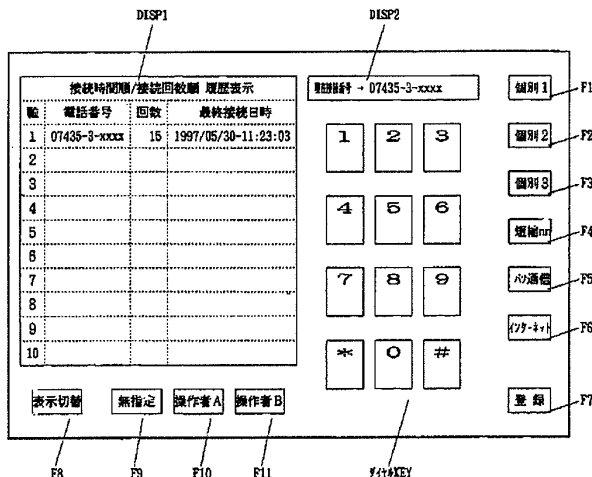
【図5】



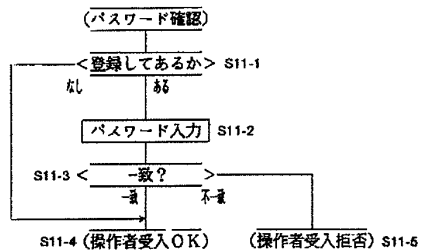
【図13】



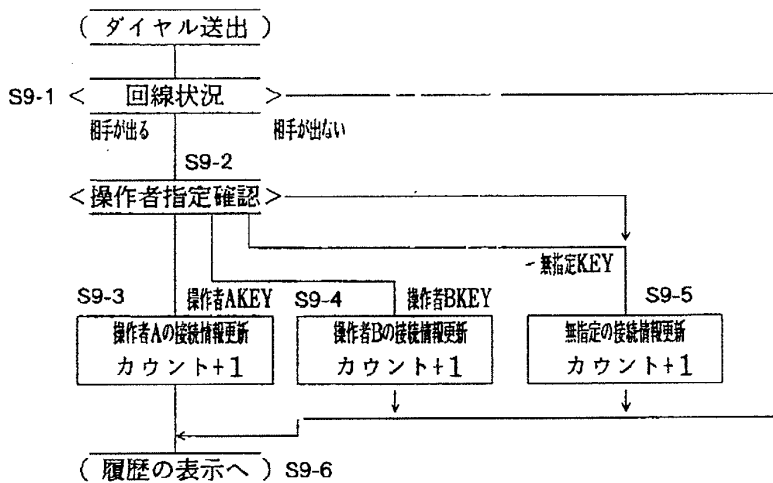
【図2】



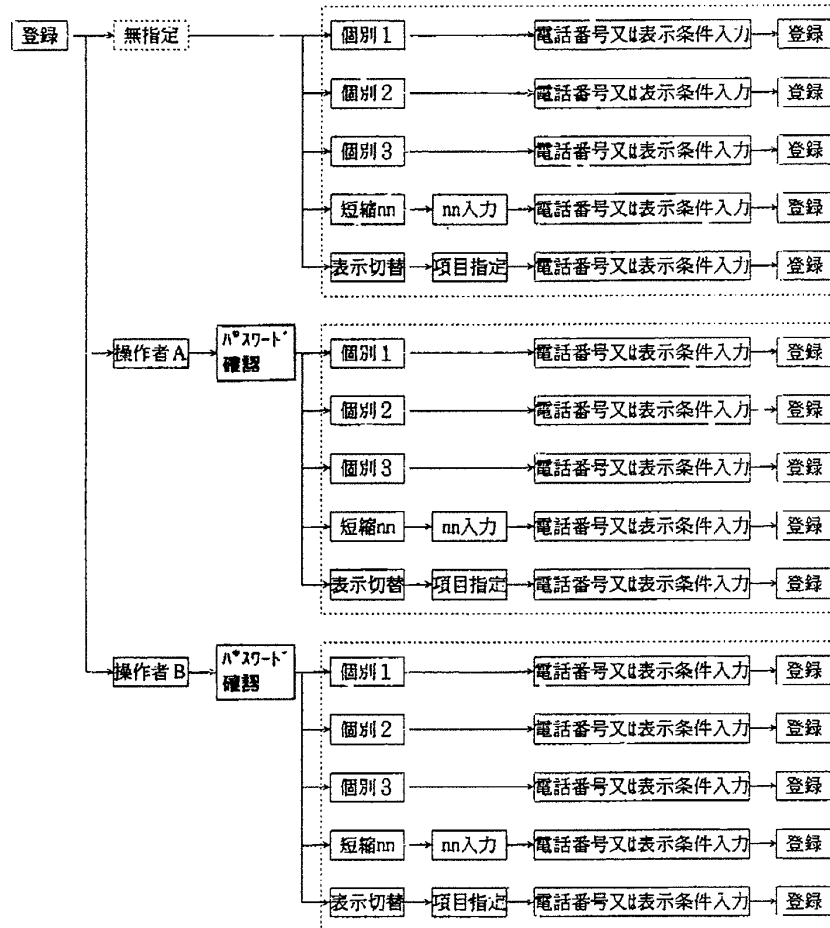
【図11】



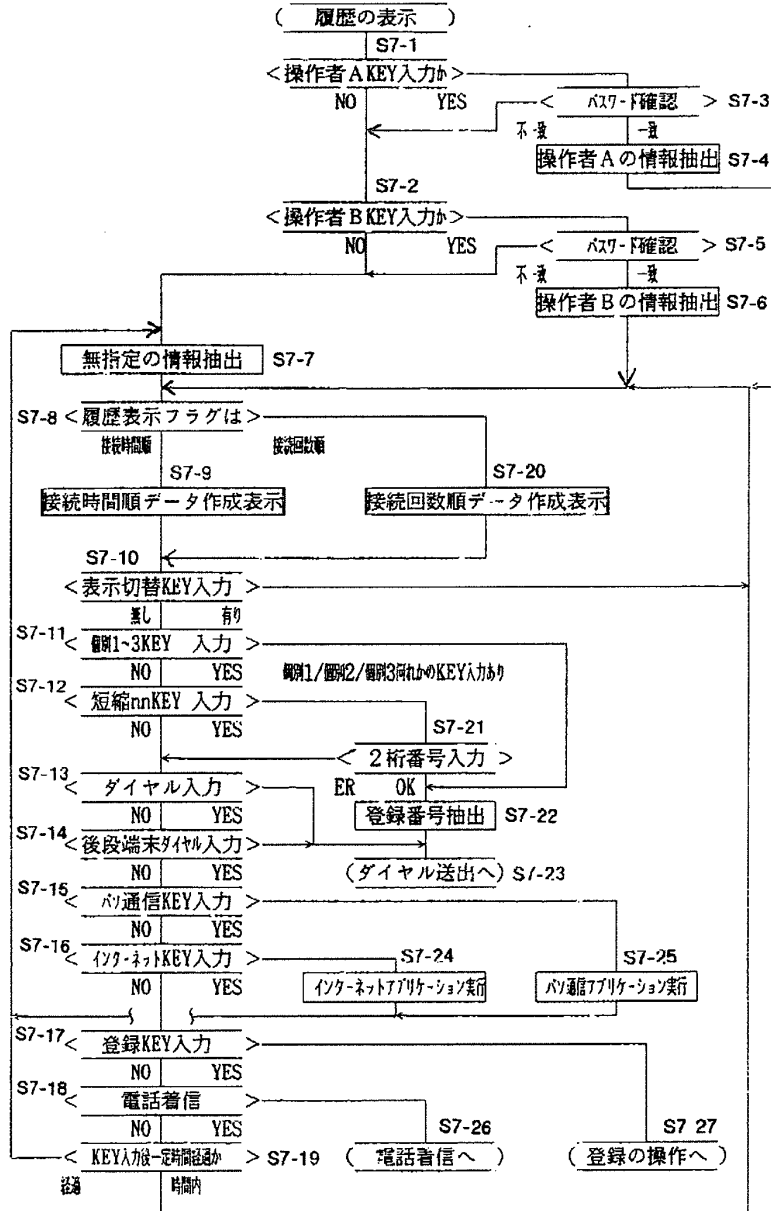
【図9】



【図6】

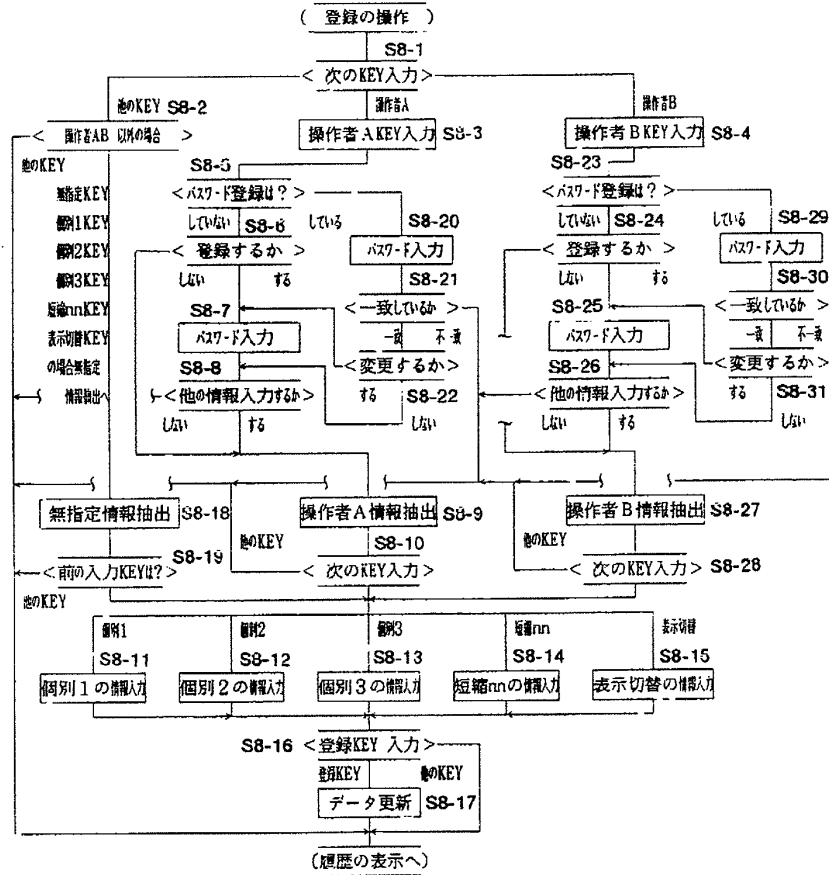


【図7】

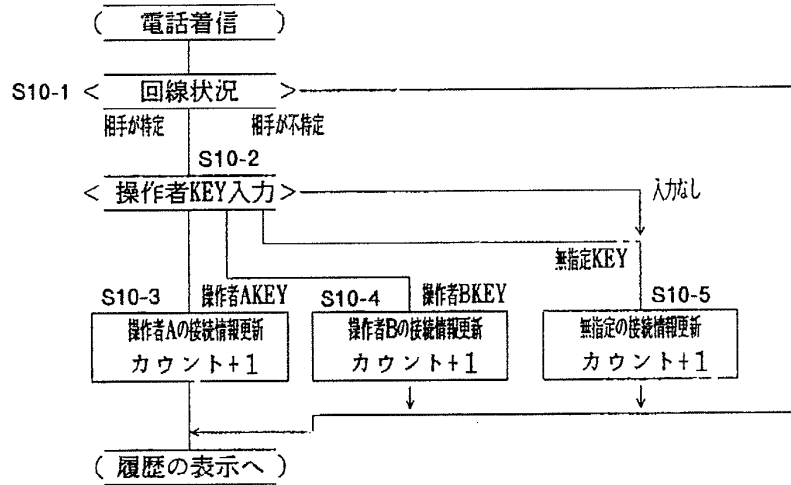




【図8】



【図10】



<b>Electronic Patent Application Fee Transmittal</b>				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Donald Merton Hill/Joyce Smith			
<b>Attorney Docket Number:</b>	042933/387289			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

