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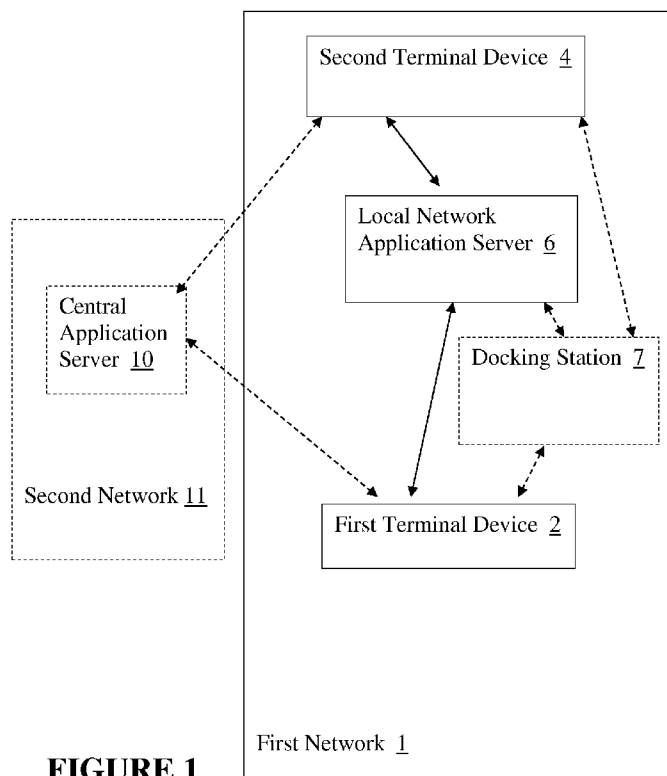


FIGURE 1

(57) Abstract: A method and apparatus that manages temporary applications that are sent to and installed on a mobile terminal device (2,4) when within a particular geographical area, such as a point of interest. Whenever a mobile terminal device (2,4) enters a point of interest, it may request or otherwise receive a list of one or more applications that it may download. Certain applications may then be transmitted to the terminal device (2,4) in response to a response to that list that identifies which of the applications is to be sent to the terminal device (2,4). The terminal device (2,4) may then determine when it is no longer within the point of interest and, as a result, delete or uninstall those applications.



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COMMUNICATION APPARATUS AND METHOD FOR APPLICATION MANAGEMENT

FIELD OF INVENTION

The present invention relates to communication systems, such as communication systems that utilize cellular phones, mobile computer devices, tablets, laptops, or other terminal devices. More particularly, the present invention relates to a system, method and device configured to permit management of applications stored on memory of a terminal device.

BACKGROUND OF THE INVENTION

Terminal devices such as desktop computers, smart phones, cellular phones, laptop computers, or internet appliances often utilize multiple applications. But, management of these applications can be time consuming. Often, a user must manually select applications to download and install on a device. If a user then decides he or she no longer needs or wants that application, the user must manually cause the user's device to delete or uninstall that application. A user may not want to spend time managing the applications on his or her device, which can contribute to wasting of memory or other resources of the device. Such issues can also impact the functionality of the device.

We have determined that a new method and apparatus are needed to improve application management. In some embodiments of our method and apparatus, a server may transmit applications to a terminal device for installation on that device when that device is within a predetermined geographical area and specific time period associated with those one or more applications. In embodiments of our method and apparatus, the transmitted applications may subsequently be uninstalled or deleted by the terminal device after it determines that it has left

the geographical area associated with those one or more applications or an expiration time period has passed indicating the device has left that geographical area.

SUMMARY OF THE INVENTION

A method, a computer device, communication system and non-transitory readable medium are provided that are configured to facilitate the management of applications. For example, a method of managing applications for a terminal device may include the steps of determining a geographical location of the terminal device and the terminal device receiving a list of one or more applications available for download from a server. The applications identified in the list of one or more applications may be associated with a geographical area. The geographical location of the terminal device may be within the geographical area. The terminal device sends a selection of at least one application from the list of one or more applications to the server, the terminal device installs the selected at least one application from the list of one or more applications, and the terminal device deletes or uninstalls the selected at least one application upon determining at least one of: (i) that the terminal device has moved out of the geographical area associated with the selected at least one application, (ii) that a predetermined amount of time passed after the terminal device is disconnected from a docking station, (iii) that a predetermined amount of time passed after the selected at least one application is installed, (iv) that a predetermined amount of time passed after the terminal device is disconnected from a docking station, the server being a component of the docking station, and (v) a new geographical location of the terminal device that is outside of the geographical area.

Some embodiments of the method may include the step of setting a flag for deleting or uninstalling the selected at least one application to actuate automatic deletion of the selected at

least one application upon the terminal device being outside of the geographical area associated with the selected at least one application. The method may also include the step of the terminal device selecting at least one application from the list of one or more applications automatically in accordance with at least one predefined rule.

In some embodiments, the terminal device is one of a cellular phone, a mobile computer device, a laptop computer, a tablet or a mobile internet appliance and the server may be a server positioned in a local area network or is a central application server. In yet other embodiments, the server may be a component of a docking station (e.g. the docking station may be configured to also be the server). For those embodiments of the method as well as other embodiments of the method, the method may also include the step of connecting the terminal device to a docking station for communications with the server.

It is contemplated that the terminal device selecting at least one application from the list of one or more applications may be based on input received from a user of the terminal device that indicates the at least one application to be selected. Alternatively, the terminal device may be configured to automatically select one or more applications based on predefined rules set by a user.

The method may also include the step of the terminal device entering an area in which a wireless local area network is available to which the terminal device is connectable. In some embodiments, the terminal device may connect to a docking station via a wireless or wired connection for connecting to the local area network.

