



(51) International Patent Classification:
G06F 17/30 (2006.01)

(21) International Application Number:
PCT/IB2009/055354

(22) International Filing Date:
26 November 2009 (26.11.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0821626.9 26 November 2008 (26.11.2008) GB

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: An Apparatus and Method for Copying Data to a File

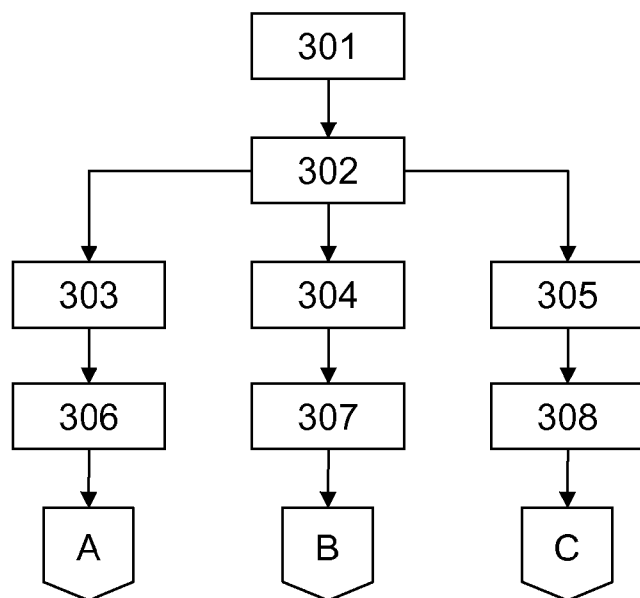


Fig. 4

(57) Abstract: An apparatus which is arranged to compare a timestamp of a file with a database of calendar entries and, in the event of a match between the timestamp and at least one calendar entry, to copy data of said at least one calendar entry to said file.



Published:

— *with international search report (Art. 21(3))*

An apparatus and method for copying data to a file

Examples of the present invention relate to an apparatus which is configured to copy data to files. Some examples embodiments can apply tags to media.

5 Examples of the invention also relate to a corresponding method.

Background to the Invention

Some media file formats enable information to be stored with the media. For
10 example, an image may have date and time information associated with it. A user may add an image title or image description. This information is generally referred to as metadata and can be read and written to by media reading applications. Some metadata is recorded automatically when a media file is created.

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Summary of the Examples of the Invention

In an example embodiment, the present invention provides an apparatus comprising: at least one processor; and at least one memory including
20 computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus at least to: compare a timestamp of a file with a database of calendar entries; and in the event of a match between the timestamp and at least one calendar entry, to copy data of said at least one calendar entry to said file.

25

In an example, said data is an event description.

In an example, the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to
30 copy said event description to file user metadata.

In an example, the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to copy said data automatically.

- 5 In an example, the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to prompt a user of said apparatus prior to copying said data.

- 10 In an example, said file is generated on the basis of an image captured by a camera and the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus automatically compare the timestamp of a said file with the database of calendar entries following generation of said file.

- 15 In an example, said file is transferred to said device from another device and the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to automatically compare the timestamp of said file with the database of calendar entries following transfer.

20

In an example, the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to provide a user with an option as to which calendar entry to use in the event that more than one matching calendar entry is located.

25

- In an example, the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to check any files transferred to the apparatus for existing user metadata, and, in the event that existing user metadata exists a) keep existing data in addition to copying any data of any matching calendar entries; or b) deleting existing data and copying any data of any matching calendar entries.
- 30

In an example, the apparatus further comprises a database of tags, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to automatically apply tags to files in the event of a match between a file
5 description and a tag.

In an example, the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to create a new calendar entry, using the timestamp of a transferred file and the
10 user metadata of the said file, in the event that the calendar contains no events matching the timestamp of the said file.

In a further example embodiment, the present invention provides an apparatus configured to: compare a timestamp of a file with a database of calendar
15 entries; and in the event of a match between the timestamp and at least one calendar entry, to copy data of said at least one calendar entry to said file.

In a further example embodiment, the present invention provides a method comprising: comparing a timestamp of a file with a database of calendar
20 entries; and in the event of a match between the timestamp and at least one calendar entry, copying data of said at least one calendar entry to said file.

In an example, the method further comprises copying said data automatically in the event of a match.
25

In an example, the method further comprises prompting a user prior to copying said data.

In an example, the method further comprises capturing an image using a
30 camera, generating a file on the basis of the captured image and automatically comparing the timestamp of a said file with the database of calendar entries.

In an example, the method further comprises transferring a file to a device from another device and automatically comparing the timestamp of said file with the database of calendar entries.

- 5 In a further example embodiment, the present invention provides an apparatus configured to carry out the method described above.

In a further example embodiment, the present invention provides an apparatus comprising: means for comparing a timestamp of a file with a database of
10 calendar entries; and means for, in the event of a match between the timestamp and at least one calendar entry, copying data of said at least one calendar entry to said file.

In a further example embodiment, the present invention provides a computer
15 program product comprising a computer-readable medium bearing computer program code embodied therein for use with a computer, the computer program code comprising: code for comparing a timestamp of a file with a database of calendar entries; and code for, in the event of a match between the timestamp and at least one calendar entry, copying data of said at least
20 one calendar entry to said file.

In a further example embodiment, the present invention provides a computer program comprising: code for comparing a timestamp of a file with a database of calendar entries; and code for, in the event of a match between the
25 timestamp and at least one calendar entry, copying data of said at least one calendar entry to said file.

In a further example embodiment, the present invention provides a computer program product comprising a computer-readable medium bearing the
30 computer program code described above for use with a computer.

In a further example embodiment, the present invention provides a computer program configured such that when executed by a computer they cause the computer to operate in accordance with the method described above.

- 5 In a further example embodiment, the present invention provides a computer readable medium storing the computer program described above.