LGE0003840

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Submission- Information Disclosure Stmt	1806	1	180	180
<b>Total in USD (\$)</b>				<b>180</b>

LGE0003841

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<b>EFS ID:</b>	10817023
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	10949
<b>Filer:</b>	Donald Merton Hill/Joyce Smith
<b>Filer Authorized By:</b>	Donald Merton Hill
<b>Attorney Docket Number:</b>	042933/387289
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<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	17:06:26
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

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Payment was successfully received in RAM	\$ 180
RAM confirmation Number	4077
Deposit Account	160605
Authorized User	

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LGE0003842

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS387289.PDF	126589 <small>26633b20094549f3ce00b2bb4c7a525774282e6</small>	yes	3
<b>Multipart Description/PDF files in .zip description</b>					
		Document Description	Start	End	
		Transmittal Letter	1	2	
		Information Disclosure Statement (IDS) Form (SB08)	3	3	
<b>Warnings:</b>					
<b>Information:</b>					
2		ART387289.PDF	1729467 <small>276fd8eca690cd0689c8312048bb04b4d629e1e8</small>	yes	27
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		Foreign Reference	1	5	
		Foreign Reference	6	23	
		Non Patent Literature	24	27	
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<b>Total Files Size (in bytes):</b>			1886115		

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Martyn Confirmation No.: 1608  
Appl. No.: 10/343,333 Group Art Unit: 2175  
Filed: August 27, 2003 Examiner: T. Vu  
For: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97(d)**

This Information Disclosure Statement is being filed after a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, but before payment of the Issue Fee. The Final Office Action or Notice of Allowance was mailed on December 31, 2008.

Attached is a list of documents on form PTO-1449 along with any cited foreign patent documents and non-patent literature documents in accordance with 37 CFR 1.98(a)(2). Also enclosed is a translation or a concise explanation of each non-English language document.

By identifying the listed documents, Applicant in no way makes any admission as to the prior art status of the listed documents, but is instead identifying the listed documents for the sake of full disclosure.

In accordance with the requirements of 37 C.F.R. § 1.97(d)(2), the following statement as specified in 37 C.F.R. § 1.97(e) is made:

Each item of information contained in this statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this statement. In this regard, Applicant notes that the communication from the foreign patent office was not received by any individual designated by 37 CFR 1.56(c) more than thirty (30) days prior to the filing of this Information Disclosure Statement.



In re: Martyn  
Appl. No.: 10/343,333  
Filed: August 27, 2003  
Page 2

The \$180.00 fee specified in 37 C.F.R. § 1.17(p) is being paid at the time of e-filing. The Commissioner is authorized to charge any additional fee, or credit any refund, to our Deposit Account No. 16-0605.

Respectfully submitted,



Nathaniel T. Quirk  
Registration No. 60,676

**CUSTOMER NO. 10949**  
**ALSTON & BIRD LLP**  
Bank of America Plaza  
101 South Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Tel Charlotte Office (704) 444-1000  
Fax Charlotte Office (704) 444-1111

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON August 25, 2011.  
#32834186v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO**

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number: 20413

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number: 20413

OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone			Email

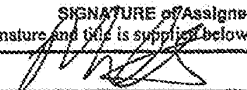
Assignee Name and Address:

Core Wireless Licensing S.a.r.l  
 16, avenue Pasteur  
 L-2310, Luxembourg

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/98 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

**SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	24 JAN 12
Name	Phillip Shaer	Telephone	613-598-9538
Title	Manager, Core Wireless Licensing S.a.r.l.		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: Mathieu Kennedy MartynApplication No./Patent No.: 10/343,333Filed/Issue Date: July 27, 2001

Titled:

Core Wireless Licensing S.a.r.l. , a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1.  the assignee of the entire right, title, and interest in;
2.  an assignee of less than the entire right, title, and interest in  
(The extent (by percentage) of its ownership interest is \_\_\_\_\_ %); or
3.  the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

- A.  An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy therefore is attached.

**OR**

- B.  A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Mathieu Kennedy Martyn To: Symbian Limited

The document was recorded in the United States Patent and Trademark Office at  
Reel 014591, Frame 0410, or for which a copy thereof is attached.

2. From: Symbian Limited To: Nokia Corporation

The document was recorded in the United States Patent and Trademark Office at  
Reel 022240, Frame 0797, or for which a copy thereof is attached.

3. From: Nokia Corporation To: Nokia 2011 Patent Trust

The document was recorded in the United States Patent and Trademark Office at  
Reel 027484, Frame 0797, or for which a copy thereof is attached.

- Additional documents in the chain of title are listed on a supplemental sheet(s).

- As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Francis J. Maguire/

17-FEB-2012

Signature

Date

Francis J. Maguire

Attorney for Assignee

Printed or Typed Name

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

LGE0003848

LG Exhibit 1006, Page 435

LG Electronics, Inc. v. Core Wireless Licensing S.A.R.L.

## Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

LGE0003849

**STATEMENT UNDER 37 C.F.R. 3.73(b) – SUPPLEMENTAL SHEET**

Applicant: Mathieu Kennedy Martyn

Application No. 10/343,333 Filed: July 27, 2001

Titled: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

Continuation of B. A chain of title from the inventor(s), of the patent application identified above, to the current assignee is as follows:

4. From: Nokia 2011 Patent Trust To: 2011 Intellectual Property Asset Trust  
The document was recorded in the United States Patent and Trademark Office at Reel 027121, Frame 0353.
  
5. From: 2011 Intellectual Property Asset Trust To: Core Wireless Licensing S.a.r.l.  
The document was recorded in the United States Patent and Trademark Office at Reel 027484 Frame 0797

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	12098329
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	10949
<b>Filer:</b>	Francis Maguire
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	042933/387289
<b>Receipt Date:</b>	16-FEB-2012
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	19:12:43
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	Executed_POA.pdf	576681 <small>4c1246f94a10b172e09756b1d799e7273f19d916</small>	no	1

### Warnings:

LGE0003851

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

**Information:**

2	Assignee showing of ownership per 37 CFR 3.73(b).	sb0096.pdf	438171 762ecf455c383a2fc01a0dbe1f5a663ee1e31542	no	2
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**Warnings:**

**Information:**

3	Assignee showing of ownership per 37 CFR 3.73(b).	Suppl-Sheet_for373bForm.PDF	13474 1a62142373b656087b1367ebbe1741ff28874fc8	no	1
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**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>			1028326
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**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/343,333	08/27/2003	Mathieu Kennedy Martyn	042933/387289

**CONFIRMATION NO. 1608**

**POA ACCEPTANCE LETTER**



20413  
FRANCIS J MAGUIRE  
BRADFORD GREEN BUILDING FIVE  
755 MAIN STREET  
P O BOX 224  
MONROE, CT 06468

Date Mailed: 02/24/2012

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 02/16/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/ttkim/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101





UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/343,333	08/27/2003	Mathieu Kennedy Martyn	042933/387289

**CONFIRMATION NO. 1608**

**POWER OF ATTORNEY NOTICE**



10949  
Nokia Corporation and Alston & Bird LLP  
c/o Alston & Bird LLP  
Bank of America Plaza, 101 South Tryon Street  
Suite 4000  
Charlotte, NC 28280-4000

Date Mailed: 02/24/2012

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 02/16/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/ttkim/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		10343333	
	Filing Date		2003-08-27	
	First Named Inventor	Mathieu Kennedy Martyn		
	Art Unit		2175	
	Examiner Name	Thanh T. Vu		
	Attorney Docket Number		990-001.563	

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
U.S. PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
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If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>
If you wish to add additional Foreign Patent Document citation information please click the Add button.							Add	
NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.					T <sup>5</sup>	

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	10343333
Filing Date	2003-08-27
First Named Inventor	Mathieu Kennedy Martyn
Art Unit	2175
Examiner Name	Thanh T. Vu
Attorney Docket Number	990-001.563

1	English translation of Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light- mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 4 pages total (numbered 1/4-4/4)	<input type="checkbox"/>
2	Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light- mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 14 pages total (numbered 2/15 through 15/15)	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

**EXAMINER SIGNATURE**

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	10343333
	Filing Date	2003-08-27
	First Named Inventor	Mathieu Kennedy Martyn
	Art Unit	2175
	Examiner Name	Thanh T. Vu
	Attorney Docket Number	990-001.563

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Francis J. Maguire/	Date (YYYY-MM-DD)	2012-09-14
Name/Print	Francis J. Maguire	Registration Number	31391

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	Computing device with improved user interface for applications			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Francis Maguire			
<b>Attorney Docket Number:</b>	990-001.563			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Submission- Information Disclosure Stmt	1806	1	180	180
<b>Total in USD (\$)</b>				<b>180</b>

LGE0003860

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	13745906
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	20413
<b>Filer:</b>	Francis Maguire
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	990-001.563
<b>Receipt Date:</b>	14-SEP-2012
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	12:05:17
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
RAM confirmation Number	11972
Deposit Account	230442
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. 1.492 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

LGE0003861



<b>File Listing:</b>					
<b>Document Number</b>	<b>Document Description</b>	<b>File Name</b>	<b>File Size(Bytes)/ Message Digest</b>	<b>Multi Part /.zip</b>	<b>Pages (if appl.)</b>
1	Transmittal Letter	IDS-XMTL-LETTER.pdf	98368	no	4
			3cc05d68088a625a6103940ee0ae5a943e14cdde		
<b>Warnings:</b>					
<b>Information:</b>					
2	Information Disclosure Statement (IDS) Form (SB08)	updated_IDS.pdf	760274	no	4
			bdbbd4d6e35da7676264cc175d6318fd40dd6d04e		
<b>Warnings:</b>					
<b>Information:</b>					
A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for auto-loading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
3	Non Patent Literature	D2-Non-patent-literature2.pdf	1069017	no	14
			61ecc9ef43b1ad88f2259010292ab3545f681937		
<b>Warnings:</b>					
<b>Information:</b>					
4	Other Reference-Patent or Application Document	JP-OA-27June2012_JP-original.pdf	100407	no	4
			8f04fca2dd1f06449c26e446c08ae89408d497d7		
<b>Warnings:</b>					
<b>Information:</b>					
5	Other Reference-Patent or Application Document	JP-OA-27June2012_translation.pdf	102656	no	4
			b79f371d22bef1d4b2c3538dce2b89515198cd5		
<b>Warnings:</b>					
<b>Information:</b>					
6	Non Patent Literature	D2-translation.pdf	1381860	no	8
			6e35465d58f06377c25e7a8198eb4adb138cb9e7		
<b>Warnings:</b>					
<b>Information:</b>					
7	Fee Worksheet (SB06)	fee-info.pdf	30058	no	2
			c08af12dd6942fa7c80f49ed1038920f61f398e2		
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			3542640		

LGE0003862

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mathicu Kennedy Martyn Group Art Unit: 2175

Serial No.: 10/343,333 Examiner: Thanh T. Vu

Filed: August 27, 2003 Confirmation No.: 1608

Title: Computing device with improved user interface for applications

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir or Madam:

INFORMATION DISCLOSURE STATEMENT (IDS)

Enclosed herewith are patents and/or publications for consideration by the Patent and Trademark office in regard to the invention claimed in the above-described application. In compliance with §1.56, such documents are listed in the enclosed Form PTO-1449.