Embodiments of the communication system may include any number of elements. For instance, a communication system may include a terminal device and a server communicatively connectable to the first terminal device. One of the server and the terminal device may

determine a geographical location of the terminal device. The server may send a list of one or more applications associated with a geographical area to the terminal device. The geographical location of the terminal device may be within the geographical area. The terminal device may receive the list of one or more applications from the server and may send a selection of at least one application from the list of one or more applications to the server. The terminal device may then install the selected at least one application. Thereafter, the terminal device may delete or uninstall the selected at least one application upon determining at least one of: (i) that the terminal device has moved out of the geographical area associated with the selected at least one application, (ii) that a predetermined amount of time passed after the terminal device is disconnected from a docking station, (iii) that a predetermined amount of time passed after the selected at least one application is installed, (iv) that a predetermined amount of time passed after the terminal device is disconnected from a docking station, the server being a component of the docking station, and (v) a new geographical location of the terminal device that is outside of the geographical area.

In some embodiments of the system, one of the server and terminal device may set a flag for deleting or uninstalling the selected at least one application to actuate automatic deletion of the selected at least one application upon the terminal device being outside of the geographical area associated with the selected at least one application.

In some certain embodiments of the system, the terminal device may select at least one application from the list of one or more applications automatically in accordance with at least one predefined rule. Alternatively, a user may provide input for selecting one or more applications upon the terminal device prompting the user for such a selection after receiving the list of one or more applications from the server.

An embodiment of a non-transitory computer readable medium may have an application stored thereon that is executable by a terminal device. The application may define a method that is executed by the terminal device that executes the application. The method may include the steps of determining a geographical location of the terminal device and the terminal device receiving a list of one or more applications available for download from a server. The applications identified in the list of one or more applications may be associated with a geographical area. The geographical location of the terminal device may be within the geographical area. The method defined by the application may also include the steps of the terminal device sending a selection of at least one application from the list of one or more applications to the server, the terminal device installing the selected at least one application from the list of one or more applications, and the terminal device deleting or uninstalling the selected at least one application upon determining at least one of: (i) that the terminal device has moved out of the geographical area associated with the selected at least one application, (ii) that a predetermined amount of time passed after the terminal device is disconnected from a docking station, (iii) that a predetermined amount of time passed after the selected at least one application is installed, (iv) that a predetermined amount of time passed after the terminal device is disconnected from a docking station, the server being a component of the docking station, and (v) a new geographical location of the terminal device that is outside of the geographical area.

In some embodiments, the method defined by the application may further comprise the terminal device setting a flag for deleting or uninstalling the selected at least one application to actuate automatic deletion of the selected at least one application upon the terminal device being outside of the geographical area associated with the selected at least one application. The

terminal device may select at least one application from the list of one or more applications automatically in accordance with at least one predefined rule. Alternatively, the terminal device may communicate a prompt to a user to receive input indicating which of the one or more applications identified in the list should be selected.

Other details, objects, and advantages of the invention will become apparent as the following description of certain present preferred embodiments thereof and certain present preferred methods of practicing the same proceeds.

BRIEF DESCRIPTION OF THE DRAWINGS

Present preferred devices, systems, and apparatuses for providing communications between multiple communication devices are shown in the accompanying drawings and certain present preferred methods of practicing the same are also illustrated therein. It should be understood that like reference numbers used in the drawings may identify like components.

Figure 1 is a block diagram of an exemplary embodiment of the communication system. An optional second network 11, central application server 10, and docking station 7 are illustrated in broken line in Figure 1.

Figure 2 is a block diagram of an exemplary embodiment of a mobile terminal device.

Figure 3 is a block diagram of an exemplary embodiment of a computer device that may provide one or more temporary applications to terminal devices in embodiments of the system.

Figure 4 is a flow chart of an exemplary method of managing applications.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Referring to Figure 1, a communication system may include a first network 1, which may be a local area network or wide area network. The first network 1 may include a plurality of

routers, wireless access points, or other access points to facilitate connection of different terminal devices to the first network. One example of such an access point may be a docking station 7 shown in broken line in Figure 1. The terminal devices of the network may include a first terminal device 2 and a second terminal device 4. The first network may also include a local network application server 6 that is communicatively connectable to the first and second terminal devices 2, 4. The local network server 6 may communicate with the first and second terminal devices to transmit data for downloading and installing one or more applications on those terminal devices when those terminal devices are within a geographical area associated with those applications. When either terminal device determines that it is no longer within the geographical area associated with those applications, the terminal device may delete or uninstall the applications from the terminal device. Such installation and deletion of the applications may occur automatically in accordance with predefined rules set in an application of the terminal device or otherwise set in memory of the terminal device.

In some embodiments, the first and second terminal devices 2, 4 may need to be connected to a docking station 7 to communicate with the local network application server 6 for receiving data for the download and installation of certain applications. The local network application server 6 may not authenticate any terminal device that is not communicating with the server via a docking station, for example. The docking station 7 may be a router and permit a connection to the local network application server 6 or a central application server 10 (discussed more fully below) via a wired transmission path, a wireless transmission path, or combination of such transmission paths, for example.

As may be appreciated from Figure 3, in yet other embodiments the local network server 6 or other temporary application server could be a component of the docking station 7. The

docking station 7 could include an interface for releasable connection 39. Such an interface may provide a releasable attachment to and electrical connection to one or more terminal devices such as the first terminal device 2 and the second terminal device 4. For instance, the interface could provide an electrical connection for communicating data between the docking station and the terminal device. Electricity could also be conveyed to a battery of the terminal device that is attached to the interface 39. The docking station 7 may also include the server such that it may host one or more temporary applications or may provide copies of such temporary applications for download by any terminal device connected to its interface.