In a further example embodiment, the present invention provides an apparatus substantially as described hereinbefore and as shown in Figures 1 to 8.

10

In a further example embodiment, the present invention provides a method substantially as described hereinbefore and as shown in Figures 1 to 8.

- 15 In a further example embodiment, the present invention provides a computer program product substantially as described hereinbefore and as shown in Figures 1 to 8.

20 This summary provides examples of the invention which are not intended to be limiting on the scope of the invention. The features of the invention described above and recited in the claims may be combined in any suitable manner. The combinations described above and recited in the claims are not intended to limit the scope of the invention.

25 Features and advantages associated with the examples of the invention will be apparent from the following description of some examples of the invention.

Brief Description of the Drawings

30 Examples of the invention will now be described in more detail, by way of example, with reference to the accompanying drawings in which:

Figure 1 shows a front view of a mobile device in accordance with an example embodiment of the invention;

Figure 2 shows an example of a rear view of the mobile device shown in Figure 1;

- 5 Figure 3 is an example schematic diagram of the components of the mobile device shown in Figure 1;

Figure 4 is a flow chart showing an example method of operation of the device shown in Figures 1 to 3;

10

Figure 5 is a further flow chart showing an example method of operation of the device shown in Figures 1 to 3;

- 15 Figure 6 is a further flow chart showing an example method of operation of the device shown in Figures 1 to 3;

Figure 7 is a further flow chart showing an example method of operation of the device shown in Figures 1 to 3; and

- 20 Figure 8 is a further flow chart showing an example method of operation of the device shown in Figures 1 to 3.

Detailed Description of Examples of the Invention

- 25 A mobile device 101, which is arranged to operate in accordance with an example embodiment of the present invention, is shown in Figure 1. In this example, the mobile device 101 comprises an outer casing 102, which includes an earphone 103 and a microphone 104. In this example, the mobile device 101 also includes a keypad 105 and a display 106. In this example,
- 30 the keypad 105 enables a user to enter information into the mobile device 101 and instruct the mobile device to perform the various functions which it provides. For example, a user may enter a telephone number, or select another mobile device from a list stored on the mobile device 101, as well as

perform functions such as initiating a telephone call. Figure 2 is a rear view of mobile device 101, in this example. In this example, the device 101 further includes a camera 107.

5 Figure 3 is a schematic diagram showing the components of the mobile device 101 according to an example embodiment. In this example, the components of the mobile device 101 include the earphone 103, the microphone 104, the keypad 105, the display 106 and the camera 107. In this example, the mobile device 101 also includes a system bus 108 to which the components are
10 connected and which allows the components to communicate with each other. In this example, the components are shown to communicate via a single system bus 108. In another example, in practice the mobile device may include several buses to connect the various components. In this example, the device also includes an application processor 109, a baseband processor
15 110, memory 111, an earphone controller 112, a microphone controller 113, a display controller 114, a keyboard controller 115, and a camera controller 116. In this example, the device 101 also includes a mobile telephone radio 117 and a storage device controller 118. In this example, the application processor 109 is for running an operating system and user applications. In
20 this example, the baseband processor 110 is for controlling a telephony stack. In this example, the mobile telephone radio 117 is also connected to an antenna 119. In this example, the mobile device 101 is arranged to communicate, via radio 117, with a base station of a mobile phone network. In this example, the storage device controller 118 is connected to a storage
25 device 120 which may be an internal hard drive or a removable storage device such as a flash memory card. In this example, the mobile device 101 also includes a Bluetooth radio 121 which is connected to an antenna 122.

In this example, the device 101 includes a camera application. In this
30 example, the application is stored in Read Only Memory (ROM) which forms part of the memory 111. In this example, the camera application controls the camera 107. In this example, the application performs the functions including

control of camera settings, image capture format, image capture and image storage.

In this example, the camera application is arranged to store images in JPEG/EXIF file format. In this example, EXIF files include information regarding the image. In this example, this information is referred to as metadata. In this example, the EXIF format includes information which is automatically generated by the camera. Examples of such metadata include camera make and model, photo date and time, exposure and aperture settings, etc. In this example, a user may add information to an EXIF file such as a title, keywords and a description. In this example, user generated keywords may be applied at a time somewhat after the time when the photo was taken. In this example, this data is referred to as user metadata.

In this example, the device 101 also includes an iCalendar compatible calendar application. In this example, such an application includes a database of event and to-do entries which are stored in accordance with the iCalendar format (RFC 2445). In this example, a typical event entry may be stored as follows:

```
BEGIN:VCALENDAR
VERSION:2.0
BEGIN:VEVENT
DTSTART:20080416T190000Z
DTEND:20080417T020000Z
SUMMARY:Matthew's Birthday Party
END:VEVENT
END:VCALENDAR
```

In this example, the format of the data is iCalendar version 2. In this example, the entry is an event which starts at 7pm on 16 April 2008 and finishes at 2am on 17 April 2008. In this example, the title of the event is "Matthew's Birthday party".

In this example, the camera application is arranged to apply information from the calendar to files it creates. In this example, this process may be referred to as tagging. In this example, the camera application includes a menu system which provides various options for a user in this regard. In this example, the camera includes a file tagging master control. In this example, this control can be set to "on" or "off". In this example, when the control is switched off, the camera application does not transfer any information to the files it creates. In this example, when the control is set to "on", it applies tags to files in accordance with the options described below. This process is described in connection with Figure 4. In this example, the process begins when a user takes a picture (block 301).

In this example, when the master control is set to "on", the camera application automatically checks whether or not the calendar has any entries which match the date and time of the image which has been captured (block 302). In this example, the camera application checks whether or not the timestamp stored in the EXIF file matches the criteria expressed in equation 1.

$$DTSTART \leq timestamp \leq DTEND \quad (1)$$

20

In this example, following this check, the camera application arrives at one of the following three outcomes:

- 1) no matches (block 303);
- 2) a single match (block 304); and
- 25 3) more than one match (block 305).

