United States Patent
Forstall et al.

MISSED TELEPHONE CALL MANAGEMENT FOR A PORTABLE MULTIFUNCTION DEVICE

Inventors: Scott Forstall, Mountain View, CA (US); Greg Christie, San Jose, CA (US);
Scott Herz, Santa Clara, CA (US);
Imran Chaudhri, San Francisco, CA (US);
Michael Matas, Palo Alto, CA (US); Marcel Van Os, San Francisco, CA (US); Stephen O. Lemay, San Francisco, CA (US)

Assignee: Apple Inc., Cupertino, CA (US)

Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 766 days.

Appl. No.: 11/769,694
Filed: Jun. 27, 2007

Prior Publication Data
Related U.S. Application Data
Provisional application No. 60/879,469, filed on Jan. 8, 2007, provisional application No. 60/879,253, filed on Jan. 7, 2007, provisional application No. 60/883,782, filed on Jan. 6, 2007, provisional application No. 60/824,769, filed on Sep. 6, 2006.

Int. Cl.
H04M 1/725 (2006.01)
H04M 1/56 (2006.01)
H04M 3/42 (2006.01)
H04M 3/00 (2006.01)

U.S. Cl. ........... 455/412.2; 379/142.01; 379/201.01; 379/418

Field of Classification Search ............... 455/412.2; 379/142.01, 201.01, 418

See application file for complete search history.

ABSTRACT
In one aspect of the invention, a computer-implemented method is disclosed for use in conjunction with a portable electronic device with a touch screen display. A list of items comprising missed telephone calls is displayed. Upon detecting user selection of an item in the list, contact information is displayed for a respective caller corresponding to the user selected item. The displayed contact information includes a plurality of contact objects that include a first contact object, comprising a telephone number object having a first telephone number associated with the missed telephone call, and a second contact object. Upon detecting user selection of the second contact object, a communication with the respective caller is initiated via a modality corresponding to the second contact object.

22 Claims, 64 Drawing Sheets

* cited by examiner
Portable Multifunction Device 100

Speaker 111  Optical Sensor 164  Proximity Sensor 166

Touch Screen 112

Microphone 113  Home 204

Figure 2
Figure 3
Portable Multifunction Device 100

Speaker 111  Optical Sensor 164  Proximity Sensor 166

Current Time 404

IM  Text 141  Photos 144  Camera 143  Videos 145

Weather 149-1  Stocks 149-2  Blog 142  Calendar 148

+ - x ÷  Calculator 149-3  Alarm 149-4  Dictionary 149-5  User-Created Widget 149-6

Phone 138  Mail 140  Browser 147  Music 146

Touch Screen 112

Microphone 113  Home 204

Figure 4
Portable Multifunction Device

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time

Instant Messages

Jane Doe ~ 504-1
Hola ~ 506-1

John Smith ~ 504-2
Are you going tonight? January 28, 2006

408-123-4567 ~ 504-3
Bye ~ 506-3

Bob Adams ~ 504-4
CU later ~ 506-4

Edit ~ 512

Touch Screen 112

Microphone 113
Home 204

Figure 5
Case 5:12-cv-00630-LHK   Document 1-5   Filed 02/08/12   Page 10 of 44

U.S. Patent
Sep. 6, 2011
Sheet 7 of 64
US 8,014,760 B2

Portable Multifunction Device

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time

Instant Messages

Jane Doe 504-1

R U there?

IM is the best.

January 30, 2006
8:30 AM

g2g

January 30, 2006
8:30 AM

Hola

How was your vacati

vacant vacate vacation vacat

How was your vacati

Send

vacant vacate vacation vacat

Figure 6B
Portable Multifunction Device

Speaker 111  Optical Sensor 164  Proximity Sensor 166

Current Time 404

Instant Messages

602 Jane Doe 504-1
R U there? 604-1

g2g 604-2
January 30, 2006
8:30 AM

606-1
IM is the best.

606-2

Hola

How was your vacat? 612

Send 614

vacant vacate vacation 622 vacat

1 2 3 4 5 6 7 8 9 0

- / : ; ( ) & @ ‘

630 632 634 636

626

Microphone 113 Home 204

Figure 6C
Portable Multifunction Device

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time 404

Instant Messages

Jane Doe ~ 504-1

R U there?

January 30, 2006
8:30 AM

IM is the best.

How was your vacat|

Send

vacant vacate vacation vacat

# $ % ^ * _ + = \ "

[ ] { } < > ` ~ |

ABC

Microphone 113
Home 204

Figure 6D
Figure 6E
Portable Multifunction Device

Current Time

Instant Messages

Jane Doe  Hola
Today

John Smith
Are you going tonight? January 28, 2006

Bye
January 27, 2006

Bob Adams
CU later
January 25, 2006
Remove

Done

Touch Screen

Microphone

Home
Portable Multifunction Device

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time

Groups
All Contacts

First Name
Last Name

Bob Adams

Darin Adler

Darin Amon

Kim Brook

Cancel
Other Number

Touch Screen 112

Figure 8A
Portable Multifunction Device

Current Time

Groups

All Contacts

First Name  Last Name

Aaron Jones

Arlene Bascom

Bob Adams

Bruce Walker

Cancel  Other Number

Touch Screen

Microphone  Home

Figure 8B
Portable Multifunction Device

Current Time

Cancel  Edit Name  Save

Ron
Smith

Microphone  Home

Figure 10C
Figure 10F

Portable Multifunction Device 100

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time 404

Edit Phone
Label

- home
- home fax
- main
- mobile
- other
- pager
- Treo
- work
- work fax

Edit~2630

Microphone 113
Home 204
Figure 10H

Portable Multifunction Device
100

Speaker 111
Optical Sensor 164
Proximity Sensor 166

2600H

402
Current Time 404

Edit Phone
Label

home
home fax
main
mobile
other

pager

Treo

work
work fax

Done 2638

Microphone 113
Home 204

Remove 2636

2634

2638
Portable Multifunction Device 100

Speaker 111  
Optical Sensor 164  
Proximity Sensor 166

Current Time

Info

Ringtone 2660° Save

Ringtone 1
Ringtone 2
Ringtone 3
Ringtone 4
Ringtone 5
Ringtone 6
Ringtone 7
Ringtone 8
Ringtone 9