Applicants request that the Patent and Trademark office make of record the above-identified documents. A full text copy of each document is attached, except for copies of U.S. patents and U.S. patent application publications. For documents not in English, an English translation or an equivalent English language patent or publication may be attached. Where a translation is not available, a concise explanation of the relevance of each document not in English is included either here or in the specification or the relevance is indicated by the categories indicated by a foreign examiner in an enclosed search report from a foreign patent office (see MPEP Section 609A(3)).

This Information Disclosure Statement (hereinafter "Statement") is submitted according to the following selected paragraph:

I. **Filed: (1) Before Examination, or (2) with an RCE to Withdraw an Appeal, or (3) with an RCE after the Mailing of a Decision on Appeal**

- (1) This Statement is being filed under §1.97(b) within three months of the filing date of the application, or before the mailing of a first Office Action on the merits or before the mailing of a first Office Action after the filing of a Request for Continued Examination under §1.114(a) and (b)(4) and before filing a Notice of Appeal.

- (2) This Statement is being filed under §1.114(d) with a Request for Continued Examination (or before the mailing of a first Office Action after the filing of the Request for Continued Examination) to withdraw an Appeal before any Decision on Appeal has been mailed in order to permit the Office to consider this Statement under §1.97(b)(4).
  - (3) This Statement is being filed under §1.198 After a Decision by the Board (see §§41.50 and 41.54) has been mailed and is being filed with a Request for Continued Examination under §1.114(a) (or before the mailing of a first Office Action after the filing of the Request for Continued Examination) to permit the Office to consider this Statement under §1.97(b)(4) (see also MPEP §1214.07).
    - furthermore, each item of information contained in this Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of this Statement.
- II. A. **Filed After Examination on the Merits has Commenced with Fee (without Certification) Before Prosecution is Closed, e.g., by a Final Action or Allowance**
- This Statement is being filed under §1.97(c)(2), with fee, **prior** to the mailing date of any Final Action, a Notice of Allowance or an Action that otherwise closes prosecution in the application. A check in the amount of the fee required by §1.17(p) is enclosed.
- II. B. **Filed After Examination on the Merits has Commenced with Certification (without Fee) Before Prosecution is Closed, e.g., by a Final Action or Allowance**
- This Statement is being filed under §1.97(c)(1), with a certification under, §1.97(e) prior to the mailing date of any of a Final Action, a Notice of Allowance or an Action that otherwise closes prosecution in the application. The undersigned hereby states that (check one):
    - each item of information contained in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
      - furthermore, each item of information contained in this Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of this Statement.
    - no item of information in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to

the knowledge of the person signing this certification under §1.97(e) after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this Statement.

III. **Filed After Prosecution has Closed with Both Fee and Certification, e.g., either: (1) After Final Action, or (2) After Allowance (but filed before or with Payment of the Issue Fee)**

- This Statement is being filed under §1.97(d), with fee and certification under §1.97(e), on or after the mailing date of either a Final Action, a Notice of Allowance (but prior to payment of the Issue Fee) or any Action that otherwise closes prosecution in the application. A check in the amount of the fee required by §1.17(p) is enclosed. The undersigned hereby states that (check one):
  - each item of information in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
  - furthermore, each item of information contained in this Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of this Statement.
  - no item of information in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this certification under §1.97(e) after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this statement.

IV. **Filed in an RCE After Payment of the Issue Fee (but before the Issue Date) with a Petition to Withdraw From Issue with Petition Fee**

- This Statement is being filed after payment of the issue fee but before the issue date with a petition under §1.313(a) and 1.313(c)(2) with the fee of Rule 17(h), and with a Request for Continued Examination under Rule 114(d) and the fee of Rule 17(e) or is being filed before the mailing of a first Office Action after the filing of the Request for Continued Examination.

**Remarks**

This IDS is filed to disclose a newly cited reference by the Japanese Patent Office during prosecution of a corresponding Japanese application 2002-515554 transmitted June 27, 2012 (the 4-page Japanese original office action and a 4-page English translation thereof are transmitted herewith) and the D2 reference cited therein along with a translation of pages 82-3 thereof. The other three references have already been disclosed. With respect to D2, a Rule 97(e)(1) certification is made above and the required Rule 17(p) fee is paid herewith at the time of the filing hereof. An SB08a is also filed herewith. Consideration is requested.

If there are fees and/or a petition due with this Statement that is/are for some reason incorrect or missing, the Commissioner is authorized to consider this paper as a substitute for any missing petition and/or to deduct/credit the missing amount or any shortfall/excess from/to our Deposit Account No. 23-0442.

Respectfully submitted,

/Francis J. Maguire/

Francis J. Maguire  
Attorney for the Applicant  
Registration No. 31,391

Ware, Fressola, Van Der Sluys  
& Adolphson LLP  
Customer No. 20413

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	10343333
	Filing Date	2003-08-27
	First Named Inventor	Mathieu Kennedy Martyn
	Art Unit	2175
	Examiner Name	Thanh T. Vu
	Attorney Docket Number	990-001.563

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
U.S. PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
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If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>
If you wish to add additional Foreign Patent Document citation information please click the Add button.							Add	
NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.					T <sup>5</sup>	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		10343333
	Filing Date		2003-08-27
	First Named Inventor	Mathieu Kennedy Martyn	
	Art Unit	2175	
	Examiner Name	Thanh T. Vu	
	Attorney Docket Number	990-001.563	

1	English translation of Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light- mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 8 pages total	<input type="checkbox"/>
2	Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light- mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 14 pages total (numbered 2/15 through 15/15)	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

**EXAMINER SIGNATURE**

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	10343333
Filing Date	2003-08-27
First Named Inventor	Mathieu Kennedy Martyn
Art Unit	2175
Examiner Name	Thanh T. Vu
Attorney Docket Number	990-001.563

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Francis J. Maguire/	Date (YYYY-MM-DD)	2012-09-14
Name/Print	Francis J. Maguire	Registration Number	31391

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	13747455
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	Computing device with improved user interface for applications
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	20413
<b>Filer:</b>	Francis Maguire
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	990-001.563
<b>Receipt Date:</b>	14-SEP-2012
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	13:25:25
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	CORRECTED-SB08a-XMTL-LETTER.pdf	77304 <small>68855e5a5355df1bb2ab939eb349f980590c9d2c</small>	no	2

**Warnings:**

**Information:**

LGE0003872

2	Information Disclosure Statement (IDS) Form (SB08)	Corrected_SB08a.pdf	760240 19edb7ac95efdd2fe11e920aaa31bf937e0ddca9	no	4
<b>Warnings:</b>					
<b>Information:</b>					
<p>A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.</p>					
<b>Total Files Size (in bytes):</b>				837544	
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>					

**DOCKET: 990-001.563**  
**USSN: 10/343,333**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mathieu Kennedy Martyn      Group Art Unit: 2175  
Serial No.:                      10/343,333                      Examiner: Thanh T. Vu  
Filed:                              August 27, 2003                      Confirmation No.: 1608

Title: Computing device with improved user interface for applications

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir or Madam:

TRANSMITTAL LETTER  
FOR  
CORRECTED FORM PTO/SB/08a

Transmitted herewith is a corrected form PTO/SB/08a in substitution for the form submitted earlier today (September 14, 2012) with an error (on page 2 of the form) in the page count set forth for Non Patent Literature citation #1.

**Remarks**

This letter is filed along with a corrected PTO/SB/08a form that corrects the page count of the first Non Patent Literature (NPL) citation cited on page 2 of the PTO/SB/08a form submitted earlier today (September 14, 2012) from the incorrect description of four (4) pages total to the correct description of eight (8) pages total.

The English translation of NPL citation #1 (the D2 document cited by the Japanese Patent Office) that was also submitted earlier today actually has 8 pages, not 4 pages, and the corrected form sets forth the correct number of pages.

Please substitute the corrected PTO/SB/08a form submitted with this letter for the form submitted earlier today with the incorrect indication of the number of pages.

Consideration is requested.

Respectfully submitted,

/Francis J. Maguire/

Francis J. Maguire  
Attorney for the Applicant  
Registration No. 31,391

Ware, Fressola, Van Der Sluys  
& Adolphson LLP  
Customer No. 20413



UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for CORE WIRELESS LICENSING S.a.r.l. and administrative information like EXAMINER, ART UNIT, and MAIL DATE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MATHIEU KENNEDY MARTYN

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Appeal 2010-008003  
Application 10/343,333  
Technology Center 2100

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Before, JOSIAH C. COCKS, MICHAEL R. ZECHER, and  
BRIAN J. McNAMARA, *Administrative Patent Judges*.

McNAMARA, *Administrative Patent Judge*.

DECISION ON APPEAL

LGE0003877



### SUMMARY

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 14-40. We have jurisdiction under 35 U.S. C. § 6(b). We reverse.

### STATEMENT OF THE CASE

Appellant's invention concerns a computing device which displays an application summary window listing applications and functions within the applications, and wherein a user's selection of a function launches the application and initiates processing of the function. (Spec. 3, ll. 15-21).

Claim 14 is illustrative.

14. A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application, and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an un-launched state.

(App. Br. 11).

### THE REJECTIONS

Claims 14-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,815,142 (“Allard”), US 6,121,968 ("Arcuri"), and US 6,160,554 (“Krause”).