In this example, at this point, an alert is displayed informing the user of the outcome (blocks 306 to 308). In this example, the sequence of events which follow depends on various choices which a user has made, or does make, as will be described in the following.

30

Figure 5 shows an example of the process in the event that no calendar entries are located. In this example, the camera application includes menu

options relating to what to do in the event that no calendar entry exists. In this example, the menu options are:

- a) take no action without prompting;
- b) search for matching media without prompting; and
- 5 c) prompt user.

In this example, if the user previously selected option a), the camera application takes no action and stores the image file without tagging it with any calendar information (block 309).

10

In this example, if the user previously selected option b), the camera application searches for image files which have similar time and date information to the newly captured image (block 310). In this example, the camera application searches for an image file having the closest timestamp to the captured image. In this example, once the application has located a file, it asks the user if they wish to use the description of the image which has been located (block 311). In this example, the user is provided with the options "yes", "no" or "cancel". In this example, if the user selects "yes", the description of the matched file is applied to the captured image (block 312). In this example, if the user selects "no", the next closest match is selected and the options repeated (block 313). In this example, if the user selects "cancel", the process is ended (314). In this example, the camera application is set to search up to a maximum of one day in the past. In this example, if no file is located, the user is informed and the file is saved without any tag (block 25 315).

In this example, if the user previously selected option c), the camera application alerts the user that no calendar information exists, and asks the user whether to take no action or search for similar media (block 316). In this example, in the event that the user chooses to take no action, the process returns to block 309. In this example, in the event that the user chooses to search for similar media, the process returns to block 310.

30

Figure 6 shows the process which occurs if a single calendar event is located, in an example embodiment. In this example, the process depends on prior choices made by the user in the camera application menu system. In this example, the menu options available are:

- 5 a) use calendar entry without prompting;
- b) ignore calendar entry without prompting; and
- c) prompt user and ask whether to use entry or not.

In this example, if the user previously chose option a), the camera application
10 copies the event summary ("SUMMARY", e.g. Matthew's Birthday Party) and
 enters this information into the description field of the EXIF file (block 317). In
 this example, the user can also choose to be prompted in this scenario. In
 this example, if the user chooses to be prompted, a window is displayed
15 prompting the user that a match has been found and that the summary
 information is being copied. In this example, in this event, the user is not able
 to cancel the transfer. In this example, the process then ends with the image
 file being stored with the summary information (block 318).

In this example, if the user previously selected option b), the entry is ignored
20 and the no information is transferred (block 319). In this example, the menu
 system provides the option for a user to be alerted to the fact that calendar
 entries are being ignored.

In this example, if the user previously selected option c), the camera
25 application prompts the user to choose whether to use the calendar entry or
 ignore it (block 320). In this example, the prompt provides details of the
 calendar entry which matches the timestamp of the captured image. In this
 example, if the user chooses to transfer the calendar event summary, the
 process reverts to block 317. In this example, if the user chooses to ignore
30 the entry, the process reverts to block 319. In this example,, if a matched
 event does not in fact relate to a captured image, a user can choose to ignore
 it.

Figure 7 shows the process which occurs if two or more calendar events are located which match the timestamp of the captured image, in an example embodiment. In this example, the camera application menu system provides a user with options in relation to what the application should do in the event that two or more events are located. In this example, the options are:

- a) use all calendar entries without prompting;
- b) ignore all calendar entries without prompting; and
- c) prompt user to select event.

10 In this example, if the user previously chose option a), the camera application copies the event summary for all matching events and enters this information into the description field of the EXIF file (block 321). In this example, the user can also choose to be prompted in this scenario. In this example, if the user chooses to be prompted, a window is displayed prompting the user that a
15 match has been found and that the summary information is being copied. In this example, the user is not able to cancel the transfer. In this example, the details of the event information which is being transferred may also be displayed. In this example, the process then ends with the image file being stored with the transferred summary information (block 322).

20

In this example, if the user previously selected option b), the entries are ignored and the no information is transferred (block 323). In this example, the menu system provides the option for a user to be alerted to the fact that calendar entries are being ignored.

25

In this example, if the user previously selected option c), the camera application prompts the user to choose one or more of the calendar entries to be ignored (block 324). In this example, the prompt provides details of the calendar entries which match the timestamp of the captured image. In this
30 example, the user may choose one or more of the entries to transfer. In this example, the user may choose to ignore all entries. In this example, if the user chooses to transfer one or more calendar event summaries, the camera application copies the selected event information and the captured image is

saved (block 325). In this example, if the user chooses to ignore the entry, the process reverts to block 323. In this example, if the matched events do not in fact relate to a captured image, a user can choose to ignore them.

- 5 In accordance with this example embodiment, a camera application is provided which utilises information stored on the device to “tag” newly captured images. In this example, this is quicker and more efficient than a user having to individually tag each image. In this example, the information is also specific to the user and uses user information rather than arbitrary
10 location tags or image recognition tags.

In another example embodiment, the mobile device 101 includes a file transfer application. In this example, this application is arranged to transfer files to and from the device using technologies such as Bluetooth. In this example, the file
15 transfer application includes a menu system which provides a user with options relating to file transfer. In this example, the menu system provides a user with options regarding the use of calendar information to “tag” incoming files.

- 20 In this example, the menu system provides options in relation to the various scenarios which occur when transferring a file to the mobile device 101. In this example, the menu system includes a file tagging master control. In this example, if master control is switched “off”, the file transfer application does not transfer file calendar information. In this example, files are transferred to
25 the device and metadata is not altered by the application. In this example, if the master control is switched “on”, the file transfer application operates in accordance with selections made in other menus, as will be described below.