In some contemplated embodiments, the docking station 7 could be configured to support plug-n-play functionality of a terminal device so that a list of one or more applications for download is provided to a terminal device upon a detection of that device being connected to its interface. One possible interface may be a universal serial bus interface that supports universal serial bus connections. An application that is downloaded from a server via a connection with the docking station may be configured with an expiration timer that is set to start counting down from a predetermined time limit upon a detection of the terminal device being disconnected from the docking station. After that predetermined time expires, the application obtained from the docking station 7 may be deleted by the terminal device automatically. The deletion of the application may be defined by code of the application such that a user is unable to provide input to the terminal device to stop the deletion of the application. The predetermined amount of time that is selected may be selected to account for time in which it would take a user to move the terminal device out of the geographical area associated with the application, such as a particular building or store, so that upon the expiration of this time period the terminal device may

determine that the terminal device is outside of the geographical area associated with the application and delete that application.

In alternative embodiments, the first network 1 may not include the local network application server 6. Instead, a central application server 10, which may be communicatively connectable to terminal devices via a second network 11 such as the internet or an enterprise network that is connectable to the first network 1 via the internet. The terminal devices may communicate with the central application server 10 when they determine that they are within the predetermined geographical area associated with certain applications to receive data for the downloading and installation of certain applications associated with that geographical area. When either terminal device determines that it is no longer within the geographical area associated with those applications, the terminal device may delete or uninstall the applications from the terminal device. Such installation and deletion of the applications may occur automatically in accordance with predefined rules set in an application of the terminal device or otherwise set in memory of the terminal device.

It should be appreciated that communication paths between the first or second terminal device 2 or 4 and the local network application server 6 or central application server 10 may utilize different types of communication paths. For instance, the communication path may be a wired path, a wireless path, or a combination of wired and wireless paths. One or more intermediate nodes such as base stations, access points, switch devices, and other types of nodes may be positioned along the communication path as well for conveying data between devices that are communicatively connected to each other.

In one embodiment of the system, it is contemplated that the first network 1 may be a wireless local area network hosted by a restaurant, retail store, or other service provider and the

terminal devices may be mobile computer devices of customers. Applications associated with the geographical area of the store, restaurant, or building may then be offered to the terminal devices of the customers for download. The applications that are offered may be, for example, applications associated with selecting items to purchase, menu items to order, or otherwise help facilitate use or purchase of goods, resources or services offered by the store or service provider. In some embodiments, at least some of the applications may also permit the ordering of different items such as menu items so that those ordered items can subsequently be delivered to the user while that user is at the store or restaurant. The ordering of such items may also require the user to have issued payment for the ordered items via a credit card transaction or other transaction facilitated by the downloaded application. The terminal device may then select which of these applications to download and receive and install those applications. Once the terminal device detects that it has left the store or restaurant, the terminal device may then automatically delete the applications received from that service provider (e.g. restaurant, store owner, etc.) or associated with the location of that store or restaurant. The terminal device may make such a detection based upon determining a new location of the terminal device that is outside of this area or by determining that a predetermined amount of time has passed since installation or use of the application.

It is also contemplated that in some embodiments a user may install an application on a terminal device associated with that user (e.g. first terminal device 2 or second terminal device 4) prior to entering a geographical area associated with that application (e.g. a restaurant or store). The application may be of a type defined by the user as a temporary application based on predefined rules or by the user providing input indicating that application is only a temporary application. Upon expiration of a predetermined amount of time or by a particular date being

reached, the terminal device may subsequently delete that application. As another example, the terminal device may determine when it is located in the geographical area associated with that application and subsequently delete the application upon a detection that the terminal device has left that geographical area.

Referring to Figure 2, the first terminal device 2 and second terminal device 4 may each be a communication endpoint. For instance, the first terminal device 2 or the second terminal device 4 may be a tablet, a smart phone, a mobile cellular phone, an internet appliance, a laptop computer, a mobile computer device, or other communication terminal. The first terminal device 2 and the second terminal device 4 may each include a processor unit 18 that is communicatively connected to a first transceiver unit 19, at least one input device 23, memory 20, a microphone 22, a display unit 25 and a speaker 24. The first transceiver unit 22 may include a receiver unit and a transmitter unit for transmission and reception of data via a cellular network, a wireless network connection, or other network connection. The speaker 24 may be only one speaker or may include multiple speakers. For instance, the speaker 24 could include a first speaker and a loud speaker. The microphone 22 may also include more than one microphone. For instance, microphone 22 may include a microphone on opposite sides of a housing of a terminal device such as a smart phone or tablet.

The processor unit 18 may be a central processing unit such as a microprocessor, interconnected microprocessors, or other hardware processor element. The speaker 24 may emit audio and the microphone 22 may be an input device that records audio emitted by a user for receiving that audio data. The display unit 25 may be a liquid crystal display or other display device. The display unit 25 may be configured as a touch screen display that functions to output data visually while also permitting a user to provide input by touching different portions of the

display. The input device 23 may be a button, keyboard, mouse, or other type of input device a user may utilize to provide input.

The memory 20 may be a non-transitory computer readable medium that has one or more applications 21 stored thereon that defines a method that is performed by the device when the processor unit 18 runs or executes the application 27. The memory 20 may include a hard drive, a flash drive, an optical disk or a hard disk or other type of computer readable medium that stores data for a non-transitory period of time.

Referring to Figure 3, the local network application server 6 or central application server 10 may each include a first transceiver unit 29 that is communicatively connected to a processor unit 28. In some embodiments, the server may be a component of the docking station 7 as noted above and indicated in broken line in Figure 3. For such embodiments, the interface for releasable connection 39 may be communicatively connected to the processor unit 28 of the server.