### ANALYSIS

The positions of the Examiner and the Appellant are detailed in the Appeal Brief filed on August 31, 2009, the Examiner’s Answer mailed on November 11, 2010, and the Reply Brief filed on January 11, 2010. Appellant argues the patentability of claims 14-40 as a group, and we treat them together, with claim 14 being illustrative.

The Examiner finds that Allard teaches a computing device with an application summary window that can be reached directly from a main menu and which displays a list of at least one function offered within the application. (Ans. 7). Referencing Figure 6A of Allard, the Examiner asserts that each selection in the list can be selected to launch the application (*id.*), but the Examiner agrees that Allard does not disclose the application summary window being displayed while the application is in an unlaunched state. (*Id.* at 3). Appellant notes that the display of functions available in the Mail application shown in Fig. 6A of Allard is generated only because the application has already been launched and is running, as distinguished from the claimed feature of each function in the list being selectable to both launch the application and initiate the selected function. (Reply Br. 2). Allard discloses that screen 6A of Figure 6 displays the main menu representing the “Mail” icon of the screen shown in Figure 4. (Col. 4, ll. 10-12). Thus, we agree with the Appellant’s argument, which is consistent with the Examiner’s initial position, that Allard does not teach the claimed application window being displayed while the application is in an unlaunched state.

Appeal 2010-008003  
Application 10/343,333

The Examiner finds that Krause teaches displaying a preview window related to an application while the application is in an unlaunched state. (Ans. 3, 7). Appellant argues that Krause is concerned solely with files and enabling a user to view information about a file, while the present claims recite a device in which an unlaunched application displays a window listing the functions it can perform once it has been launched. (App. Br. 9). More to the point, however, Appellant also notes that previewing of files without opening them using metadata, as taught by Krause, is different from the claimed feature of allowing the application to be launched and a certain functionality initiated. (Reply Br. 3). Since “each function in the list being selectable to launch the first application and initiate the selected function” is a feature of all the claims, we agree with Appellant and reverse the rejection.

#### ORDER

The Examiner’s rejection of claims 14-40 under 35 U.S.C. 103(a) as being unpatentable over Allard, Arcuri, and Krause is reversed.

REVERSED

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NOTICE OF ALLOWANCE AND FEE(S) DUE

20413 7590 01/04/2013
CORE WIRELESS LICENSING S.a.r.l.
c/o WARE, FRESSOLA, VAN DER SLUYS & ADOLPHSON LLP
BRADFORD GREEN, BUILDING FIVE
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER

VU, THANH T

ART UNIT PAPER NUMBER

2175

DATE MAILED: 01/04/2013

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

10/343,333 08/27/2003 Mathieu Kennedy Martyn 990-001.563 1608

TITLE OF INVENTION: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional NO \$1770 \$300 \$0 \$2070 04/04/2013

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

**PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block I, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block I for any change of address)

20413                      7590                      01/04/2013  
**CORE WIRELESS LICENSING S.a.r.l.**  
 c/o WARE, FRESSOLA, VAN DER SLUYS & ADOLPHSON LLP  
 BRADFORD GREEN, BUILDING FIVE  
 755 MAIN STREET, P O BOX 224  
 MONROE, CT 06468

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**  
 I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	990-001.563	1608

TITLE OF INVENTION: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1770	\$300	\$0	\$2070	04/04/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
VU, THANH T	2175	345-783000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  <input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  <input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev. 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p>	<p>2. For printing on the patent front page, list                  (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____                  (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____                  3 _____</p>
--	---

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE \_\_\_\_\_ (B) RESIDENCE: (CITY and STATE OR COUNTRY) \_\_\_\_\_

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

<p>4a. The following fee(s) are submitted:  <input type="checkbox"/> Issue Fee  <input type="checkbox"/> Publication Fee (No small entity discount permitted)  <input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (<b>Please first reapply any previously paid issue fee shown above</b>)  <input type="checkbox"/> A check is enclosed.  <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.  <input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
---	---

5. **Change in Entity Status** (from status indicated above)  
 a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for 10/343,333 filed 08/27/2003 by Mathieu Kennedy Martyn.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1653 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1653 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

LGE0003884

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/343,333	MARTYN, MATHIEU KENNEDY	
	<b>Examiner</b>	<b>Art Unit</b>	
	THANH VU	2175	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to Board Decision dated 10/24/2012.
2.  An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
3.  The allowed claim(s) is/are 14-40. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_ .
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date ____</li> <li>3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> <li>4. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date ____ .</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>7. <input type="checkbox"/> Other ____.</li> </ol> |
|--|---|



## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 14-40 are allowed.

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

Based on the Patent Board Decision dated 10/24/2012, the prior art either alone or in combination doesn't teach the limitation of "the application summary window displays a limited list of at least one function offered within the first application, each function in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an un-launched state" in combination with the other claimed features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Inquiries***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH VU whose telephone number is (571)272-4073. The examiner can normally be reached on Mon- Fri 7:00AM - 3:00PM.

LGE0003886

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L. Bashore can be reached on (571) 272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh T. Vu/  
Primary Examiner, Art Unit 2175


<b>Issue Classification</b> 	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH VU	<b>Art Unit</b> 2175

ORIGINAL						INTERNATIONAL CLASSIFICATION														
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED									
715			808			G	0	6	F	3 / 048 (2006.01.01)										
<b>CROSS REFERENCE(S)</b>																				
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																			

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	4	17	23	33										
	2	5	18	24	34										
	3	6	19	25	35										
	4	7	20	26	36										
	5	8	21	13	37										
	6	9	22	14	38										
	7	10	23	27	39										
	8	11	24	15	40										
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	11	17	27												
	12	18	28												
	13	19	29												
1	14	20	30												
2	15	21	31												
3	16	22	32												

NONE		<b>Total Claims Allowed:</b>	
		27	
(Assistant Examiner)	(Date)		
/THANH VU/ Primary Examiner. Art Unit 2175	01/03/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

LGE0003888

<b>Search Notes</b>  	<b>Application/Control No.</b> 10343333	<b>Applicant(s)/Patent Under Reexamination</b> MARTYN, MATHIEU KENNEDY
	<b>Examiner</b> THANH T VU	<b>Art Unit</b> 2175

SEARCHED			
Class	Subclass	Date	Examiner
715	762, 759, 776, 808	4/22/2008	TV
715	762, 759, 776, 808	12/30/2008	TV
715	762, 759, 776, 808	1/3/2013	TV

SEARCH NOTES		
Search Notes	Date	Examiner
East Search	4/22/2008	TV
East Search	12/30/2008	TV
East search, inventors search	1/3/2013	TV

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
715	762, 759, 776, 808 (text search)	1/3/2013	TV

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Substitute for form 1449/PTO (Revised 04/2003)  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/343,333
				Filing Date	August 27, 2003
				First Named Inventor	Mathieu K. Martyn
				Group Art Unit	2175
Examiner Name	T. Vu				
Attorney Docket Number	042933/387289				
Sheet	1	of	1		

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached
	1	EP 0 946 028 A2	09-29-1999	Nokia Mobile Phones Ltd.		
	2	JP 2000-036856	02-02-2000	Nokia Mobile Phones Ltd.		Abstract

OTHER DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	3	Office Action for Japanese Patent Application No. 2002-515554; Date of Transmission: December 21,2010; 4 pages	X

Examiner Signature	/Thanh Vu/ (01/03/2013)	Date Considered	
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE SHOWN OTHERWISE  
 Submitted: December 23, 2010

LGE0003890

Substitute for form 1449/PTO (Revised 07/2007)  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>		
				Application Number	10/343,333	
				Filing Date	August 27, 2003	
				First Named Inventor	Martyn	
				Art Unit	2175	
Examiner Name	T. Vu					
Sheet	1	of	1	Attorney Docket Number	042933/387289	
<b>U. S. PATENT DOCUMENTS</b>						
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear	
		US-				
		US-				
		US-				
		US-				
<b>FOREIGN PATENT DOCUMENTS</b>						
Examiner Initials	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached
	1	JP 3-149666 A	06-26-1991	Matsushita Electric Ind Co Ltd		*
	2	JP 11-74985 A	03-16-1999	Sharp KK		*
		*Abstract only				
<b>OTHER DOCUMENTS</b>						
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			English Language Translation Attached	
	3	Office Action for Japanese Application No. 2002-515554 dated August 8, 2011			Yes	
Examiner Signature	/Thanh Vu/ (01/03/2013)			Date Considered		

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. LEGAL02/32811780v1

**Submitted August 25, 2011**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /TV/

LGE0003891

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		10343333	
	Filing Date		2003-08-27	
	First Named Inventor	Mathieu Kennedy Martyn		
	Art Unit		2175	
	Examiner Name	Thanh T. Vu		
	Attorney Docket Number		990-001.563	

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
U.S. PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>
If you wish to add additional Foreign Patent Document citation information please click the Add button							Add	
NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T <sup>5</sup>

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		10343333
	Filing Date		2003-08-27
	First Named Inventor	Mathieu Kennedy Martyn	
	Art Unit	2175	
	Examiner Name	Thanh T. Vu	
	Attorney Docket Number	990-001.563	

1	English translation of Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light-mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 4 pages total (numbered 1/4-4/4)	<input type="checkbox"/>
2	Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light- mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 14 pages total (numbered 2/15 through 15/15)	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

**EXAMINER SIGNATURE**

Examiner Signature	/Thanh Vu/ (01/03/2013)	Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	10343333
	Filing Date	2003-08-27
	First Named Inventor	Mathieu Kennedy Martyn
	Art Unit	2175
	Examiner Name	Thanh T. Vu
	Attorney Docket Number	990-001.563

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Francis J. Maguire/	Date (YYYY-MM-DD)	2012-09-14
Name/Print	Francis J. Maguire	Registration Number	31391

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	10343333
	Filing Date	2003-08-27
	First Named Inventor	Mathieu Kennedy Martyn
	Art Unit	2175
	Examiner Name	Thanh T. Vu
	Attorney Docket Number	990-001.563

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
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Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
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Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>
If you wish to add additional Foreign Patent Document citation information please click the Add button.							Add	
NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T <sup>5</sup>

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	First Named Inventor	Mathieu Kennedy Martyn	
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1	English translation of Japanese literature (bibliography: ARIOKA Osamu, "Windows CE carnival, using fast- and light-mobile phones toughly", Mobile PC, Softbank Corp, 1 March 1999, Vol.5, No.3, p.82-83), 8 pages total	<input type="checkbox"/>
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STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	10343333
Filing Date	2003-08-27
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /TV/

**EAST Search History****EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2951	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L2	48	L1 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L3	177	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L4	175	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L5	2	("6456841") or ("6144863").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L6	282	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L7	397	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L8	1	("6512525").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L9	1645	(715/762).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L10	700	(715/808).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24