An example of the file transfer process will be described with reference to
30 Figure 8. In this example, the process begins when a file is transferred to the mobile device 101 (block 400). In this example, when a file is transferred to the device the file transfer application checks whether or not the file has user metadata (in the form of an EXIF file description) associated with it (block

401). In this example, the menu system includes a set of options which relate to what the application should do when a file is determined to have user metadata associated with it already. In this example, the menu options are:

- a) keep existing metadata;
- 5 b) keep existing metadata and use calendar entries;
- c) delete existing metadata and use calendar entries; and
- d) delete existing metadata.

In this example, if the user previously selected option a), the file transfer
10 application stores the incoming file without altering the user metadata (402).
In this example, the user can choose to be prompted that this has occurred.

In this example, if the user previously selected option b) the file transfer
application checks the calendar for entries with matching timestamps (block
15 403). In this example, the file transfer application automatically checks
whether or not the calendar has any entries which match the date and time of
the file which is being transferred to the mobile device 101. In this example,
the file transfer application checks whether or not the timestamp stored in the
imported files metadata matches the criteria expressed in equation 1, as noted
20 above.

In this example, at this point, three options are possible. Either no match is
located (block 404), a single match is located (block 405), or two or matches
are located (block 406). In this example, the file transfer application then
25 operates in the same manner as the camera application as described above
and shown in Figures 5, 6 and 7.

In this example, if the user previously selected option c), the file transfer
application operates in the same way as for option b) except that the existing
30 metadata is deleted. In this example, this process therefore begins at block
403.

In this example, if the user previously selected option d), the existing metadata is deleted but no calendar information is transferred (block 407).

5 In this example, in a separate menu, a user can choose whether or not to be prompted about these actions. In other words, a user can choose for these actions to occur automatically, or for the user to be prompted before action is taken. In this example, the user can select to be prompted only if data is going to be overwritten.

10 In this example, if no metadata is associated with the incoming file (block 408), the file transfer application operates in accordance with previously selected user options. In this example, the menu options are:

- a) take no action; and
- b) use calendar entries.

15

In this example, if a user selects “take no action”, then files are transferred to the mobile device without modification (block 409). In this example, if a user selects “use calendar entries” the file transfer application compares the timestamp included with a file’s metadata with the calendar in accordance with
20 block 403.

In an example embodiment, the file transfer application includes further options relating to what the application should do in the event that incoming files includes user metadata, but when the calendar includes no matching
25 events. In this example, the menu system provides the user with an option to copy user meta data to the calendar. In this example, if the user copies a single file, the file transfer application will ask the user whether or not to copy the file description to the calendar as an event. In this example, if the user copies several files, each having the same description, the file transfer
30 application creates an event in the calendar with DSTART and DEND information matching the timestamp of the earliest and latest file. In this example, if the user transfers a number of files having two or more

descriptions, the file transfer application will give the user the option to create events relating to each description.

5 In an example embodiment, the file transfer application may transfer groups of files. In this example, the application is arranged to detect when a group of files all match a single event. In this example, in this case, the application will give the user the option to “tag” all of the selected files with the same event description.

10 In example embodiments, the above described applications can be used with a variety of media types, in particular, images and video.

In the above described example embodiments, the term “tagging” has been used in a generic sense. Specifically, a “tag” may be a word or phrase
15 associated with a particular file. “Tagging” may have a more specific meaning. A “tag” may be a word associated with a particular file in order to facilitate searching. In this example, a file which is compatible with “tags” may have a tag field in which a user can enter single words which relate to that file. In one example, if a file relates to “Matthew’s Birthday Party”, a user may
20 choose to tag the file with the term “birthday”. In this example, certain applications can use tags to analyse the content of a group of files. For example, a list of tags can be produced indicating how many images contain the tag “birthday”.

25 In a further example embodiment, a mechanism is provided for generating new tags for media files. In this example, the mobile device 101 is provided with a tagging assist application. In this example, the application provides the mechanism by which tags are applied to files. In this example, the application works in combination with the applications described above to allow tags to be
30 applied to media files. In this example, the application provides a database for storing tags. In this example, initially this database is empty. In this example, when the camera application or file transfer application stores a file in device memory, the user is given the option to apply tags. In this example, if a file

has a description associated with it, the user is invited to apply a tag. In this example, the tag is a word which appears in the file description. For example, if the description is "Matthew's Birthday Party", the tag may be, "matthew" "birthday" or "party". In this example, the user may enter one or more of these tags. In this example, any tags which are entered are stored in the tag database.

In this example, when a user next comes to tag a file, the tag application checks the database to see if any of the words in the file description appear there. In this example, if so, the tag application suggests the stored tags as possible tags for the new file. In this example, the following gives an example of the transfer of four image files to the device:

- 1) Peer's Birthday - manual tags: peer and birthday;
- 2) Jen's Birthday - manual tag: jen - assisted tag: birthday;
- 3) Peer's Anniversary - manual tag: anniversary - assisted tag: peer;
- 4) Jen's Anniversary - assisted tags: jen and anniversary.

In this example, as the user enters more tags, the more dynamic the system becomes at suggesting appropriate tags.

In an example embodiment, the mechanism can be arranged so that a manually entered tag does not have to relate to description. In this example, such tags are entered in the database and may be used to suggest assisted tags for files at a later time.

In an example embodiment, the tagging application can also be used when creating calendar entries. For example, when a user enters a new calendar entry, they can also assign manual tags as described above. In this example, subsequent entries can then be automatically tagged using the suggested assisted tags.

In an example, the term “timestamp” is used to refer to information relating to the time and/or date on which a file was created. In this example, it is not limited to any particular format or standard of time/date related information. In this example, it does not require the presence of information which relates specifically to time. In an example, a timestamp may just include data information.

