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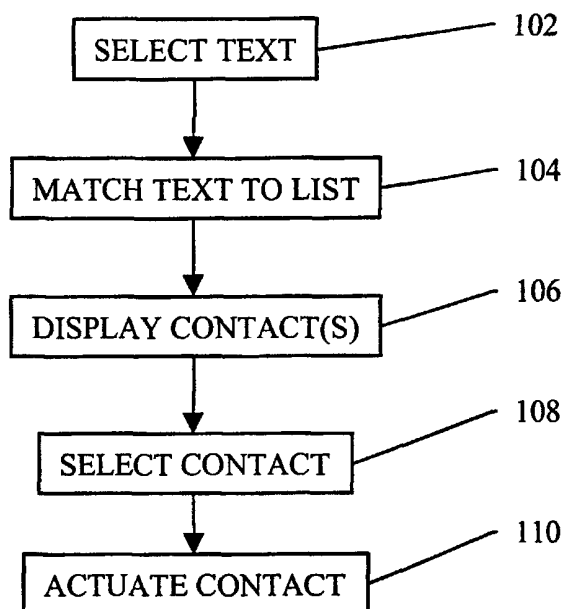
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[Continued on next page]

(54) Title: FIND AND DIAL



(57) Abstract: The operator of a communications device selects text (102) displayed by the device. The device matches (104) the text to a list of contacts and their associated names. "Contact" means a telephone number, an e-mail address, a uniform resource locator (URL), or the like. Contacts or their associated names that appear in both the text and the list are displayed (106), and the operator selects one (108) from this much-abbreviated list. The device then actuates the contact (110), either automatically or at the operator's command. To "actuate" a contact means to dial the telephone number, or start the e-mail program or the URL browser, or the like.



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FIND AND DIAL

Technical Field

- 5 [1001] This invention relates to multi-media communications, and has particular relation to initiating communication in a multi-media environment.

Background Art

- 10 [1002] In conventional technology, the operator of a telephone had a list of telephone numbers (and associated names), which he could dial simply by touching the appropriate number on a touch screen. Similarly, an e-mail operator had a list of e-mail addresses, and could start an e-mail program, with the desired address already filled in, simply by touching the address on a touch
15 screen. A World Wide Web operator could do the same by touching the appropriate uniform resource locator (URL) on a URL list.

BRIEF DISCLOSURE OF THE INVENTION

- 20 [1003] Applicant has noted that conventional technology requires the operator of a communications device to pull up a contact list before a contact on that list can be actuated. "Contact", as used herein, means a telephone number, an e-mail address, a uniform resource locator (URL), or any other indicator as to how a remote person may be contacted. An operator "actuates" the contact, as
25 used herein, by dialing the telephone number, or starting the e-mail program or the URL browser, or similarly causing the communications device to initiate communication with a remote device.

- [1004] This pulling up of a contact list is often necessary, but often it is not. The communications device may already have a block of text in it, and this text
30 (or some selectable portion of it), may have the contact already in it. For that matter, it may have the name (including a nickname or code name) of the remote person in it. If this text is already available, it makes more sense for the communications device to match it against the list, and to display only the contacts which appear (or whose associated names appear) in the text. The

operator may then select the desired contact from this much-abbreviated list, and actuate the selected contact.

BRIEF DESCRIPTION OF THE DRAWINGS

- 5 [1005] FIG. 1 is a block diagram of a method according to one embodiment of the present invention.
- [1006] FIG. 2 shows an alternative to FIG. 1.
- [1007] FIG. 3 shows another alternative to FIG. 1.
- [1008] FIG. 4 shows a desirable error trapping routine.
- 10 [1009] FIG. 5 shows the preferred details of actuating a contact.
- [1010] FIG. 6 shows a preferred apparatus for carrying out the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

- 15 [1011] FIG. 1 is a block diagram of a method according to one embodiment of the present invention. The operator selects a block of text (102), and the text is matched (104) to a list of contacts. Each contact has an associated name. As noted above, a "contact", as used herein, means a telephone number, an e-mail
- 20 address, a uniform resource locator (URL), or any other indicator as to how a remote person may be contacted. At least one contact and its associated name are displayed (106) to the operator. The contact and name is displayed only if either the contact or the name appears in the selected text.
- [1012] Preferably, the selected text consists of only a single word, such as the
- 25 first or last name of the desired person. If a person's name (or contact) includes a rare letter or cluster of letters, the selected text may consist of only that letter or cluster. Conventional – and rapid – software can then be used to match this word (or letter, or cluster) to the matching name(s) (or contact(s)) in the name (or contact) list. If adequate processing power is available (desktop device vs.
- 30 wireless device, for example), alternative searching schemes become more attractive. One such scheme is comparing the entire list of names against each and every word that appears in a selected text, even if it is several paragraphs long. Another scheme is first determining whether the selected text is more likely to be a name or a contact (and which type of contact), and then selecting

(as appropriate) the list of names or the list of contacts to be searched first. Other schemes will occur to the skilled worker in this art.