L11	270	(715/759).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L12	329	(715/776).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L13	1	("20020054115").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L14	3	((("5917990") or ("5995095") or ("6738100"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L15	0	(09/738050).APP.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L16	1	("6240410").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L18	1	("6993712").PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L19	3	((("6512525") or ("6781161") or ("6121968"))).PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L20	3	((("6512525") or ("6781611") or ("6121968"))).PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L21	1	("6160554").PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L22	35	("6160554").URPN.	USPAT	OR	ON	2013/01/03 12:24
L23	0	(list with application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L24	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L25	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls.	US-PGPUB; USPAT;	OR	ON	2013/01/03 12:24



			USOCR			
L26	3	(application with (pre adj1 view) with (window or dialog))	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L27	5	(application with list with alert with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L28	24	(application with list with (notific\$6) with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L29	4	((("6512525") or ("6570596") or ("6121968") or ("6160554")).PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L30	1	("5815142").PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L31	2951	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L32	48	L31 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L33	177	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L34	175	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L35	2	((("6456841") or ("6144863")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L36	282	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L37	397	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L38	1	("6512525").PN.	US-PGPUB;	OR	OFF	2013/01/03 12:24

			USPAT; USOCR			
L39	1645	(715/762).CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L40	700	(715/808).CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L41	270	(715/759).CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L42	329	(715/776).CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L43	1	("20020054115").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L44	3	((("5917990") or ("5995095") or ("6738100")).PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L46	1	("6240410").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/03 12:24
L47	71	vu-thanh.xa.	US- PGPUB; USPAT	OR	ON	2013/01/03 12:24
L48	1	("6993712").PN.	US- PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L49	3	((("6512525") or ("6781161") or ("6121968")).PN.	US- PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L50	3	((("6512525") or ("6781611") or ("6121968")).PN.	US- PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L51	1	("6160554").PN.	US- PGPUB; USPAT	OR	OFF	2013/01/03 12:24
L52	35	("6160554").URPN.	USPAT	OR	ON	2013/01/03 12:24
L56	3	(application with (pre adj1 view) with (window or dialog))	US- PGPUB;	OR	ON	2013/01/03 12:24

			USPAT; USOCR			
L57	5	(application with list with alert with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L58	24	(application with list with (notific\$6) with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2013/01/03 12:24
L59	2	((("5956025") or ("6691282")).PN.	US-PGPUB; USPAT	OR	OFF	2013/01/03 12:24
S1	920	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 09:43
S2	17	S1 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 12:03
S3	29	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 09:51
S4	41	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/09 09:57
S5	2	((("6456841") or ("6144863")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 09:57
S6	79	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 12:03
S7	102	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/13 12:46
S8	1	("6512525").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:16
S9	521	(715/762).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:17

S10	290	(715/808).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
S11	136	(715/759).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
S12	160	(715/776).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/09 17:18
S13	1	("20020054115").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/14 07:48
S14	3	((("5917990") or ("5995095") or ("6738100"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/15 10:14
S15	0	(09/738050).APP.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/15 10:14
S16	1	("6240410").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/11/15 10:14
S17	51	vu-thanh.xa.	US-PGPUB; USPAT	OR	ON	2007/08/13 15:50
S18	1	("6993712").PN.	US-PGPUB; USPAT	OR	OFF	2007/08/13 15:50
S19	3	((("6512525") or ("6781161") or ("6121968"))).PN.	US-PGPUB; USPAT	OR	OFF	2008/04/21 14:34
S20	3	((("6512525") or ("6781161") or ("6121968"))).PN.	US-PGPUB; USPAT	OR	OFF	2008/04/21 14:36
S21	1	("6160554").PN.	US-PGPUB; USPAT	OR	OFF	2008/04/21 14:47
S22	6	("6160554").URPN.	USPAT	OR	ON	2008/04/21 14:47
S23	0	(list with application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:17

S24	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.cls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:18
S25	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.cls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:18
S26	2	(application with (pre adj1 view) with (window or dialog))	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:18
S27	5	(application with list with alert with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:22
S28	22	(application with list with (notific\$6) with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/21 15:26
S29	4	((("6512525") or ("6570596") or ("6121968") or ("6160554")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 09:42
S30	1	("5815142").PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 10:11
S31	1577	(pda or (portable near3 device)) with menu	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S32	24	S31 and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S33	59	((pda or (portable near3 device)) with menu) and (application near3 menu) and (plurality near3 application)	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S34	77	((pda or (portable near3 device))) and ((application near3 menu) same (plurality near3 application))	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S35	2	((("6456841") or ("6144863")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S36	147	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07

S37	200	(pda((mobile or handheld) near3 device)) same ((adapt\$4 customiz\$6) with menu)	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S38	1	("6512525").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S39	832	(715/762).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S40	384	(715/808).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S41	168	(715/759).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S42	188	(715/776).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S43	1	("20020054115").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S44	3	((("5917990") or ("5995095") or ("6738100")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S45	0	(09/738050).APP.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S46	1	("6240410").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/12/30 11:07
S47	71	vu-thanh.xa.	US-PGPUB; USPAT	OR	ON	2008/12/30 11:07
S48	1	("6993712").PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
S49	3	((("6512525") or ("6781161") or ("6121968")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07

S50	3	((("6512525") or ("6781611") or ("6121968")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
S51	1	("6160554").PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 11:07
S52	8	("6160554").URPN.	USPAT	OR	ON	2008/12/30 11:07
S53	0	(list with application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S54	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls. and @ad<"20010127"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S55	0	(application with (pre adj1 view) with (window or dialog)) and "715"/\$.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S56	2	(application with (pre adj1 view) with (window or dialog))	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S57	5	(application with list with alert with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S58	22	(application with list with (notific\$6) with message) and @ad<"20010727"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 11:07
S59	2	((("5956025") or ("6691282")).PN.	US-PGPUB; USPAT	OR	OFF	2008/12/30 15:17

1/3/2013 12:55:34 PM

C:\Users\tvu2\Documents\EAST\Workspaces\10343333.wsp



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BIB DATA SHEET

CONFIRMATION NO. 1608

<b>SERIAL NUMBER</b> 10/343,333	<b>FILING or 371(c) DATE</b> 08/27/2003	<b>CLASS</b> 345	<b>GROUP ART UNIT</b> 2175	<b>ATTORNEY DOCKET NO.</b> 990-001.563		
<b>APPLICANTS</b> Mathieu Kennedy Martyn, London, GBN, UNITED KINGDOM;						
<b>** CONTINUING DATA *****</b> This application is a 371 of PCT/GB01/03387 07/27/2001						
<b>** FOREIGN APPLICATIONS *****</b> UNITED KINGDOM 0019459.7 07/28/2000						
<b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **</b>						
Foreign Priority claimed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Met after Allowance Initials _____	<b>STATE OR COUNTRY</b> GBN	<b>SHEETS DRAWINGS</b> 1	<b>TOTAL CLAIMS</b> 28 27	<b>INDEPENDENT CLAIMS</b> 2
<b>ADDRESS</b> CORE WIRELESS LICENSING S.a.r.l. c/o WARE, FRESSOLA, VAN DER SLUYS & ADOLPHSON LLP BRADFORD GREEN, BUILDING FIVE 755 MAIN STREET, P O BOX 224 MONROE, CT 06468 UNITED STATES						
<b>TITLE</b> Computing device with improved user interface for applications						
<b>FILING FEE RECEIVED</b> 1284	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		



PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE  
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 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

20413 7590 01/04/2013  
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 MONROE, CT 06468

**Certificate of Mailing or Transmission**  
 I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	08/27/2003	Mathieu Kennedy Martyn	990-001.563	1608

TITLE OF INVENTION: COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1770	\$300	\$0	\$2070	04/04/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
VU, THANH T	2175	345-783000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_

3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Core Wireless Licensing S.a.r.l.  
 (B) RESIDENCE: (CITY and STATE OR COUNTRY): Luxembourg, Luxembourg

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

4a. The following fee(s) are submitted:

Issue Fee

Publication Fee (No small entity discount permitted)

Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

A check is enclosed.

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The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 23-0442 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent, or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature: /Francis J. Maguire/ Date: 2013-03-28

Typed or printed name: Francis J. Maguire Registration No. 31391

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Francis Maguire/Lorraine Kniffin			
<b>Attorney Docket Number:</b>	990-001.563			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Utility Appl Issue Fee	1501	1	1780	1780
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300

LGE0003911

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>2080</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	15379814
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	20413
<b>Filer:</b>	Francis Maguire/Lorraine Kniffin
<b>Filer Authorized By:</b>	Francis Maguire
<b>Attorney Docket Number:</b>	990-001.563
<b>Receipt Date:</b>	28-MAR-2013
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	15:21:44
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	yes
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Payment was successfully received in RAM	\$ 2080
RAM confirmation Number	2038
Deposit Account	230442
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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LGE0003913

1	Issue Fee Payment (PTO-85B)	PTOL_85_Issue_Fee_Transmittal.pdf	707625 b8a02197eb58e7d4e847fe5adba88847c1d411dc	no	1
<b>Warnings:</b>					
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<b>Information:</b>					
2	Fee Worksheet (SB06)	fee-info.pdf	32238 45e63d3d37de04ad9cc1cd7e61730196dec96f64	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>				739863	
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

LGE0003914



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/343,333	04/30/2013	8434020	990-001.563	1608

20413 7590 04/10/2013  
CORE WIRELESS LICENSING S.a.r.l.  
c/o WARE, FRESSOLA, MAGUIRE & BARBER LLP  
BRADFORD GREEN, BUILDING FIVE  
755 MAIN STREET, P O BOX 224  
MONROE, CT 06468

**ISSUE NOTIFICATION**

The projected patent number and issue date are specified above.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 2088 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Mathieu Kennedy Martyn, London, GBN, UNITED KINGDOM;

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: **Mathieu Kennedy Martyn**

Confirmation No.: **1608**

Serial No.: **10/343,333**

Examiner: **Thanh T. Vu**

Filed: **August 27, 2003**

Group Art Unit: **2175**

Patent No.: **8,434,020**

Issue Date: **April 30, 2013**

For: *Computing Device with Improved User Interface for Applications*

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT  
PURSUANT TO 37 C.F.R. § 1.705(b)**

Sir:

This is a request for reconsideration of the patent term adjustment of the above-referenced patent, which according to the front page of U.S. 8,434,020 issued on April 30, 2013, is 2,088 days. It is respectfully submitted that the patent term adjustment should be **2,984** days.

In accordance with 37 C.F.R. §§ 1.705(b), Applicant submits herewith the fee set forth in 37 C.F.R. § 1.18(e), as required by 37 C.F.R. § 1.705(b)(1), and a statement of the facts involved in accordance with 37 C.F.R. § 1.705(b)(2).

The Commissioner is hereby authorized to charge to deposit account no. 23-0442 any fee deficiency required to submit this paper.