In at least one example embodiment, a user does not have to manually and retrospectively add detailed information such as a description of what a photo is of or what event it was taken at. For example, if a user attends a friend’s birthday party on a particular date, it is not necessary for the user to enter the event details at a later time.

At least one example embodiment represents an improvement in data capture when compared with image recognition programs. Such programs are able to detect objects present in an image. However, the results produced by such programs are not accurate and only relate to the content of the image. They are not able to detect the nature of the event at which the photo was taken. At least one example embodiment provides a system which is more accurate than image recognition systems.

At least one example embodiment reduces problems with erroneous metadata. The existence of large amounts of incorrect or inaccurate metadata can result in difficulties with information management. Individuals who have concerns with the inappropriate use of metadata are referred to as “meta-haters”. At least one example embodiment provides an apparatus with better accuracy. At least one example embodiment provides an improved application which makes the task tagging media with useful descriptive details easier.

Examples of the present invention may be implemented in software, hardware, application logic or a combination of software, hardware and application logic. The software, application logic and/or hardware may reside

on an individual component, computer chip or other computing apparatus. In an example embodiment, the application logic, software or an instruction set is maintained on any one of various conventional computer-readable media. In the context of this document, a “computer-readable medium” may be any
5 media or means that can contain, store, communicate, propagate or transport the instructions for use by or in connection with an instruction execution system, apparatus, or device, such as a computer, with one example of a computer described and depicted in Figure 1. A computer-readable medium may comprise a computer-readable storage medium that may be any media
10 or means that can contain or store the instructions for use by or in connection with an instruction execution system, apparatus, or device, such as a computer.

If desired, the different functions discussed herein may be performed in a
15 different order and/or concurrently with each other. Furthermore, if desired, one or more of the above-described functions may be optional or may be combined.

Although various aspects of the invention are set out in the independent
20 claims, other aspects of the invention comprise other combinations of features from the described embodiments and/or the dependent claims with the features of the independent claims, and not solely the combinations explicitly set out in the claims.

25 Various modifications, changes, and/or alterations may be made to the above described embodiments to provide further embodiments which use the underlying inventive concept, falling within the spirit and/or scope of the invention. Any such further embodiments are intended to be encompassed by the appended claims.

Claims

1. An apparatus comprising:
5 at least one processor; and
at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus at least to:
compare a timestamp of a file with a database of calendar entries; and
10 in the event of a match between the timestamp and at least one calendar entry, to copy data of said at least one calendar entry to said file.
2. An apparatus according to claim 1, wherein said data is an event description.
15
3. An apparatus according to claim 2, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to copy said event description to file user metadata.
20
4. An apparatus according to claims 1, 2 or 3, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to copy said data automatically.
- 25 5. An apparatus according to claims 1, 2 or 3, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to prompt a user of said apparatus prior to copying said data.
- 30 6. An apparatus according to any preceding claim, wherein said file is generated on the basis of an image captured by a camera and the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus automatically compare the

timestamp of a said file with the database of calendar entries following generation of said file.

7. An apparatus according to any of claims 1 to 5, wherein said file is transferred to said device from another device and the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to automatically compare the timestamp of said file with the database of calendar entries following transfer.

8. An apparatus according to any preceding claim, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to provide a user with an option as to which calendar entry to use in the event that more than one matching calendar entry is located.

9. An apparatus according to claim 7, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to check any files transferred to the apparatus for existing user metadata, and, in the event that existing user metadata exists a) keep existing data in addition to copying any data of any matching calendar entries; or b) deleting existing data and copying any data of any matching calendar entries.

10. An apparatus according to any preceding claim, further comprising a database of tags, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to automatically apply tags to files in the event of a match between a file description and a tag.

11. An apparatus according to any preceding claim, wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to create a new calendar entry, using the timestamp of a transferred file and the user metadata of the

said file, in the event that the calendar contains no events matching the timestamp of the said file.

12. An apparatus configured to:

5 compare a timestamp of a file with a database of calendar entries; and
 in the event of a match between the timestamp and at least one
calendar entry, to copy data of said at least one calendar entry to said file.

13. A method comprising:

10 comparing a timestamp of a file with a database of calendar entries;
and

 in the event of a match between the timestamp and at least one
calendar entry, copying data of said at least one calendar entry to said file.

15 14. A method according to claim 13, further comprising copying said data
automatically in the event of a match.

15. A method according to claim 13, further comprising prompting a user
prior to copying said data.

20

16. A method according to any of claims 13 to 15, further comprising
capturing an image using a camera, generating a file on the basis of the
captured image and automatically comparing the timestamp of a said file with
the database of calendar entries.

25

17. A method according to any of claims 13 to 15, further comprising
transferring a file to a device from another device and automatically comparing
the timestamp of said file with the database of calendar entries.

30 18. An apparatus configured to carry out the method of any of claims 13 to
17.

19. An apparatus comprising:

means for comparing a timestamp of a file with a database of calendar entries; and

means for, in the event of a match between the timestamp and at least one calendar entry, copying data of said at least one calendar entry to said
5 file.

20. A computer program product comprising a computer-readable medium bearing computer program code embodied therein for use with a computer, the computer program code comprising:

10 code for comparing a timestamp of a file with a database of calendar entries; and

code for, in the event of a match between the timestamp and at least one calendar entry, copying data of said at least one calendar entry to said
file.

15

21. A computer program comprising:

code for comparing a timestamp of a file with a database of calendar entries; and

code for, in the event of a match between the timestamp and at least
20 one calendar entry, copying data of said at least one calendar entry to said file.

22. A computer program product comprising a computer-readable medium bearing the computer program code of claim 21 for use with a computer.

25

23. A computer program configured such that when executed by a computer they cause the computer to operate in accordance with the method of any of claims 13 to 17.