[1013] The operator then selects (108) one of the displayed contacts, and actuates (110) the selected contact. Also as noted above, an operator "actuates" the contact, as used herein, by dialing the telephone number, or starting the e-mail program or the URL browser, or similarly causing the communications device to initiate communication with a remote device.

[1014] FIG. 2 shows an alternative to FIG. 1. As before, the contact is displayed to the operator. Now, however, the operator's act of selecting a contact also (212) actuates it.

[1015] FIG. 3 shows another alternative to FIG. 1. Once the contacts have been displayed (106), the operator is given the opportunity to modify (314) the selected text. This opportunity is valuable when, for example, the operator has selected too small of a block of text, and the desired contact does not appear in that block. It is also valuable when the operator has selected too large of a block, and the one desired contact is buried beneath a large number of undesired contacts. If the operator chooses to modify the text, then he selects the text (102) and the method continues as in FIG. 1. If he chooses not to modify the text, then he selects the desired contact (108), and the method continues.

One convenient way for the operator to choose not to modify the text is to simply select one of the displayed contacts.

[1016] FIG. 4 shows a desirable error trapping routine. The operator, having selected a contact, is about to actuate it. Suppose, for example, that he wants to access his bank account on the World Wide Web. He selects what he thinks is a Uniform Resource Locator (URL), but what is actually a telephone number for that bank. A label is presented to him, showing "Dial". The operator realizes his mistake, selects the correct contact, and now the label appears as "Browse". He actuates the "Browse" label, and gets the URL, which he wanted, and not the telephone number that he did not want.

[1017] One method for doing this is, after contact selection (108), to inquire if the contact is a telephone number (416). If it is, display "Dial" (418). If not, inquire if the contact is an e-mail address (420). If it is, display "E-mail" (422). If not, the only remaining possibility is that the contact is a URL, and "Browse"

should be displayed (424). Regardless of the label displayed, actuation (110) takes place, as in FIG. 1

[1018] The label of FIG. 4 is easily provided by displaying it on a touch screen. In this case, touching the label on the touch screen may easily actuate
5 (110) the contact.

[1019] FIG. 5 shows the preferred details of actuating a contact. When the operator actuates a contact (108), suitable apparatus determines if the contact is a telephone number (526). If it is (528) it dials the number; if it is not, it determines if the contact is an e-mail address (530). If it is (532) it dials the
10 number; if it is not, it concludes that the contact must be a URL, and starts a browser (534). The contact having been actuated, the method of the present invention ends (536), and communication is established.

[1020] FIG. 6 shows a preferred apparatus for carrying out the invention. A touch screen (638) is connected via software (640) to a list (642) of contacts and
15 associated names. Text is displayed on the touch screen, and the operator selects whatever portion he desires. The software matches the selected text to the list. If either a contact or an associated name appears in both the selected text and the list, the software displays the contact and the name on the touch screen. Preferably all such contacts are displayed, but in any event at least one
20 such contact is displayed, if there is at least one such contact.

[1021] Experienced operators are likely to select exactly the text needed for the desired contacts. An inexperienced operator, however, will sometimes select too much text or too little text. If he selects too much text, then there will be too many contacts, and the desired one will not be immediately apparent.
25 This is especially true when, as is typical, the touch screen is fairly small. If he selects too little text, then there will be too few contacts; that is, the desired contact will not appear at all. The inexperienced operator will notice neither of these undesirable situations until the list of contacts has been displayed and it is seen to be wrong. The software therefore preferably includes an opportunity,
30 after the contacts have been displayed, for the operator to modify the text and repeat the process.