The processor unit 28 of the server may also be connected to memory 30, such as non-transitory memory. The memory 30 may have at least one application 31 stored thereon. The application 31 can include program code that defines instructions that define a method that the server performs when the processor unit 28 executes the application 31. It should be understood that the memory 30 may also include one or more databases or other data that contains information that may be accessed to route communications or manage the sending of data relating to applications that may be downloaded and installed by a terminal device, or provide other services hosted by the server. The first transceiver unit 29 may be configured to permit communications to be established between the server and other devices such as other servers or communication terminal devices. For instance, the server may send data to different

communication endpoints via the first transceiver unit so that one or more communication sessions for transmitting data for the installing of an application on a terminal device may be established or maintained.

It should be understood that a docking station may be a router, an access point, or other type of computer device. It is also contemplated that the docking station may be a data container like flash memory, a thumb drive, or non-transitory memory that is external to a terminal device and is communicatively connectable to the terminal device. In some embodiments, the docking station 7 may include a transceiver unit for communicating with a server or other network nodes and a second transceiver unit for facilitating a wireless, wired, or direct connection between the docking station at least one terminal device. The docking station may also include a processor communicatively connected to the transceiver units and non-transitory memory. The memory may have one or more application stored thereon that define methods that are executed by the docking station when the applications are executed by the processor unit of the docking station. In some embodiments, the docking station 7 may include an interface that permits a coupling with a terminal device so that the terminal device's battery (not shown) may be charged by electrical current while a communication connection to the docking station 7 for access to the first network 1 is also formed.

In other embodiments and as noted above, the docking station 7 may be configured to also include the server. As may be appreciated from Figure 3, such embodiments of a docking station may be configured so that the processor unit, memory and transceiver of the server are components of the docking station 7.

Embodiments of the system, terminal device, server, and non-transitory memory that have an application that defines a method that may be executed by a device are also discussed

more fully below. For example, as may be appreciated by Figure 4, the terminal device (e.g. the first terminal device 2 or second terminal device 4) may have an application that is configured to periodically determine the location of the terminal device. The terminal device may periodically communicate with a global positioning service ("GPS") for example to obtain current geographical location data for the terminal device. Alternatively, the terminal device may communicate with multiple base stations or a server hosting a location server to determine its geographical location.

When the terminal device (e.g. the first terminal device 2 or second terminal device 4) determines that it is within a particular geographical location, it may send a request to a local network application server 6 associated with a geographical area assigned to the geographical location of the device or may send a request to a central application server 10 for a list of one or more applications associated with a geographical area that includes the location of the terminal device. The terminal device may send such request at predetermined time intervals or may only send such a request upon a detection of being within certain locations within predefined geographical areas.

As an alternative, the terminal device's presence within a particular geographical location may be detected by the local network application server 6 or central application server 10. For instance, the local network application server 6 or central application server 10 may detect the presence of the terminal device being within the first network 1 and, in response to this detection, send a message to the terminal device providing the terminal device with a list of one or more applications associated with the geographical area of that first network 1 that the terminal device may download from the server. Such a detection may occur by the server receiving a message from an access point that provides access to the first network 1 for example or may occur by the

server detecting the presence of a new terminal device to which it may communicate with via its connection to the first network 1.

Upon receipt of a message from the central application server 10 or local network application server 6, the terminal device (e.g. the first or second terminal device 2, 4) may send a message to that server identifying which applications are selected for download so that the server will transmit the data for the download and installation of the selected one or more applications to the terminal device. The selection of applications may occur based on the terminal device prompting a user for a selection of applications from the received list and the user providing input selecting one or more of the applications. Alternatively, predefined rules for the selection of applications may be set and the terminal device may automatically select certain applications for download in accordance with those rules. For instance, a rule that any free application be downloaded may be set and the terminal device may then select all the free applications within the list received from a server. The predefined rules that are set may also include rules for addressing security concerns. For instance, only applications that are subject to authentication. As another example, one or more rules may be set that define different application offering by type and indicate which applications that are automatically downloaded should be automatically deleted. For instance, applications classified as being advertisements, guides, maps, coupons or informative may be defined in the rules and the rules may indicate that all of those types applications are to be automatically deleted upon a detection that the terminal device has left an area associated with the downloaded application. Alternatively, all but an informative application type may be set for automatic deletion while the informative type applications may not be automatically deleted upon leaving of a predefined geographical area associated with those applications.

In response to the message from the terminal device (e.g. the first terminal device 2 or second terminal device 4) selecting one or more applications, the server may transmit data to the terminal device providing the terminal device with the selected one or more applications for download and installation. The terminal device may then install the received one or more applications.

The installed applications may only be stored for a temporary amount of time or a predetermined amount of time. For instance, each application received from the server may be flagged by the terminal device or otherwise associated with a deletion or uninstallation parameter. That flag or other parameter may associate the application with a particular geographical area and indicate that the application should be deleted upon the terminal device being outside of this geographical area. For instance, the flag or other parameter may actuate an automatic uninstallation or deletion of the application by the terminal device upon a detection of the terminal device being outside of the geographical area associated with that application. The deletion flag or other parameter may be set by the terminal device during the installation or download of the application.

It should be appreciated that variations to the embodiments of our system, method, device and apparatus may be made to meet different design criteria. For example, the central applications server 10 or local network applications server 6 may be any type of computer device that hosts a service such as a workstation, docking station, desktop computer, or other type of server. As another example, terminal devices may be any of a number of different possible communication endpoints that would utilize one or more applications, such as mobile phones, laptop computers, mobile smart phones, or other types of mobile computer devices. As yet another example, the first network 1 may be a wireless network or a wired network such as a

local area network or wireless local area network and the second network 11 may be an enterprise network, cellular network or other type of network.

While certain present preferred embodiments of the communication apparatus such as a communication device and a communication system, and methods of making and using the same have been shown and described above, it is to be distinctly understood that the invention is not limited thereto but may be otherwise variously embodied and practiced within the scope of the following claims.