Cancel

Microphone 113
Home 204

Figure 10K

2600K
Portable Multifunction Device

Current Time

All Contacts

Graphic

Bruce Walker

Work (408) 123-4567
Home (408) 974-1234
Work bwalker@company.com
Home brucew@aol.com

Edit

Figure 10L
Portable Multifunction Device

Current Time

All Contacts

Info

Graphic

Bruce Walker

Work (408) 123-4567
Home (408) 974-1234
Add new Phone
Work bwalker@company.com
Home brucew@aol.com
Add new Email
Add new Address
Add new Ringtone

Done

Delete Contact

Favorites
Recent
Contacts
Dial
Voice Mail

Microphone
Home

Figure 10M
Figure 11A
Portable Multifunction Device 100

Current Time 404

Favorites

- Kim Brook Mobile
- Arlene Bascom Mobile
- Bob Adams Mobile
- Bruce Walker Work
- Aaron Jones Other
- Darin Adler Work

Done

Figure 11B
Portable Multifunction Device

Speaker 111  Optical Sensor 164  Proximity Sensor 166

Current Time 404

Favorites

- Kim Brook  Mobile
- Arlene Bascom  Mobile
- Bob Adams  Mobile
- Bruce Walker
- 2714
- Aaron Jones  Other
- Darin Adler  Work

Done

Figure 11C
### Portable Multifunction Device

<table>
<thead>
<tr>
<th>Speaker 111</th>
<th>Optical Sensor 164</th>
<th>Proximity Sensor 166</th>
</tr>
</thead>
</table>

### Current Time

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:44 PM</td>
</tr>
</tbody>
</table>

### Recent Calls

<table>
<thead>
<tr>
<th>Name</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kim Brook</td>
<td>Jan 26 2:44 PM</td>
</tr>
<tr>
<td>Bruce Walker</td>
<td>Jan 26 10:53 AM</td>
</tr>
<tr>
<td>Bob Adams</td>
<td>Jan 26 10:30 AM</td>
</tr>
<tr>
<td>(408) 654-3210</td>
<td>Jan 26 9:16 AM</td>
</tr>
<tr>
<td>Darin Adler</td>
<td>Jan 26 9:09 AM</td>
</tr>
<tr>
<td>Aaron Jones</td>
<td>Jan 25 10:37 PM</td>
</tr>
<tr>
<td>Bruce Walker</td>
<td>Jan 25 9:32 PM</td>
</tr>
</tbody>
</table>

### Favorites

- Microphone 113
- Home 204

### Recent

- Missed

### Contacts

- Dial
- Voice Mail

---

**Figure 12A**
Portable Multifunction Device

Current Time

Recent Calls

Bruce Walker (2) Jan 26 10:53 AM
Darin Adler Jan 26 9:09 AM
Bob Adams Jan 25 6:43 PM
Kim Brook (3) Jan 25 5:30 PM
(408) 234-5678 Jan 25 4:48 PM
Arlene Bascom Jan 25 4:04 PM
Bruce Walker Jan 25 3:30 PM

Favorites  Recent  Contacts  Dial  Voice Mail

Microphone  Home

Figure 12B
Figure 12C

Recent Calls

Graphic

Bruce Walker

Jan 26 10:53 AM

Work (408) 123-4567

Home (408) 974-1234

Work bwalker@company.com

Home brucew@aol.com

Edit

Favorites

Recent

Contacts

Dial

Voice Mail

Microphone 113

Home 204
San Jose, CA
Jan 26 9:16 AM

Call (408) 654-3210

Add this phone number to:

Add New Contact
Add to Existing Contact
Check Call History

Figure 12D
Portable Multifunction Device

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time

(650) 132-2234
Calling . . .

Mute
Hold

Speaker
Conference

End Call

Favorites
Recent
Contacts
Dial
Voice Mail

Microphone 113
Home 204

Figure 14A
Portable Multifunction Device
100

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time 404

(650) 132-2234
Calling . . .

Mute 3006
Keypad 3016
Speaker 3010

Add Call 3018
Hold 3008
Contacts 3020

End Call 3014

Favorites
Recent
Contacts
Dial
Voice Mail

Microphone 113
Home 204

Figure 14C
Portable Multifunction Device

(650) 132-2234
00:55

Add Call
Hold
Contacts

End Call

Figure 14D
Figure 15A

Portable Multifunction Device
100

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time 404

Arlene Bascom
3102

Graphic for Arlene Bascom
3104

Decline 3106
Answer 3108

Favorites
Recent
Contacts
Dial
Voice Mail

Microphone 113
Home 204
Portable Multifunction Device

Speaker 111
Optical Sensor 164
Proximity Sensor 166

Current Time 404
(987) 654-3210

Decline Answer
3106 3108

Favorites Recent Contacts Dial
Microphone 113 Voice Mail

Home 204

Figure 15B