[1022] The operator selects a contact, preferable by touching it on the touch screen. The software then actuates the contact. This actuation can be initiated either by the simple touching of the contact, or by touching a separate label on

the touch screen after the contact has been selected. In this case, the label should display "Dial", "E-mail", or "Browse", depending on whether the contact is (respectively) a telephone number, an e-mail address, or a uniform resource locator (URL). The software would then (respectively) dial the
5 telephone number, start an e-mail program (with the e-mail address as the address to which the e-mail is to be sent), or start an Internet Browser (with the URL as the URL to be browsed).

[1023] FIG. 6 shows a double-headed arrow between the touch screen (638) and the software (640), since the software both receives touch commands from
10 the touch screen and displays text, names, and contacts on the touch screen. The arrow from the list (642) to the software (640) is shown as single headed, since the software only extracts names and contacts from the list, and does not modify the list. In practice, additional software would be provided to modify the list, either from the touch screen (638) or, preferably, a keyboard (not
15 shown). List modification is, however, not a part of the present invention.

[1024] The foregoing figures have assumed that the communications device is designed to operate on three media, namely voice, e-mail, and the World Wide Web. These three media are preferred, but even a single medium is within the scope of the present invention, and as many different media may be
20 used as the operator finds convenient.

Industrial Application

[1025] This invention is capable of exploitation in industry, and can be made
25 and used, whenever is it desired to conveniently initiate communication with a remote device. The individual components of the apparatus and method shown herein, taken separate and apart from one another, may be entirely conventional, it being their combination which is claimed as the invention.

[1026] While various preferred embodiments and modes of apparatus and
30 method have been described, the true spirit and scope of the invention are not limited thereto, but are limited only by the following claims and their equivalents, and such is claimed as the invention.

CLAIMS

1. A method for operating a communications device, *characterized in that*
2 the method includes:
 - (a) the operator selecting a text;
 - 4 (b) matching the text to a list of contacts and associated names;
 - (c) displaying to the operator at least one contact and its associated
6 name if either the contact or the name appears in the selected text;
 - (d) the operator selecting a contact; and
 - 8 (e) the operator actuating the selected contact.
2. The method of claim 1, *further characterized in that* the operator's act of
2 selecting a contact also actuates the selected contact.
3. The method of claim 1, *further characterized in that* the method further
2 includes, after the act of displaying to the operator at least one contact
and its associated name, the acts of:
 - 4 (a) offering an opportunity for the operator to modify the selected
text; and
 - 6 (b) repeating acts (b) through (e) of claim 1 if the operator accepts the
opportunity.
4. The method of claim 1, *further characterized in that* the method further
2 includes, after the act of the operator selecting a contact, the acts of:
 - (a) if the contact is a telephone number, displaying a "Dial" label;
 - 4 (b) if the contact is an e-mail address, displaying an "E-mail" label;
and
 - 6 (c) if the contact is a uniform resource locator (URL), displaying a
"Browse" label.
5. The method of claim 4, *further characterized in that* the act of the
2 operator actuating the selected contact includes the act of the operator
touching the label.

6. The method of claim 1, *further characterized in that* the method further includes, after the act of the operator actuating the selected contact, the acts of:
- (a) if the contact is a telephone number, dialing the number;
 - (b) if the contact is an e-mail address, starting an e-mail program with the e-mail address as the address to which the e-mail is to be sent; and
 - (c) if the contact is a uniform resource locator (URL), starting an Internet browser with the URL as the URL to be browsed.
7. A communications device, *characterized in that* the communications device includes:
- (a) a touch screen;
 - (b) a list of contacts and associated names; and
 - (c) software configured such that, when an operator of the communications device selects text appearing in the touch screen, the software:
 - (1) matches the text to the list;
 - (2) displays to the operator, on the touch screen, at least one contact and its associated name if either the contact or the name appears in the selected text;
 - (3) allows the operator to select a contact by touching a selection portion of the touch screen; and
 - (4) actuates the selected contact in response to the operator touching an actuation portion of the touch screen.
8. The communications device of claim 7, *further characterized in that* the actuation portion of the touch screen is the selection portion of the touch screen.
9. The communications device of claim 7, *further characterized in that* the software is further configured, after displaying to the operator at least one contact and its associated name, to:
- (a) offer an opportunity for the operator to modify the selected text; and

- 6 (b) repeat acts (c1) through (c4) of claim 7 if the operator accepts the opportunity.