What is claimed is:

1. A method of managing applications for a terminal device comprising:

determining a geographical location of the terminal device;

the terminal device receiving a list of one or more applications available for download from a server, the applications identified in the list of one or more applications being associated with a geographical area, the geographical location of the terminal device being within the geographical area;

the terminal device sending a selection of at least one application from the list of one or more applications to the server;

the terminal device installing the selected at least one application from the list of one or more applications;

the terminal device deleting or uninstalling the selected at least one application upon determining at least one of:

that the terminal device has moved out of the geographical area associated with the selected at least one application,

that a predetermined amount of time passed after the terminal device is disconnected from a docking station,

that a predetermined amount of time passed after the selected at least one application is installed,

that a predetermined amount of time passed after the terminal device is disconnected from a docking station, the server being a component of the docking station, and

a new geographical location of the terminal device that is outside of the geographical area.

2. The method of claim 1 further comprising:

setting a flag for deleting or uninstalling the selected at least one application to actuate automatic deletion of the selected at least one application upon the terminal device being outside of the geographical area associated with the selected at least one application.

3. The method of claim 1 or claim 2 further comprising:

the terminal device selecting at least one application from the list of one or more applications automatically in accordance with at least one predefined rule; and

wherein the terminal device is one of a cellular phone, a mobile computer device, a laptop computer, a tablet or a mobile internet appliance and the server is a server positioned in a local area network or is a central application server.

4. The method of claim 1, claim 2, or claim 3, further comprising:

the terminal device selecting at least one application from the list of one or more applications based on input received from a user of the terminal device that indicates the at least one application to be selected.

5. The method of claim 1, claim 2, claim 3, or claim 4 wherein the terminal device determines that the terminal device has moved out of the geographical area associated with the selected at least one application.

6. The method of claim 1, claim 2, claim 3, claim 4, or claim 5 further comprising:

connecting the terminal device to a docking station for communications with the server.

7. The method of claim 1, claim 2, claim 3, claim 4, claim 5 or claim 6 further comprising:

the terminal device entering an area in which a wireless local area network is available to which the terminal device is connectable.

8. A communication system comprising:

a terminal device;

a server communicatively connectable to the first terminal device;

one of the server and the terminal device determining a geographical location of the terminal device;

the server sending a list of one or more applications associated with a geographical area to the terminal device, the geographical location of the terminal device being within the geographical area;

the terminal device receiving the list of one or more applications from the server;

the terminal device sending a selection of at least one application from the list of one or more applications to the server;

the terminal device installing the selected at least one application;

the terminal device deleting or uninstalling the selected at least one application upon determining at least one of:

that the terminal device has moved out of the geographical area associated with the selected at least one application,

that a predetermined amount of time passed after the terminal device is disconnected from a docking station,

that a predetermined amount of time passed after the selected at least one application is installed,

that a predetermined amount of time passed after the terminal device is disconnected from a docking station, the server being a component of the docking station, and

a new geographical location of the terminal device that is outside of the geographical area.

9. The system of claim 8 wherein one of the server and terminal device set a flag for deleting or uninstalling the selected at least one application to actuate automatic deletion of the selected at least one application upon the terminal device being outside of the geographical area associated with the selected at least one application.

10. The system of claim 8 or claim 9 wherein the terminal device selecting at least one application from the list of one or more applications automatically in accordance with at least one predefined rule.

11. The system of claim 8, claim 9 or claim 10 wherein the terminal device determines that the terminal device has moved out of the geographical area associated with the selected at least one application.

12. A non-transitory computer readable medium having an application stored thereon that is executable by a terminal device, the application defining a method that is executed by the terminal device that executes the application, the method comprising:

determining a geographical location of the terminal device;

the terminal device receiving a list of one or more applications available for download from a server, the applications identified in the list of one or more applications being associated with a geographical area, the geographical location of the terminal device being within the geographical area;

the terminal device sending a selection of at least one application from the list of one or more applications to the server;

the terminal device installing the selected at least one application from the list of one or more applications; and

the terminal device deleting or uninstalling the selected at least one application upon determining at least one of:

that the terminal device has moved out of the geographical area associated with the selected at least one application,

that a predetermined amount of time passed after the terminal device is disconnected from a docking station,

that a predetermined amount of time passed after the selected at least one application is installed,

that a predetermined amount of time passed after the terminal device is disconnected from a docking station, the server being a component of the docking station, and

a new geographical location of the terminal device that is outside of the geographical area.

13. The non-transitory computer readable medium of claim 12 wherein the method further comprises the terminal device setting a flag for deleting or uninstalling the selected at least one application to actuate automatic deletion of the selected at least one application upon the terminal device being outside of the geographical area associated with the selected at least one application.

14. The non-transitory computer readable medium of claim 12 or claim 13 wherein the method further comprises the terminal device selecting at least one application from the list of one or more applications automatically in accordance with at least one predefined rule.

15. The non-transitory computer readable medium of claim 12, claim 13 or claim 14 wherein the terminal device determines that the terminal device has moved out of the geographical area associated with the selected at least one application.