30 24. A computer readable medium storing the computer program according to claim 23.

25. An apparatus substantially as described hereinbefore and as shown in Figures 1 to 8.

26. A method substantially as described hereinbefore and as shown in
5 Figures 1 to 8.

27. A computer program product substantially as described hereinbefore and as shown in Figures 1 to 8.

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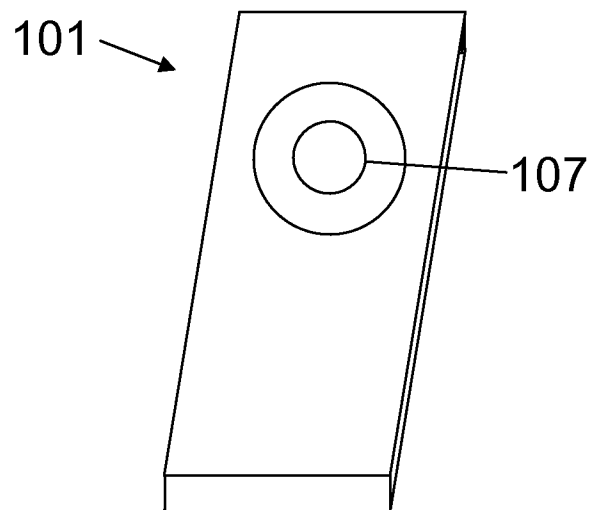
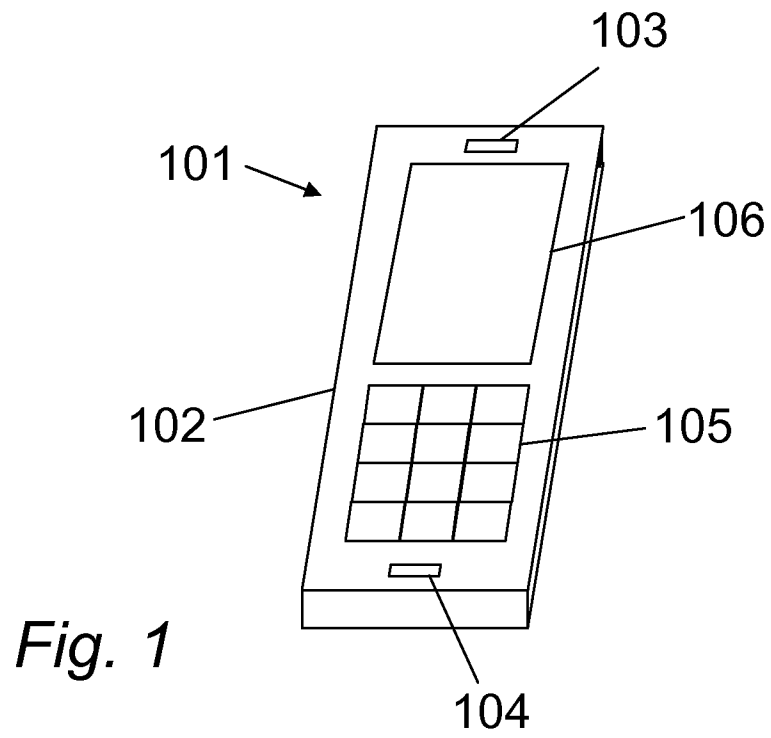