10. The communications device of claim 7, *further characterized in that* the
2 actuation portion of the touch screen is:

- (1) a "Dial" label if the contact is a telephone number;
4 (2) an "E-mail" label if the contact is an e-mail address; and
6 (3) a "Browse" label if the contact is a uniform resource locator (URL).

11. The communications device of claim 7, *further characterized in that* the
2 software is further configured, after the operator actuates the selected contact, to:

- 4 (a) if the contact is a telephone number, dial the number;
(b) if the contact is an e-mail address, start an e-mail program with
6 the e-mail address as the address to which the e-mail is to be sent; and
8 (c) if the contact is a uniform resource locator (URL), start an Internet browser with the URL as the URL to be browsed.

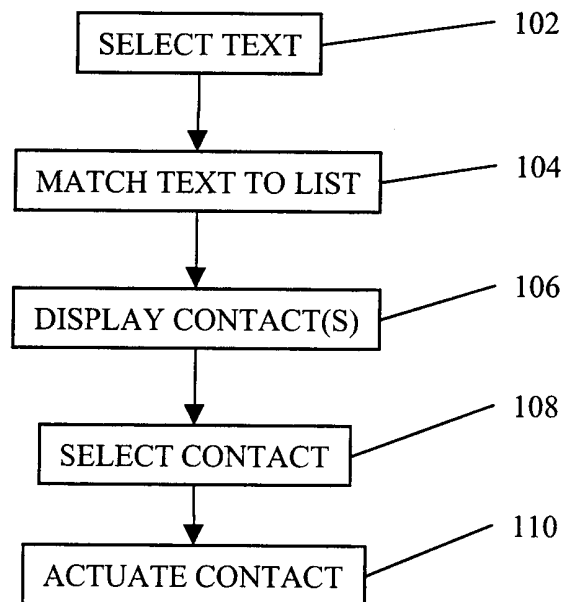
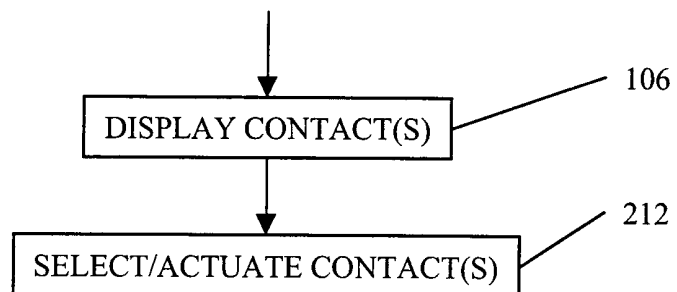
12. A communications device, *characterized in that* the communications
2 device includes:

- (a) means, responsive to an operator of the communications device
4 selecting a text, for matching the text to a list of contacts and associated names;
6 (b) means for displaying to the operator at least one contact and its associated name if either the contact or the name appears in the
8 selected text;
(c) means for the operator to select a contact; and
10 (d) means for the operator to actuate the selected contact.

13. The communications device of claim 12, *further characterized in that* the
2 means for selecting a contact includes the means for actuating the selected contact.

14. The communications device of claim 12, *further characterized in that* the
communications device further includes means, responsive to the act of
displaying to the operator at least one contact and its associated name,
for:
- (a) offering an opportunity for the operator to modify the selected
text; and
 - (b) repeating the operations of means (b) through (d) of claim 12 if the
operator accepts the opportunity.
15. The communications device of claim 12, *further characterized in that* the
communications device further includes means, responsive to the act of
operator selecting a contact, for:
- (a) if the contact is a telephone number, displaying a "Dial" label;
 - (b) if the contact is an e-mail address, displaying an "E-mail" label;
and
 - (c) if the contact is a uniform resource locator (URL), displaying a
"Browse" label.
16. The communications device of claim 15, *further characterized in that* the
means for actuating the selected contact includes means responsive to
the act of the operator touching the label.
17. The communications device of claim 12, *further characterized in that* the
communications device further includes means, responsive act of the
operator actuating the selected contact, for:
- (a) if the contact is a telephone number, dialing the number;
 - (b) if the contact is an e-mail address, starting an e-mail program with
the e-mail address as the address to which the e-mail is to be sent;
and
 - (c) if the contact is a uniform resource locator (URL), starting an
Internet browser with the URL as the URL to be browsed.