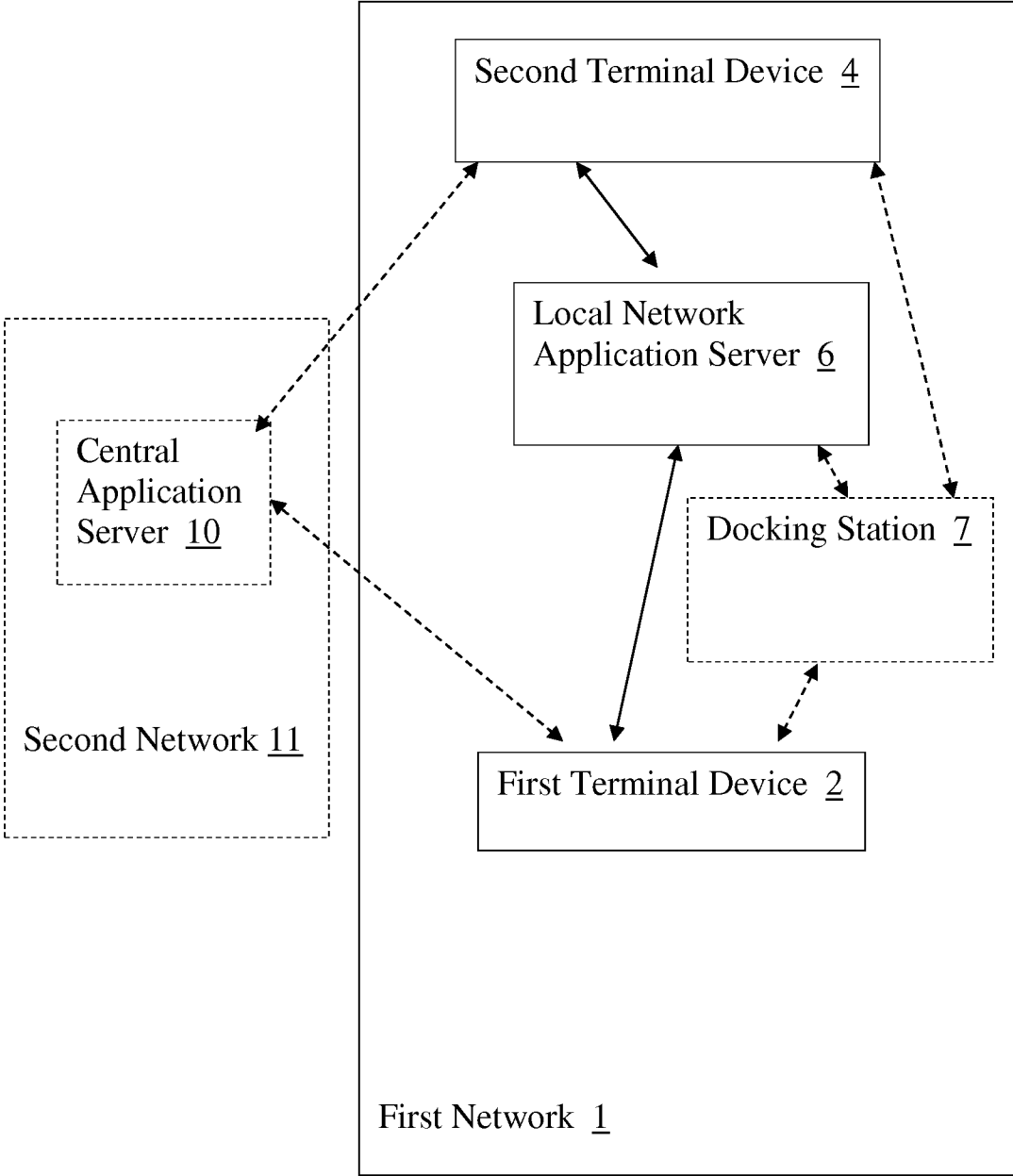
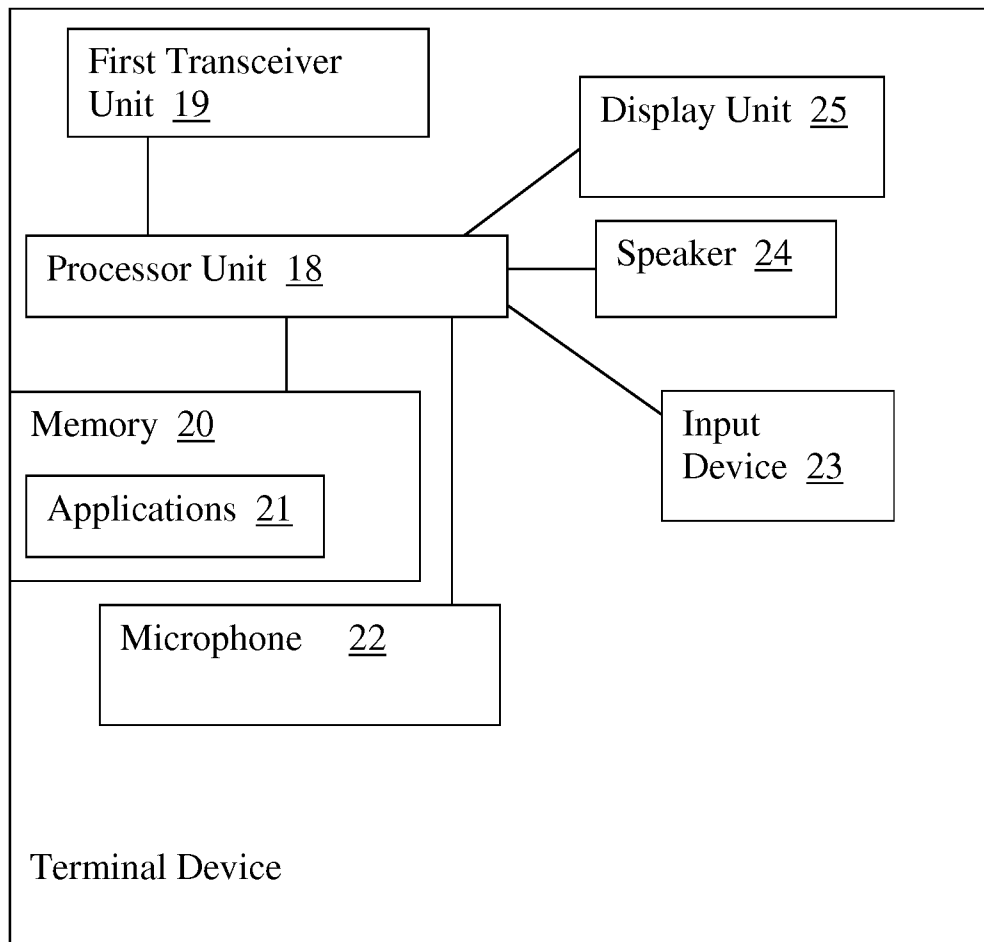