Fig. 2

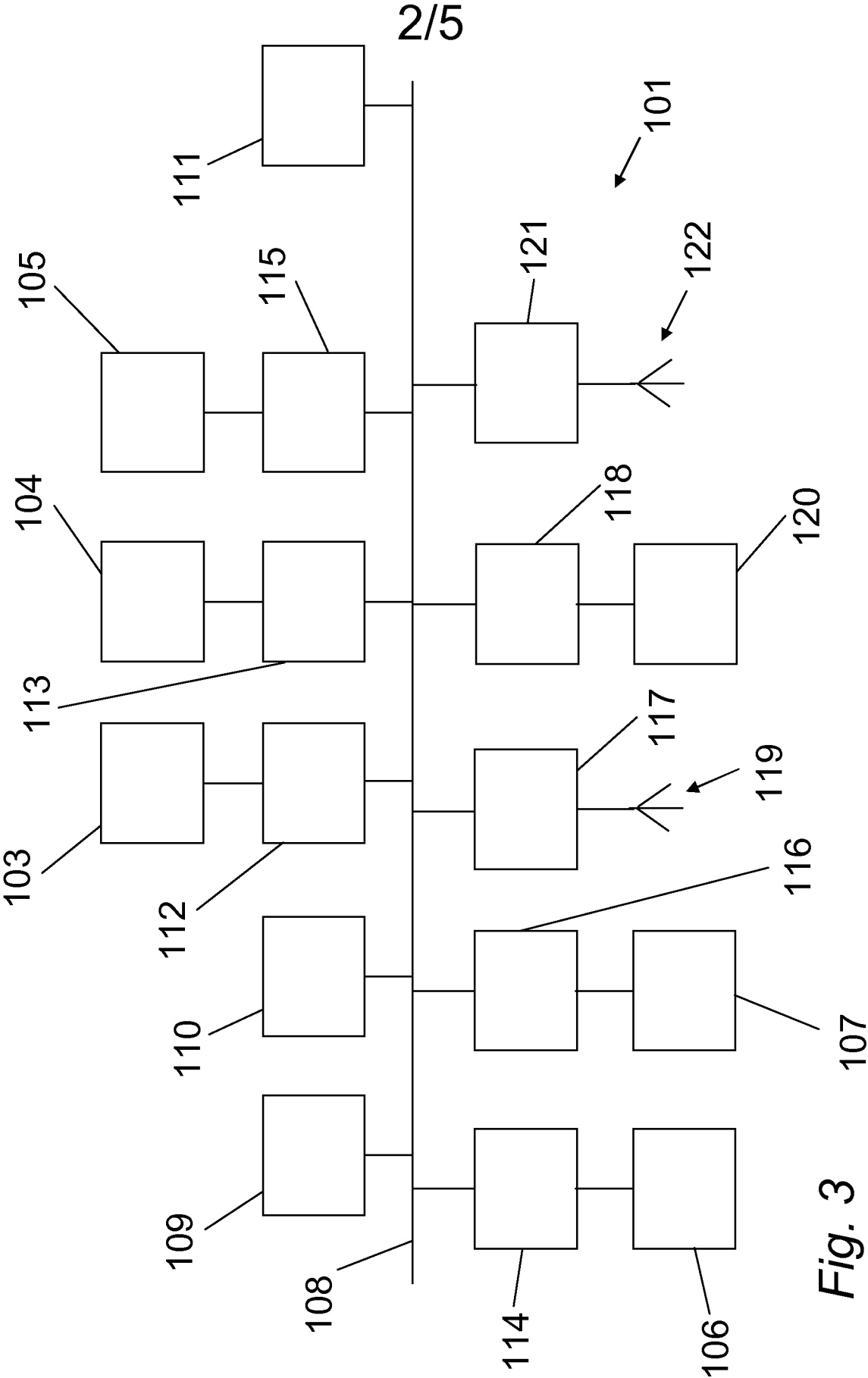
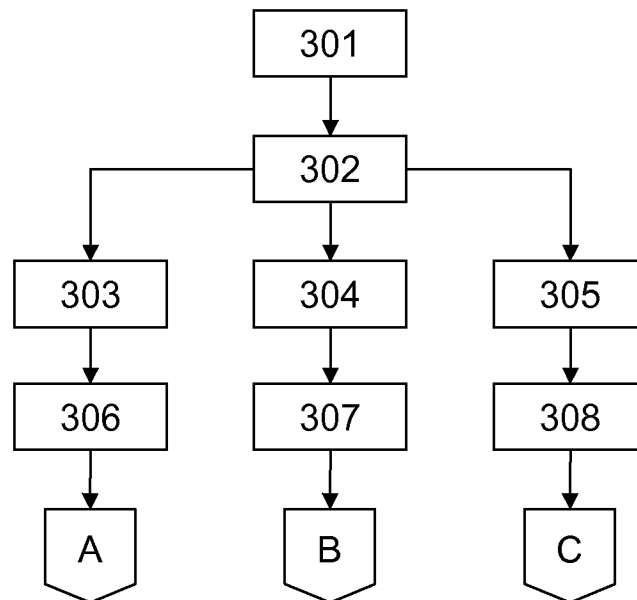
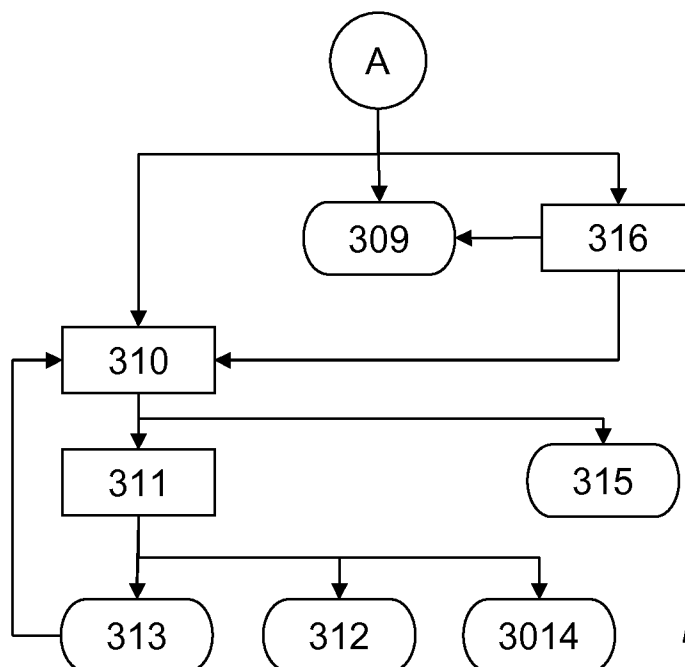
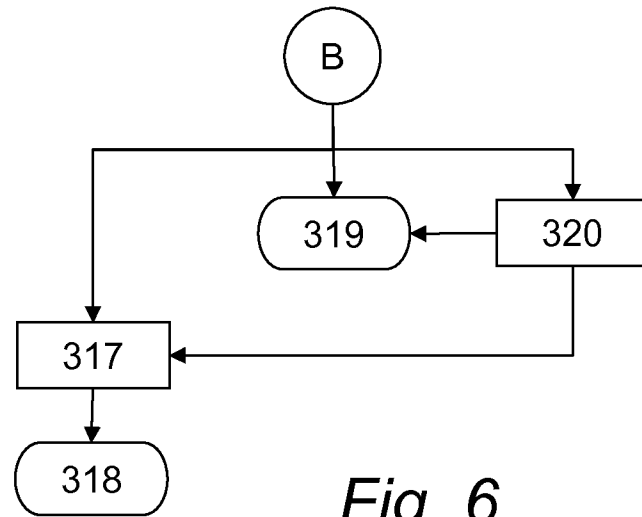
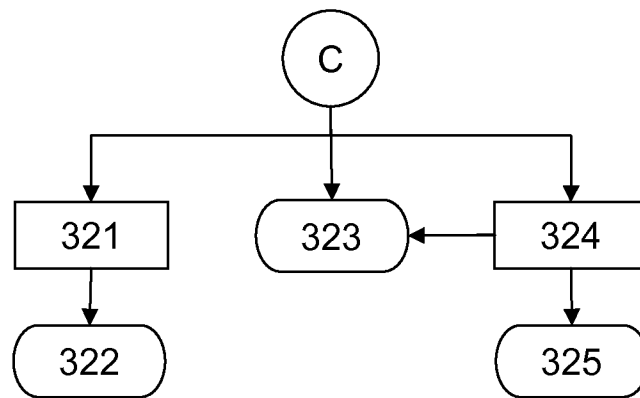