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FIG. 1FIG. 2

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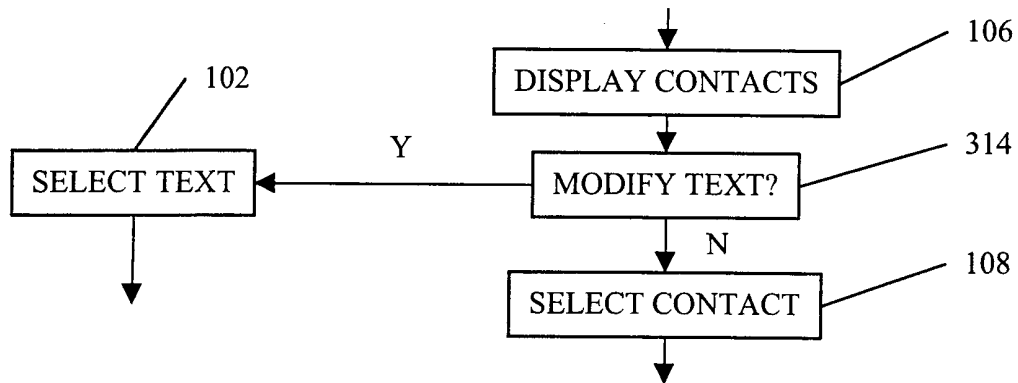