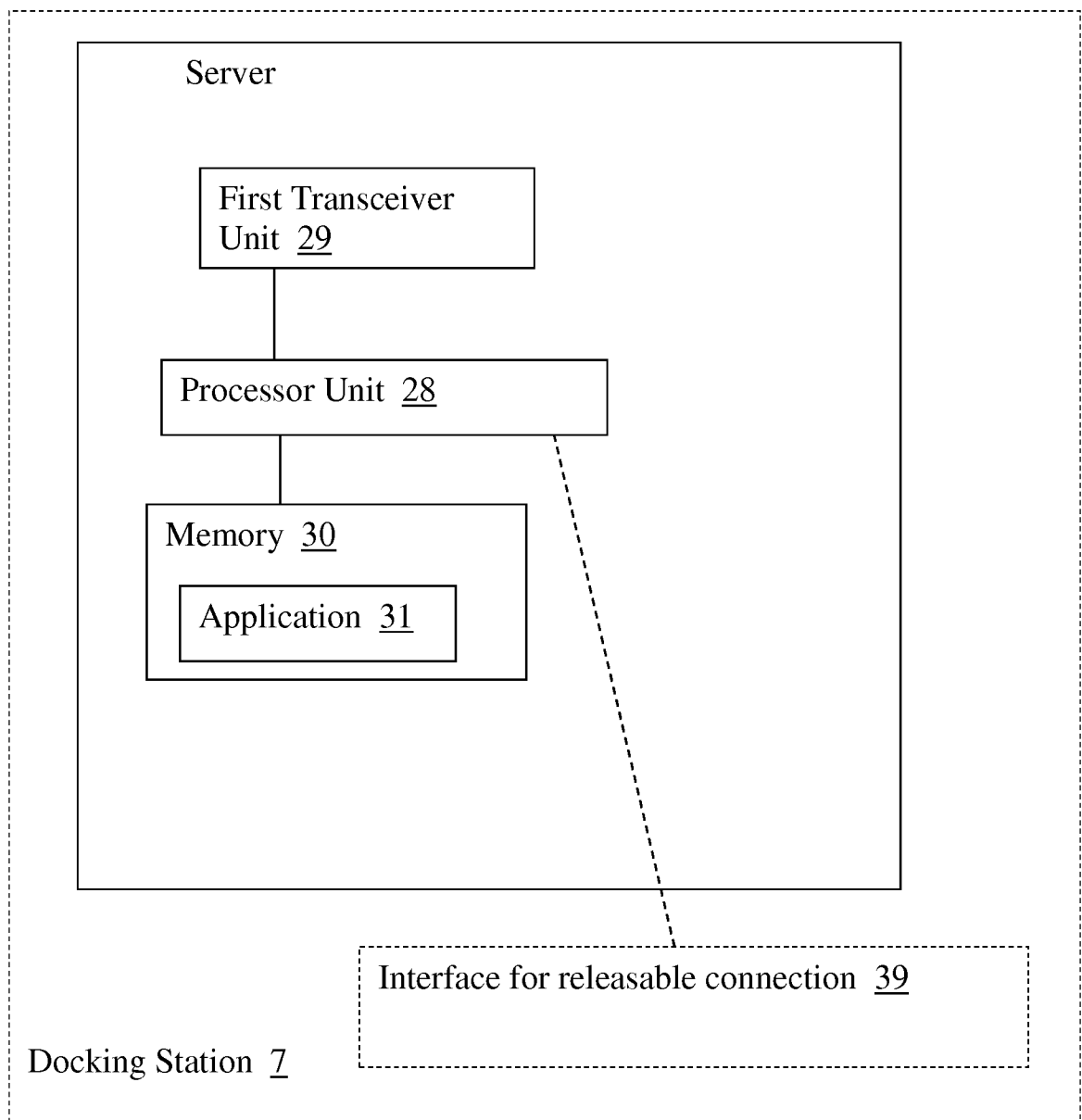