Respectfully submitted,

Dated: June 28, 2013

\_\_\_\_\_  
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LGE0003916

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: **Mathieu Kennedy Martyn**

Confirmation No.: **1608**

Serial No.: **10/343,333**

Examiner: **Thanh T. Vu**

Filed: **August 27, 2003**

Group Art Unit: **2175**

Patent No.: **8,434,020**

Issue Date: **April 30, 2013**

For: ***Computing Device with Improved User Interface for Applications***

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**STATEMENT OF FACTS PURSUANT TO 37 C.F.R. § 1.705(b)(2)**

This Statement of Facts accompanies applicant's "Request for Reconsideration of Patent Term Adjustment Pursuant to 37 C.F.R. § 1.705(b)", in which it is respectfully submitted that the patent term adjustment for this patent should be **2,984** days.

In accordance with 37 C.F.R. § 1.705(b)(2), this Statement of Facts includes:

"(i) The correct patent term adjustment and the basis or bases under § 1.702 for the adjustment;

(ii) The relevant dates as specified in §§1.703(a) through (e) for which an adjustment is sought and the adjustment as specified in § 1.703(f) to which the patent is entitled;

(iii) Whether the patent is subject to a terminal disclaimer and any expiration date specified in the terminal disclaimer; and

(iv) (A) Any circumstances during the prosecution of the application resulting in the patent that constitute a failure to engage in reasonable efforts to conclude processing or examination of such application as set forth in § 1.704; or (B) that there were no circumstances constituting a failure to engage in reasonable efforts to conclude processing or examination of such application as set forth in § 1.704."

For the reasons presented below, it is respectfully submitted that the patent term adjustment determination of 2,088 days indicated in the issued patent is in error, and that the correct patent term adjustment should be 2,984 days. The bases for this adjustment are 37 C.F.R. §§1.702(a)(1), 1.702(b) and 1.702(e).

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**A. Examination Delays Pursuant to 37 C.F.R. § 1.702 and § 1.703**

37 C.F.R. § 1.703(f) provides that the term of a patent entitled to an adjustment under 37 C.F.R. § 1.702 and § 1.703 shall be adjusted for the sum of the periods calculated under §§ 1.703(a)-(e), to the extent such periods are not overlapping, less the sum of the periods calculated under § 1.704. For the present patent, applicant respectfully submits that it is entitled to an examination delay equal to the sum of the delay periods set forth in § 1.703(a), § 1.703(b) and § 1.703(e) to the extent those periods are not overlapping, based on delays under § 1.702(a)(1), § 1.702(b) and § 1.702(e) less the sum of periods calculated under § 1.704.

*1. Delay Pursuant to 37 C.F.R. §§ 1.702(a)(1) and 1.703(a)(1)*

37 C.F.R. § 1.703(a) provides for the method of calculating patent term adjustment from the category an examination delay provided for in 35 U.S.C. § 154(b)(1)(A) and 37 C.F.R. § 1.702(a) (this category of delay is hereinafter referred to as “A delay”). 37 C.F.R. § 1.703(a)(1), relating to § 1.702(a)(1), states: “The period of adjustment under § 1.702(a) is the sum of the following periods: The number of days, if any, in the period beginning on the day after the date that is fourteen months after the date on which the application was filed under 35 U.S.C. 111(a) or the date the national stage commenced under 35 U.S.C. 371(b) or (f) in an international application and ending on the date of mailing of either an action under 35 U.S.C. 132, or a notice of allowance under 35 U.S.C. 151, whichever occurs first.” *See also* Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416 (Apr. 1, 2013). In accordance with this section, applicant is entitled to a period of patent term adjustment due to the Office first issuing an action under 35 U.S.C. § 132 later than fourteen months after the date on which the application entered the national stage.

The PAIR printout of the Office’s Patent Term Adjustment calculation has been attached as Exhibit A for assistance in explaining the dates to this adjustment.

The present application commenced the national stage under § 371(b) on January 28, 2003 (from PCT application no. PCT/GB01/03387). The day after the date that is fourteen months after the filing date is March 29, 2004. The date of mailing of the first office action under 35 U.S.C. § 132 was December 12, 2006. Therefore, under 37 C.F.R. §§ 1.702(a)(1) and 1.703(a)(1), applicant is entitled to an adjustment for the number of days in the period beginning

on March 29, 2004 and ending on December 12, 2006. Accordingly, 37 C.F.R. §§ 1.702(a)(1) and 1.703(a)(1) is 989 days.

As seen in Exhibit A, the Office calculated this A delay period based on the date the requirements of 35 U.S.C. § 371(c) were completed, which was August 27, 2003. As a result, the Office measured an A delay of 776 days from October 28, 2004 to December 12, 2006. *See* Exhibit A. However, because 37 C.F.R. §§ 1.702(a)(1) and 1.703(a)(1) state that this delay is measured from the date the national stage commences under 35 U.S.C. § 371(b) or (f) and not the § 371(c) completion date, it is respectfully submitted that the Office's calculation is incorrect and this A delay is 989 days.

2. Delay Pursuant to 37 C.F.R. § 1.702(b) and § 1.703(b)

37 C.F.R. § 1.703(b) provides the method for calculating the patent term adjustment for the category of examination delay that occurs as a result of the failure of the Office to issue a patent within three years of the application's filing date or commencement of the national stage, which is provided for in 35 U.S.C. § 154(b)(1)(B) and 37 C.F.R. § 1.702(b) (this category of delay is hereinafter referred to as "B delay").

The present application commenced the national stage under § 371 on January 28, 2003. The patent was issued on a date (i.e., April 30, 2013) that was more than three years after the filing date. Because of this delay, applicant should have received an additional 2,649 days of patent term adjustment in accordance with 35 U.S.C. § 154(b)(1)(B) for the period of time between January 29, 2006 (one day after the three year date) and April 30, 2013.

However, based on the Office's prior interpretation of the statute, as stated in 37 C.F.R. § 1.703(b)(1), applicant had its patent term adjustment reduced as a result of filing an RCE on February 21, 2008, more than three-years after filing the application. Rather than calculating the B delay period as having an end date on the issue date (i.e. April 30, 2013), the Office determined the B delay period to end on the day before applicant filed an RCE (i.e. February 20, 2008). As a result, the Office calculated the B delay to equal 753 days. *See* Exhibit A.

In a recent decision by the U.S. District Court for the Eastern District of Virginia, the Office's interpretation of 35 U.S.C. § 154(b)(1)(B) was held to be incorrect and in excess of the Office's statutory authority. *Exelixis, Inc. v. Kappos*, 105 USPQ2d 1910 (E.D. Va. 2012). It was stated by the Court: "In sum, the plain and unambiguous language of [35 U.S.C. § 154(b)(1)(B)]

requires that the time devoted to an RCE tolls the running of the three year clock if the RCE is filed within the three year period. And, put simply, RCE's have no impact on [patent term adjustment] if filed after the three year deadline has passed. The PTO's ... interpretation of [35 U.S.C. § 154(b)(1)(B)] must be set aside as 'in excess of [its] statutory...authority' pursuant to 5 U.S.C. § 706(2)(A) and (C)." *Id.* at 1917 (emphasis added).

Because the filing of an RCE after the three-year period does not have an impact on a 35 U.S.C. § 154(b)(1)(B) patent term adjustment, applicant should have been granted the full period of B delay, as measured up to the issue date of April 30, 2013 rather than as measured up to the filing date of an RCE that occurred more than three years after the application filing date.

Therefore, based on the proper method of calculating the B delay as set forth above, applicant is entitled to a B delay of 2,649 days.

3. Delay Pursuant to 37 C.F.R. § 1.702(e) and § 1.703(e)

37 C.F.R. § 1.703(e) provides for the method of calculating patent term adjustment from the category an examination delay provided for in 35 U.S.C. § 154(b)(1)(C) and 37 C.F.R. § 1.702(e) (this category of delay is hereinafter referred to as "C delay"). 37 C.F.R. § 1.703(e) states: "The period of adjustment under § 1.702(e) is the sum of the number of days, if any, beginning on the date on which jurisdiction over the application passes to the Patent Trial and Appeal Board under § 41.35(a) of this chapter and ending on the date of a final decision in favor of the applicant by the Patent Trial and Appeal Board or by a Federal court in an appeal under 35 U.S.C. 141 or a civil action under 35 U.S.C. 145." Under 37 C.F.R. § 41.35(a), "[j]urisdiction over the proceeding passes to the Board upon the filing of a reply brief under § 41.41 or the expiration of the time in which to file such a reply brief, whichever is earlier."

A notice of appeal was filed in this application on June 30, 2009. A reply brief was filed on January 11, 2010, which is the date jurisdiction over the application passed to the Patent Trial and Appeal Board under § 41.35(a). A final decision in favor of applicant was made by the Board on October 24, 2012. Therefore, there was a C delay of 1,018 days that occurred from January 11, 2010 to October 24, 2012. This is a different result than the 1,213 days reached by the Office, which measured the delay period from the date the notice of appeal was filed on June 30, 2009 to October 24, 2012.

4. Overlap in A, B and C Delay Periods Pursuant to 37 C.F.R. §1.703(f)

The total examination delay provided by 35 U.S.C. 154(b)(1) is limited to the extent that the A, B and C delay periods “overlap”. See 35 U.S.C. 154(b)(2)(A). As explained in *Wyeth v. Kappos*, 93 USPQ2d 1257, 1260 (Fed. Cir. 2010), an “overlap” only happens when an A delay and a B delay (or a C delay) occur at the same time (i.e. on the same date).

For the present patent, the A delay period occurred from March 29, 2004 to December 12, 2006. The B delay period occurred from January 29, 2006 to April 30, 2013. The C delay period occurred from January 11, 2010 to October 14, 2012. The A and B delay periods therefore overlapped from January 29, 2006 to December 12, 2006 (a total of 318 days) and the B and C delay periods overlapped from January 11, 2010 to October 14, 2012 (a total of 1,018 days). Therefore, the combined A, B and C delays are subject to a reduction of 1,336 days for the overlapping days in the A, B and C delay periods. As a result of the above-described error in calculating the B delay, this number of overlapping days is inconsistent with the number of overlapping days calculated by the Office, which found 318 overlapping days and no overlap between B and C delay periods. See Exhibit A.

5. Total Examination Delay Pursuant to 37 C.F.R. §§ 1.702 and 1.703

In view of the foregoing, the total delay pursuant to 37 C.F.R. §§ 1.702 and 1.703 and 35 U.S.C. 154, as measured by adding the total number of days of applicant’s A delay period (i.e., 989 days), applicant’s B delay period (i.e., 2,649 days), and applicant’s C delay period (i.e., 1,018 days) and subtracting the number of overlapping days (i.e., 1,336 days) is 3,320 non-overlapping days.

**B. Applicant Delay Pursuant to 37 C.F.R. § 1.704**

Pursuant to 37 C.F.R. § 1.704, the period of patent term adjustment under § 1.703(a) through (e) is reduced by the period of applicant delays, as measured according to 37 C.F.R. § 1.704. As seen in Exhibit A, the Office has calculated the applicant delay to be 45 days.