FIG. 3

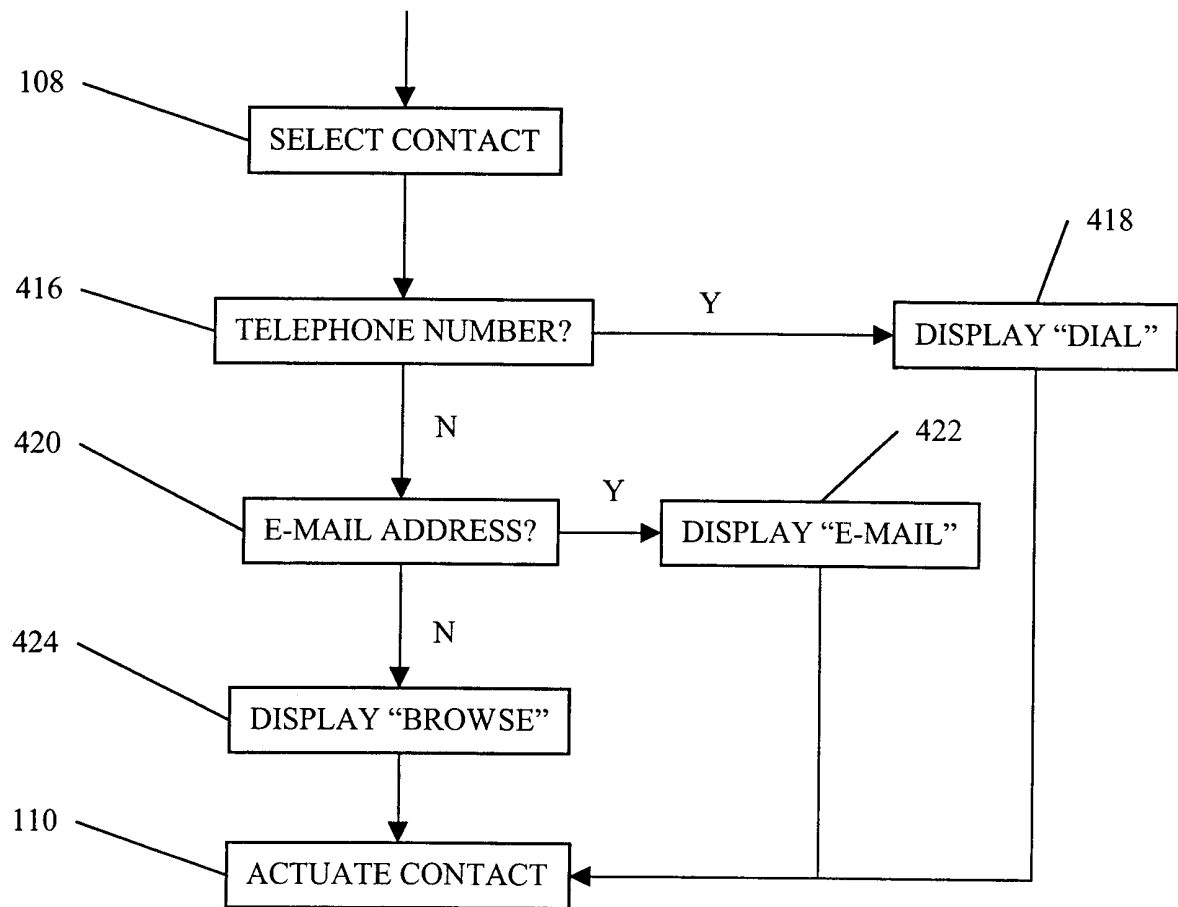


FIG. 4

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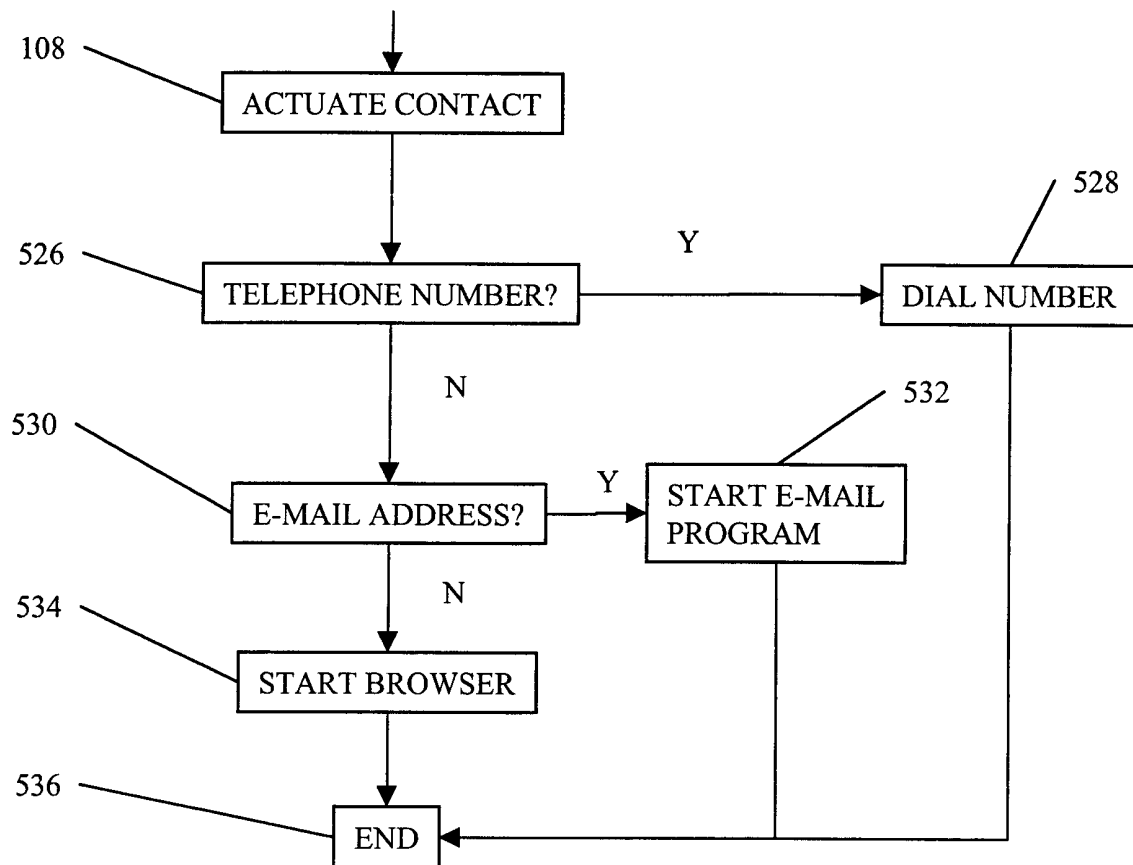


FIG. 5

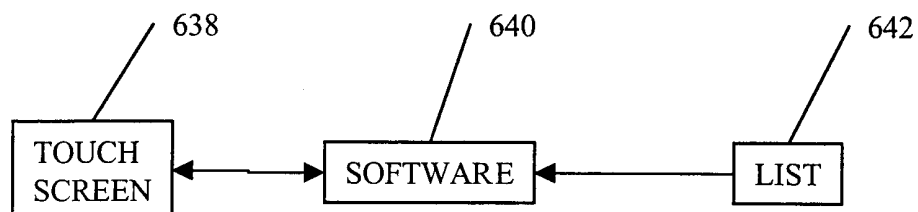


FIG. 6