FIGURE 1

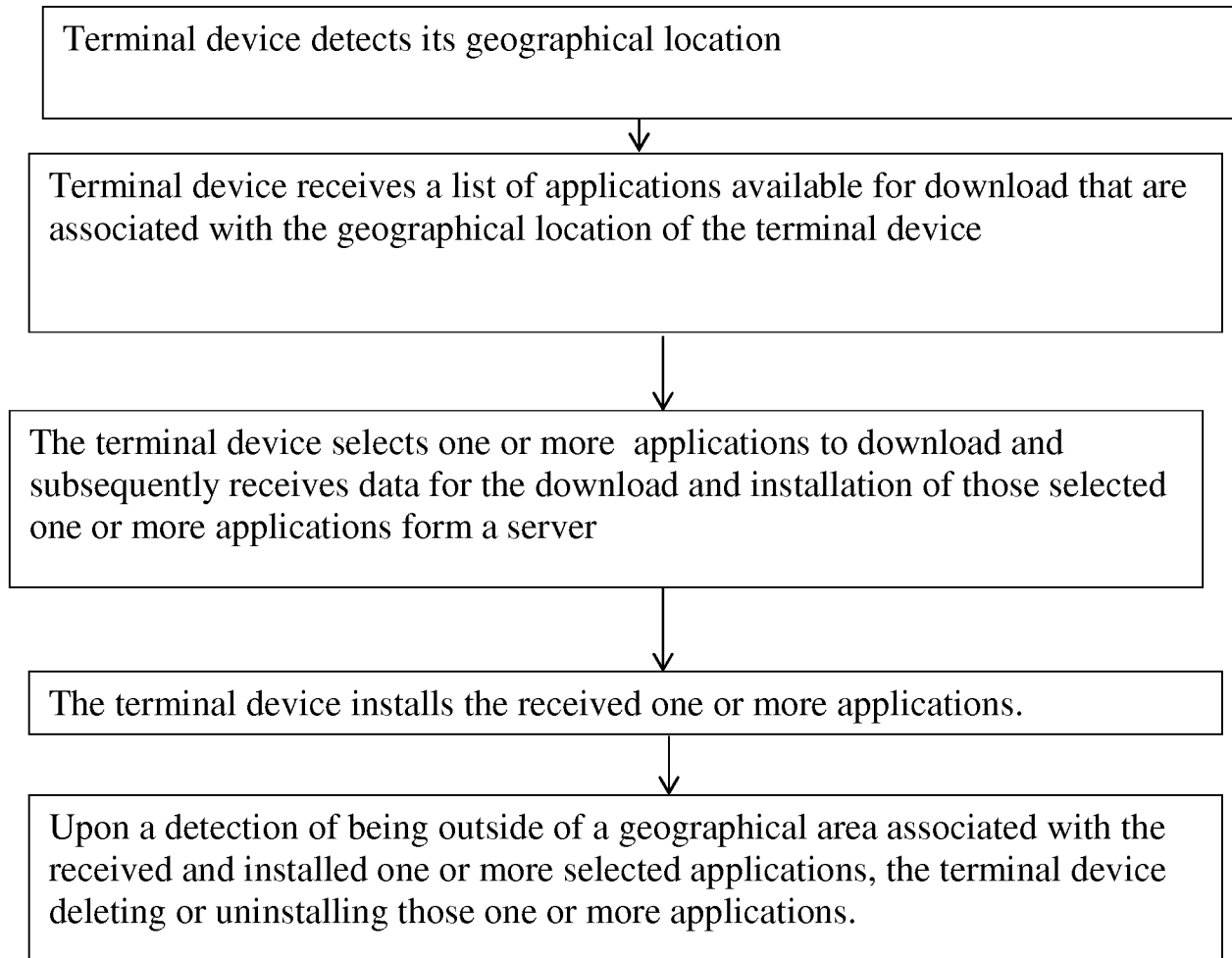
2/4

**FIGURE 2**

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**FIGURE 3**

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**FIGURE 4**

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/068904

A. CLASSIFICATION OF SUBJECT MATTER		
INV.	H04L29/08 H04M1/725	G06F9/00 G06F9/445
	H04M1/00	H04W4/00 H04W4/02
ADD.		
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) H04L G06F H04M H04W		
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 practicable, search terms used) EPO-Internal, WPI Data, COMPENDEX, INSPEC		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2 451 138 A1 (NOKIA CORP [FI]) 9 May 2012 (2012-05-09) figures 1-4 paragraphs [0001] - [0002] paragraphs [0013] - [0018] paragraph [0020] paragraph [0023] paragraph [0025] paragraphs [0032] - [0037] paragraphs [0041] - [0043] -----	1-15
X	WO 2010/088138 A1 (SYMBOL TECHNOLOGIES INC [US]; ORLASSINO MARK P [US]) 5 August 2010 (2010-08-05) figures 2-4 paragraphs [0025] - [0028] ----- -/-	1-15
☒ 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 "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 "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "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 9 October 2013		Date of mailing of the international search report 02/01/2014
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Jeampierre, Gérald

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/068904

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.:
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:
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:

see additional sheet

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 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.:

2-7, 9-11, 13-15(completely); 1, 8, 12(partially)

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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/068904

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EPODOC EUROPEAN PATENT OFFICE, THE HAGUE, NL; 19 January 2011 (2011-01-19), XP002714240, abstract -& CN 101 951 549 A (ZTE CORP) 19 January 2011 (2011-01-19) the whole document A computer translation of this Patent document is available on the webpage of the SIPO.	1-15
A	----- EP 2 252 055 A1 (SONY EUROPE LTD [GB]) 17 November 2010 (2010-11-17) figures 1a, 1b, 2 paragraph [0001] paragraph [0010] paragraphs [0032] - [0038] paragraphs [0050] - [0051] paragraph [0062] -----	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/068904

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2451138	A1	09-05-2012	AU 2003274446 A1 25-05-2004 BR 0315883 A 04-10-2005 CA 2503977 A1 13-05-2004 CN 1717943 A 04-01-2006 EP 1557056 A1 27-07-2005 EP 2451138 A1 09-05-2012 ES 2424638 T3 07-10-2013 JP 2006505182 A 09-02-2006 KR 20050062650 A 23-06-2005 US 7072672 B1 04-07-2006 US 2005222918 A1 06-10-2005 WO 2004040923 A1 13-05-2004
WO 2010088138	A1	05-08-2010	CA 2750571 A1 05-08-2010 CN 102301334 A 28-12-2011 EP 2382539 A1 02-11-2011 KR 20110135926 A 20-12-2011 US 2010190522 A1 29-07-2010 WO 2010088138 A1 05-08-2010
CN 101951549	A	19-01-2011	CN 101951549 A 19-01-2011 WO 2012034471 A1 22-03-2012
EP 2252055	A1	17-11-2010	CN 101888528 A 17-11-2010 EP 2252055 A1 17-11-2010 JP 2010268462 A 25-11-2010 US 2010293586 A1 18-11-2010

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 2-7, 9-11, 13-15(completely); 1, 8, 12(partially)

Claim 1, alternatives 1 and 5

2. claims: 2-7, 9-11, 13-15(completely); 1, 8, 12(partially)

Claim 1, alternatives 2 and 4

3. claims: 2-7, 9-11, 13-15(completely); 1, 8, 12(partially)

Claim 1, alternative 3