Fig. 3

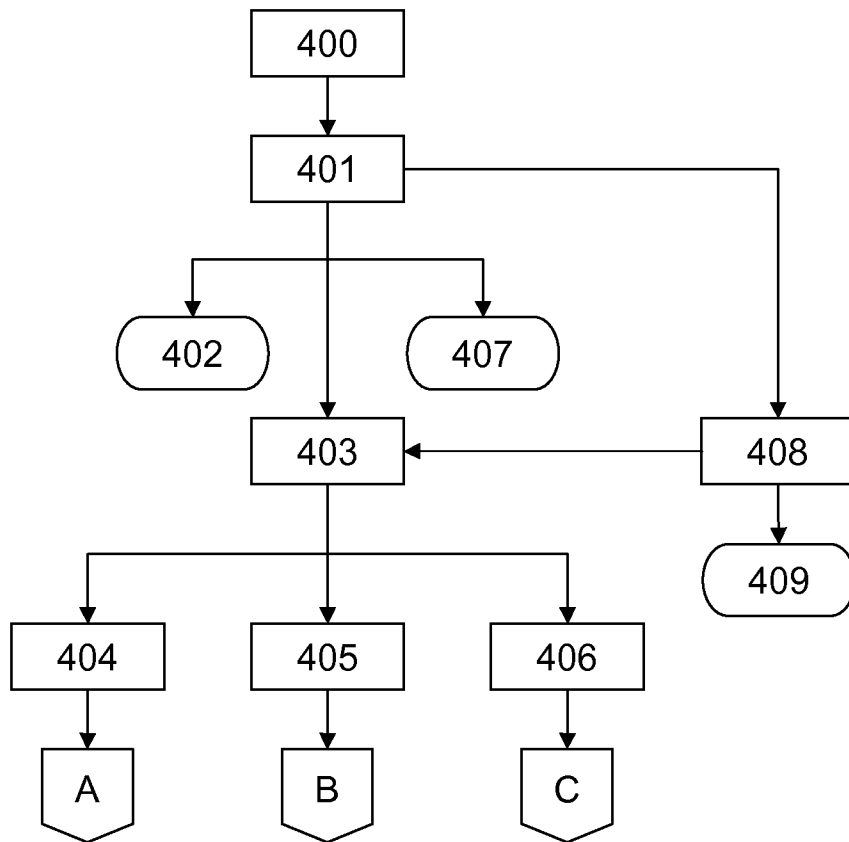
3/5

*Fig. 4**Fig. 5*

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*Fig. 6**Fig. 7*

5/5

*Fig. 8*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2009/055354

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

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: G06F, G06Q

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

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	US 7636733 B1 (K. ROTHMULLER), 22 December 2009 (22.12.2009), column 7, line 23 - line 48; column 9, line 51 - line 56, figure 7, abstract	1-24
	--	
P,X	US 20090222482 A1 (G.D. KLASSEN ET AL), 3 Sept 2009 (03.09.2009), abstract, paragraph (0050)	1-9,12-24
	--	
X	US 20040148453 A1 (A. WATANABE ET AL), 29 July 2004 (29.07.2004), figure 10, claims 1,5,7, 20, abstract, paragraphs (0043)-(0047), (0113)-(0118)	1-9,12-24
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Y		10
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
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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

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

2 March 2010

Date of mailing of the international search report

04-03-2010

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2009/055354

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 20060007315 A1 (M. SINGH), 12 January 2006 (12.01.2006), abstract, paragraphs (0040)-(0048) --	1-9,12-24
X	US 20070008321 A1 (A.C. GALLAGHER ET AL), 11 January 2007 (11.01.2007), figure 11, abstract, paragraphs (0082)-(0094) --	1-9,12-24
X	US 20030050982 A1 (S.M. CHANG), 13 March 2003 (13.03.2003), abstract, paragraphs (0013)-(0016) --	1-9,12-24
X	EP 1513080 A2 (NOKIA CORPORATION), 9 March 2005 (09.03.2005), abstract, paragraph (0052) --	1-9,12-24
Y	KR 20070066509 A, SAMSUNG ELECTRONICS CO LTD, 2007-06-27; (abstract) Retrieved from: EPODOC database --	10
A	WO 2006095053 A2 (NOKIA CORPORATION), 14 Sept 2006 (14.09.2006), page 2, line 22 - page 3, line 26, figure 2 -- -----	11

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Use the application number as username. The password is **SXSKKJWOLV**.

Paper copies can be ordered at a cost of 50 SEK per copy from PRV InterPat (telephone number 08-782 28 85).

Cited literature, if any, will be enclosed in paper form.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2009/055354

US	7636733	B1	22/12/2009	NONE		
US	20090222482	A1	03/09/2009	NONE		
US	20040148453	A1	29/07/2004	NONE		
US	20060007315	A1	12/01/2006	NONE		
US	20070008321	A1	11/01/2007	NONE		
US	20030050982	A1	13/03/2003	NONE		
EP	1513080	A2	09/03/2005	US	20050050043 A	03/03/2005
WO	2006095053	A2	14/09/2006	BR	PI0608472 A	05/01/2010
				EP	1859387 A	28/11/2007
				JP	2008533576 T	21/08/2008
				RU	2007137103 A	20/04/2009
				US	20080263087 A	23/10/2008

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2009/055354

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 25-27
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

The claims 25-27 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. Each claim must contain all technical features essential to the definition of the invention, without referring to the description or drawings. No meaningful search of claims 25-27 is possible.

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.