Applicant respectfully submits that periods of applicant delay under § 1.704(b) occurred as follows:

(1) Applicant filed a response on June 12, 2007 (i.e. the date the response was received at the USPTO) to a non-final office action mailed December 12, 2006, and therefore more than three months after the date of the office action. This period of applicant delay equals 92 days.

(2) Applicant filed a response with an RCE on February 21, 2008 following a final office action mailed August 22, 2007, and therefore more than three months after the date of the office action. This period of applicant delay equals 91 days.

(3) Applicant filed a response on September 23, 2008 to a non-final office action mailed April 23, 2008, and therefore more than three months after the date of the office action. This period of applicant delay equals 62 days.

(4) Applicant filed a notice of appeal on June 30, 2009 following a final office action mailed December 31, 2008, and therefore more than three months after the date of the office action. This period of applicant delay equals 91 days.

Therefore, consistent with the Office's finding, it is respectfully submitted that the period of applicant delay is 336 days.

In accordance with 37 C.F.R. § 1.705(b)(2)(iv), applicant respectfully submits that with the exception of the applicant delay described above, there were not any circumstances during the prosecution of the application resulting in the patent that constituted a failure to engage in reasonable efforts to conclude processing or examination of the application as set forth in § 1.704 or circumstances constituting a failure to engage in reasonable efforts to conclude processing or examination of the application as set forth in § 1.704.

### **C. Terminal Disclaimer**

Pursuant to 37 C.F.R. § 1.705(b)(2)(iii), Applicant respectfully submits that this patent is not subject to a terminal disclaimer.

### **D. The Correct Patent Term Adjustment**

In accordance with 35 U.S.C. §§ 154(b)(1)(A) and (B) and 37 C.F.R. §§1.702-1.705 and for those reasons set forth above, the correct patent term adjustment for applicant's patent is the total non-overlapping examination delay (3,320) less the time for applicant delays (336 days). Therefore, the correct patent term adjustment should be 2,984 days.



# EXHIBIT A

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**Patent Term Adjustments**

Patent Term Adjustment (PTA) for Application Number: 10/343,333

Filing or 371(c) Date:	08-27-2003	Overlapping Days Between {A and B} or {A and C}:	318
Issue Date of Patent:	04-30-2013	Non-Overlapping USPTO Delays:	2424
A Delays:	776	PTO Manual Adjustments:	0
B Delays:	753	Applicant Delays:	336
C Delays:	1213	Total PTA Adjustments:	2088

**Patent Term Adjustment History Explanation Of Calculations**

Number	Date	Contents Description	PTO(Days)	APPL(Days)	Start
122.5	02-20-2008	PTA 36 Months	753		122.4
122.4	01-28-2003	Commencement Date			0
122	04-30-2013	Patent Issue Date Used in PTA Calculation			0
121	04-01-2013	Export to Final Data Capture			0
120	03-29-2013	Dispatch to FDC			0
119	03-29-2013	Application Is Considered Ready for Issue			0
118	03-28-2013	Issue Fee Payment Verified			0
117	03-28-2013	Issue Fee Payment Received			0
116	02-19-2013	Finished Initial Data Capture			0
115	01-07-2013	Export to Initial Data Capture			0
114	01-04-2013	Mail Notice of Allowance			0
113	01-04-2013	Office Action Review			0
112	01-04-2013	Office Action Review			0
111	01-04-2013	Issue Revision Completed			0
110	01-04-2013	Document Verification			0
109	01-04-2013	Notice of Allowance Data Verification Completed			0
108	01-03-2013	Reasons for Allowance			0
107	01-03-2013	Allowability Notice			0
103	09-14-2012	Information Disclosure Statement considered			0
102	09-14-2012	Information Disclosure Statement considered			0
101	08-25-2011	Information Disclosure Statement considered			0
100	12-23-2010	Information Disclosure Statement considered			0
98	10-24-2012	Mail BPAI Decision on Appeal - Reversed	1213		57
97	10-23-2012	BPAI Decision - Examiner Reversed			0
96	09-14-2012	Electronic Information Disclosure Statement			0
95	09-14-2012	Electronic Information Disclosure Statement			0
94	09-14-2012	Electronic Information Disclosure Statement			0
93	09-14-2012	Information Disclosure Statement (IDS) Filed			0
92	09-14-2012	Information Disclosure Statement (IDS) Filed			0
91	02-24-2012	Change in Power of Attorney (May Include Associate POA)			0
90	02-23-2012	Correspondence Address Change			0



89	08-25-2011	Information Disclosure Statement (IDS) Filed		0
88	08-25-2011	Information Disclosure Statement (IDS) Filed		0
87	12-23-2010	Information Disclosure Statement (IDS) Filed		0
86	12-23-2010	Information Disclosure Statement (IDS) Filed		0
85	11-26-2010	Correspondence Address Change		0
83	05-26-2010	Docketing Notice Mailed to Appellant		0
82	05-26-2010	Assignment of Appeal Number		0
81	05-24-2010	Appeal Awaiting BPAI Docketing		0
80	05-16-2010	TC completion of return order		0
79	05-16-2010	Appeal ready for BPAI docketing		0
78	04-30-2010	Mail Miscellaneous Communication to Applicant		0
77	04-29-2010	Miscellaneous Communication to Applicant - No Action Count		0
76	04-21-2010	Date Forwarded to Examiner		0
75	03-16-2010	Resp. to post-examiner ans		0
74	04-19-2010	Appeal Brief Review Complete		0
73	04-05-2010	Change in Power of Attorney (May Include Associate POA)		0
72	03-31-2010	Correspondence Address Change		0
71	03-05-2010	Mail Post-examiner ans. com		0
70	03-01-2010	Post-examiner ans. com		0
69	03-01-2010	Order Returning Undocketed Appeal to the Examiner		0
68	02-17-2010	Appeal Awaiting BPAI Docketing		0
67	02-16-2010	Mail Reply Brief Noted by Examiner		0
66	02-10-2010	Reply Brief Noted by Examiner		0
65	01-29-2010	Date Forwarded to Examiner		0
64	01-11-2010	Reply Brief Filed		0
63	12-07-2009	Exam. Ans. Review Complete		0
62	11-10-2009	Mail Examiner's Answer		0
61	11-09-2009	Examiner's Answer to Appeal Brief		0
60	09-18-2009	Appeal Brief Review Complete		0
59	09-18-2009	Date Forwarded to Examiner		0
58	08-31-2009	Appeal Brief Filed		0
57	06-30-2009	Notice of Appeal Filed	91	51
56	06-30-2009	Request for Extension of Time - Granted		0
55	03-17-2009	Mail Advisory Action (PTOL - 303)		0
54	03-16-2009	Advisory Action (PTOL-303)		0
53	03-04-2009	Date Forwarded to Examiner		0
52	03-02-2009	Amendment after Final Rejection		0
51	12-31-2008	Mail Final Rejection (PTOL - 326)		0
50	12-30-2008	Final Rejection		0
49	10-21-2008	Date Forwarded to Examiner		0

48	09-23-2008	Response after Non-Final Action	62	44
47	09-23-2008	Request for Extension of Time - Granted		0
46	09-10-2008	Change in Power of Attorney (May Include Associate POA)		0
45	09-09-2008	Correspondence Address Change		0
44	04-23-2008	Mail Non-Final Rejection		0
43	04-22-2008	Non-Final Rejection		0
41	04-07-2008	Case Docketed to Examiner in GAU		0
40	03-20-2008	Date Forwarded to Examiner		0
39	02-21-2008	Request for Continued Examination (RCE)	91	25
38	03-20-2008	Disposal for a RCE / CPA / R129		0
37	02-21-2008	Workflow - Request for RCE - Begin		0
36	01-24-2008	Mail Advisory Action (PTOL - 303)		0
35	01-22-2008	Advisory Action (PTOL-303)		0
34	01-09-2008	Date Forwarded to Examiner		0
33	12-26-2007	Amendment after Final Rejection		0
32	12-26-2007	Request for Extension of Time - Granted		0
29	11-08-2007	Mail Advisory Action (PTOL - 303)		0
28	11-07-2007	Advisory Action (PTOL-303)		0
27	10-24-2007	Date Forwarded to Examiner		0
26	10-22-2007	Amendment after Final Rejection		0
25	08-22-2007	Mail Final Rejection (PTOL - 326)		0
24	08-20-2007	Final Rejection		0
22	06-14-2007	Date Forwarded to Examiner		0
21	06-12-2007	Response after Non-Final Action	92	17
20	06-12-2007	Request for Extension of Time - Granted		0
17	12-12-2006	Mail Non-Final Rejection	776	7
16	12-08-2006	Non-Final Rejection		0
15	11-02-2006	Case Docketed to Examiner in GAU		0
14	08-15-2006	Case Docketed to Examiner in GAU		0
13	08-15-2006	Case Docketed to Examiner in GAU		0
12	05-12-2004	IFW TSS Processing by Tech Center Complete		0
10	05-11-2004	Case Docketed to Examiner in GAU		0
9	02-26-2004	Transfer Inquiry to GAU		0
8	12-07-2003	Cleared by OIPE CSR		0
7	08-27-2003	371 Completion Date		0
6	09-24-2003	Application Dispatched from OIPE		0
5	09-24-2003	Notice of DO/EO Acceptance Mailed		0
4	08-27-2003	Additional Application Filing Fees		0
3	08-27-2003	A statement by one or more inventors satisfying the requirement under 35 USC 115, Oath of the Applic		0
0.5	07-27-2001	International Filing date		0

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>	10343333			
<b>Filing Date:</b>	27-Aug-2003			
<b>Title of Invention:</b>	COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS			
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn			
<b>Filer:</b>	Steven Thomas Cooper/Annemarie Maher			
<b>Attorney Docket Number:</b>	990-001.563			
Filed as Large Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
Application for patent term adjustment	1455	1	200	200
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>200</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	16184536
<b>Application Number:</b>	10343333
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1608
<b>Title of Invention:</b>	COMPUTING DEVICE WITH IMPROVED USER INTERFACE FOR APPLICATIONS
<b>First Named Inventor/Applicant Name:</b>	Mathieu Kennedy Martyn
<b>Customer Number:</b>	20413
<b>Filer:</b>	Steven Thomas Cooper/Annemarie Maher
<b>Filer Authorized By:</b>	Steven Thomas Cooper
<b>Attorney Docket Number:</b>	990-001.563
<b>Receipt Date:</b>	28-JUN-2013
<b>Filing Date:</b>	27-AUG-2003
<b>Time Stamp:</b>	12:15:32
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$200
RAM confirmation Number	11586
Deposit Account	230442
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

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Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

**File Listing:**

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Patent Term Adjustment Petition	990-001-563_Request_for_Recalculation_of_PTA_with_statement_of_facts_as_filed_Jun-28-2013.pdf	47659 1bf39f435e683556e5cc3599dabf943961ed8d29	no	8
<b>Warnings:</b>					
<b>Information:</b>					
2	Patent Term Adjustment Petition	990-001-563_PTA_Exhibit_A.pdf	121349 80c17f9ca45e441d28458c42853d11111e93667b	no	4
<b>Warnings:</b>					
<b>Information:</b>					
3	Fee Worksheet (SB06)	fee-info.pdf	30503 e6dc3d9edac6957158d534962c79c352cf06377d	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			199511		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

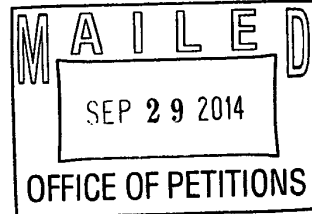
LGE0003931



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In re Patent No. 8,434,020 :
Martyn : REDETERMINATION OF
Issue Date: April 30, 2013 : PATENT TERM ADJUSTMENT
Application No. 10/343,333 :
Filed or 371(c): August 27, 2003 :
Attorney Docket No. 990-001.563 :
Title: COMPUTING DEVICE WITH :
IMPROVED USER INTERFACE FOR :
APPLICATIONS :

This is a response to applicants "Request for Reconsideration of Patent Term Adjustment" filed pursuant to 37 CFR 1.705(b) on June 28, 2013 requesting that the Office adjust the PTA from 2088 days to 2984 days. The Office has re-determined the PTA to be 2222 days.

This redetermination of patent term adjustment is not the Director's decision on the applicant's request for reconsideration within the meaning of 35 U.S.C. 154(b)(4) that triggers a 180-day period for applicant disagreeing with the Office redetermination to commence a civil action in the District Court for the Eastern District of Virginia.

The term of the above-identified patent is extended or adjusted by 2222 days.

Relevant Procedural History

On April 30, 2013, this patent issued with a patent term adjustment determination of 2088 days. On June 28, 2013, patentee timely filed this request for redetermination of patent term adjustment, requesting that patentee be granted a patent term adjustment of 2984 days.

Decision

Patentee agrees with the Office's calculation of applicant delay of 336 days. Patentee disputes the calculations for the period of A delay, B delay, C delay and overlap.

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The Office agrees with patentees' calculations regarding "A" delay. The Office amended 37 C.F.R. § 1.703(a) to read as follows, with emphasis added:

The period of adjustment under § 1.702(a) is the sum of the following periods:

- (1) The number of days, if any, in the period beginning on the day after the date that is fourteen months after the date on which the application was filed under 35 U.S.C. 111(a) or the date the national stage commenced under 35 U.S.C. 371(b) or (f) in an international application and ending on the date of mailing of either an action under 35 U.S.C. 132, or a notice of allowance under 35 U.S.C. 151, whichever occurs first[.]<sup>1</sup>

The changes made to 37 C.F.R. § 1.703(a) apply to all patents issued on or after January 14, 2013, and the instant application issued as a patent on April 30, 2013. Therefore, the changes made to 37 C.F.R. § 1.703(a) apply to this case.

In view thereof, the period of A-1 delay should be based on the date the national stage commenced ("Commencement Date") instead of the Date of Completion.

The correct Commencement Date is January 28, 2003. The date the national stage of an international application commences is addressed in MPEP § 1893.01, which states, with emphasis added,

Subject to 35 U.S.C. 371(f), commencement of the national stage occurs upon expiration of the applicable time limit under PCT Article 22(1) or (2), or under PCT Article 39(1)(a). See 35 U.S.C. 371(b) and 37 CFR 1.491(a). PCT Articles 22(1), 22(2), and 39(1)(a) provide for a time limit of not later than the expiration of 30 months from the priority date. Thus, *in the absence of an express request for early processing* of an international application under 35 U.S.C. 371(f) and compliance with the conditions provided therein, *the U.S. national stage will commence upon expiration of 30 months from the priority date of the international application.*

The January 28, 2003 papers did include a request for early processing however the requirements were not met prior to the expiration of the 30 months. It is noted that a Demand was filed thus delaying commencement to 30 months. Therefore, the national stage commenced upon the expiration of 30 months from the priority date.

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<sup>1</sup> See Revisions to Patent Term Adjustment (Interim Final Rule), 78 Fed. Reg. 19416, 19420 (April 1, 2013).



The national stage commenced upon the expiration of 30 months from the priority date of the international application. The date 30 months after July 28, 2000, which is the priority date of the international application, is January 28, 2003.

The correct period of A-1 Delay is 989 days, which is the number of days beginning March 29, 2004, the day after the date 14 months after the Commencement Date, and ending December 12, 2006.

The Office accorded 753 days of B delay based upon the Office's former interpretation of rule 37 CFR 1.703(b)(1) which excluded from the amount of "B" delay the period beginning on the date of filing of the continued examination and ending on the date of the issuance of the patent. The Federal Circuit reviewed the statutory interpretation of 35 U.S.C. § 154(b)(1)(B)(i) and issued a decision regarding the effects of a Request for Continued Examination ("RCE") on "B" delay in *Novartis AG v. Lee*, 740 F.3d 593 (Fed. Cir. 2014). In *Novartis*, the Federal Circuit agreed with the Office that "no ["B" delay] adjustment time is available for any time in continued examination, even if the continued examination was initiated more than three calendar years after the application's filing." *Novartis*, 740 F.3d at 601. However, the *Novartis* court found that if the Office issues a notice of allowance after an RCE is filed, the period after the notice of allowance should not be excluded from the "B" delay period but should be counted as "B" delay. *Id.* at 602.

Pursuant to the *Novartis* decision, the USPTO has determined that the patentee is entitled to 869 days of "B" delay. In this case, the commencement date of the application is January 28, 2003 and the patent issued on April 30, 2013. Thus, the application was pending for 3746 days. During this period, applicant filed an RCE on February 21, 2008. The Office mailed a single Notice of Allowance on January 4, 2013. Under 35 USC 154(b)(1)(B)(i), the time period consumed by continued examination ("RCE period") began on February 21, 2008 and ended on January 4, 2013, i.e., 1780 days. Subtracting the RCE period from the total number of days the application was pending results in  $3746 - 1780 = 1966$  days. Thus, for purposes of "B" delay, the application was pending for  $1966 - 1097$  [i.e., 3 years from the actual filing date] = 869 days beyond the three-year anniversary of the filing date. The 869-day period of "B" delay extends from January 29, 2006 to February 20, 2008 (753 days) and from January 5, 2013 to April 30, 2013 (116 days).

It is noted that the Office issued Revision of Patent Term Adjustment Provisions Relating to Appellate Review, 77 Fed. Reg. 49354 (Aug. 16, 2012). In the amended final rule, 37 CFR 1.703(b)(4), appeal time excluded from the "B" delay begins on the date on which jurisdiction over the application passes to the Patent Trial and Appeal Board under 37 CFR 41.35(a) and ends on the date that jurisdiction by the Patent Trial and Appeal Board ends under 37 CFR 41.35(b) or the date of the last decision by a Federal Court in an appeal under 35 U.S.C. § 141 or a civil action under 35 U.S.C. § 145, whichever is later. Accordingly, in an application in which the Board does not receive jurisdiction of the application, there is no reduction to the "B" delay under 37 C.F.R. § 1.703(b)(4).

The Office finds that there are 318 days of overlapping days of Office delay. In *Wyeth v. Kappos*, 591 F.3d 1364 (Fed. Cir. 2010), the United States Court of Appeals for the Federal Circuit determined that overlap occurs when the calendar days overlap between the “A” and “B” delays. The period begins January 29, 2006 and ends on December 12, 2006.

#### Overall PTA Calculation

##### Formula:

“A” delay + “B” delay + “C” delay - Overlap - applicant delay = X

##### USPTO’s Calculation:

$989 + 869 + 1018 - 318 - 336 = 2,222$

##### Patentee’s Calculation

$989 + 2649 + 1018 - 1336 - 336 = 2,984$

#### Conclusion

Patentee is entitled to PTA of two thousand two hundred twenty-two (2,222) days. Using the formula “A” delay + “B” delay + “C” delay - overlap - applicant delay = X, the amount of PTA is calculated as following:  $989 + 869 + 1018 - 318 - 336 = 2,222$  days.

Patentee has two (2) months from the date of the Office’s redetermination of patent term adjustment to request reconsideration of the patent term adjustment if patentee continues to disagree with this determination (no petition fee). This two month period is extendible under 37 CFR 1.136(a). The new/renewed request for reconsideration may be filed without any additional fee. However, patentee who responds more than two months after the mail date of the redetermination is required to pay the extension of time fee. After the period of time to respond has expired, the Office will sua sponte issue a certificate of correction adjusting the PTA to two thousand two hundred twenty-two (2,222) days.

Telephone inquiries specific to this matter should be directed to the undersigned at (571) 272-3215.

/Charlema Grant/  
Charlema Grant  
Attorney Advisor  
Office of Petitions

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**DRAFT COPY**

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT : 8,434,020 B2  
DATED : April 30, 2013  
INVENTOR(S) : Martyn

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover page,

[\*] Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 USC 154(b) by 2088 days

Delete the phrase "by 2088 days" and insert -- by 2222 days --

LGE0003936

AO 120 (Rev. 08/10)

TO: <b>Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450</b>	<b>REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK</b>
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Tyler on the following  
 Trademarks or  Patents. (  the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT Eastern District of Texas, Tyler
PLAINTIFF CORE WIRELESS LICENSING S.A.R.L.		DEFENDANT APPLE INC.,
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,713,476	4/29/2014	Core Wireless Licensing S.A.R.L.
2 8,498,671	7/30/2013	Core Wireless Licensing S.A.R.L.
3 8,434,020	4/30/2013	Core Wireless Licensing S.A.R.L.
4 7,693,552	4/6/2010	Core Wireless Licensing S.A.R.L.
5 7,072,667	7/4/2006	Core Wireless Licensing S.A.R.L.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 5,907,823	5/25/1999	Core Wireless Licensing S.A.R.L.
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT
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CLERK	(BY) DEPUTY CLERK	DATE
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 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

LGE0003937

AO 120 (Rev. 08/10)

TO: <b>Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450</b>	<b>REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK</b>
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Tyler Division on the following  
 Trademarks or  Patents. (  the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT Eastern District of Texas, Tyler Division
PLAINTIFF CORE WIRELESS LICENSING S.A.R.L.		DEFENDANT APPLE INC.,
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 5,946,634	8/31/1999	Core Wireless Licensing S.A.R.L.
2 6,477,151	11/5/2002	Core Wireless Licensing S.A.R.L.
3 6,633,536	10/14/2003	Core Wireless Licensing S.A.R.L.
4 7,782,818	8/24/2010	Core Wireless Licensing S.A.R.L.
5 RE44,828 E	4/8/2014	Core Wireless Licensing S.A.R.L.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT
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CLERK	(BY) DEPUTY CLERK	DATE
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 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

LGE0003938