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(73) Patenthaver: **Cortado AG, Alt-Moabit 91 a/b, 10559 Berlin, Tyskland**

(72) Opfinder: **Paschold, Alexander, Fanningerstr. 65, 10365 Berlin, Tyskland**
Pröhl, Mathias, Spandauer Damm 121, 14050 Berlin, Tyskland

(74) Fuldmægtig i Danmark: **Patrade A/S, Ceresbyen 75, 8000 Århus C, Danmark**

(54) Benævnelse: **PRINTMETODE, INDRETNING TIL REALISERING AF PRINTMETODEN SAMT ET TILSVARENDE COMPUTERPROGRAM OG ET TILSVARENDE COMPUTERLÆSBART HUKOMMELSESMEDIUM**

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DESCRIPTION

[0001] The invention relates to a printing method, to an assembly for carrying out the printing method, and to a corresponding computer program and to a corresponding computer-readable storage medium, which in particular make it possible to increase the number of printing devices that can be used by a mobile terminal device.

Prior art:

[0002] For transmitting a print job to a printer, some limitations are associated with a mobile terminal device equipped with iOS (iPhone™ Operating System) in comparison to stationary devices such as PCs or other mobile devices such as laptops. It is only possible to communicate with printers that use the AirPrint™ protocol (interface software). The printers are found using the Bonjour™ protocol. These printers must be accessible via wireless local area network (WLAN) and have a network address in the same segment as the mobile device. The printer therefore has to be in proximity to the mobile device from which the print job is initiated. The control of access rights to the printers is not uniformly regulated; every manufacturer is at liberty to use and design a user management. This printing solution for iOS-based mobile devices is therefore only feasible in small environments, i.e., generally a few to a few tens of users and a few printers in a spatially delimited area. In larger environments, in which not every printer is supposed to be available to every user, this concept places substantial demands on the management of the printers and mobile terminal devices, as each new mobile device must be made known to each printer to which print jobs may be sent by mobile devices. For this reason, in actual practice the printers, in the default setting, allow each mobile device to print. In this environment, it makes sense to install a server that uses the AirPrint™

protocol, accepts the print job and forwards it to the desired printer. This would remedy the limitations in terms of the accessibility of the printer. However, rights management is still only possible with considerable difficulty with this system. Both methods (direct printing with AirPrint™ or indirect printing via an AirPrint™ server) have a number of disadvantages, which this invention remedies:

- Printing rights can generally only be granted to a device, not to a user.
- Printing rights for a mobile terminal device can only be set up on the printer itself.
- Whether and to what extent printing rights can be assigned to devices or users depends on the printer. A comprehensive management for all users and devices is therefore only possible if all printers enable management of users and devices.
- Because the user interface is not standardized, the necessary administration work for this must be performed on the device itself. At best, a rudimentary configuration server is installed on the printer so that the administer can access the printer via the network. However, this does not solve the problem regarding the different user interfaces of different printers.
- If no printing rights are assigned, then each terminal device is authorized to send print jobs to a given printer. Or a printer does not accept any print jobs, depending on the pre-settings on the printer.
- The user does not have any control over his rights and the available devices. The AirPrint™ protocol offers him all accessible printers; the user does not learn whether he has the authorization to use the printer until after he has started the print job.

[0003] A typical scenario in an AirPrint™ environment looks like this:

1. The access rights are established on the printers by the administrator.
2. The user selects the print function on his iOS device.
3. The device offers him all printers that were offered via the AirPrint™ protocol.
4. The user selects a printer.
5. The print job is transmitted to the printer.
6. The print-out starts if the printer accepts the job. Otherwise, an error message is generated and the user must repeat step 4.
7. Printers are searched in order to get the print-out.

[0004] In a general manner, KR 2001 0067777 A describes an INTERNET PRINTING PROTOCOLS SERVER SYSTEM. According to this document, a local area network (LAN) is used to transmit information data to a printer, which is connected to a target printer server via a user terminal. A protocol server system is also described. In a general manner, JP 2004 102959 A describes a HOSTING PRINTER SERVER SYSTEM as a server-based printer management based on the internet printing protocol (IPP).

[0005] Different aspects of the then new internet printing protocol IPP are described in a general manner in the document designated as "INTERNET DRAFT" and titled "Internet Printing, Protocol/1.0: Directory Schema; draft-ietf-ipp-dir-schema-01.txt" by K. Carter (IBM) and S. Isaacson (Novell, Inc.) of June 12, 1997.

[0006] The problem addressed by the invention is therefore that of providing a printing method, an assembly for carrying out the printing method and a corresponding computer program and a corresponding computer-readable storage medium, which remedy the disadvantages of the known solutions and in particular facilitate printing from mobile terminal devices.

[0007] According to the invention, this problem is solved by the features in Claims 1, 5, 6 and 7. Useful embodiments of the invention are contained in the subordinate claims.

[0008] A particular advantage of this invention lies in the fact that the number of usable printing devices is increased for mobile terminal devices. This is achieved by providing a printing method in which a mobile terminal device, for example a mobile terminal device on which the iOS operating system is installed, communicates with a server via a wireless communication connection. For this purpose, the communication can use any known or yet to be developed communication protocol, including in particular communication protocols permitting the use of printing devices only within a limited radius, for example restricted to specific network addresses of the printing devices, as is the case with, for example, the AirPrint™ protocol. (For using the invention, the server would then have to have a corresponding network address, although the printing devices supported by the server would no longer have to). According to the invention, data to be printed out are sent by the mobile terminal device to a printer via the server.

[0009] According to the invention, further provision is made such that data are filed on the mobile terminal device that comprise at least information on a printing device or on multiple printing devices and keys, wherein each printing device is assigned at least one key. These data can be data that were originally generated on the data processing device on which the server is installed or on another data processing device. The keys are also preferably allocated to a user such that a user profile is created on the server or on the other data processing device by the generation of the data, which user profile comprises information on printing devices usable by a specific user and keys assigned to the printing devices. The keys are preferably also user-specific such that each key is allocated to just one user (issued for one user).

(The data, which comprise at least information on one or multiple printing devices and keys, shall henceforth also be designated as 'user profile'. Accordingly, a user profile is assigned to one user). The data can be transmitted to the terminal device from the data processing device on which the server is installed or from the other data processing device, either by automated or semi-automated transmission or by manual retrieval. For example, an email server, a web server or a mobile device management (MDM) server, which sends the user profile to the mobile terminal device, can be installed on the other data processing device. The other data processing device shall henceforth also be designated as 'communication server'.

[0010] In the event that content is to be printed out by the mobile terminal device, according to the invention a communication connection is then established between the mobile terminal device and the server. The mobile terminal device preferably communicates with the server via a wireless communication interface. The communication connection therefore has at least partially wireless communication routes. In a preferred embodiment, the connection to the server is established in response to the activation of a print function on the mobile terminal device, for example after a user of the mobile terminal device actuates a print button of an application such as Microsoft™ Word. At least one key is preferably transmitted to the server during or (shortly) after the establishment of the connection. After the connection has been established between the mobile terminal device and the server, in a preferred embodiment the server determines the available printing devices that can be used for printing the content. During this determination, among other things it is verified whether a printing device is technically accessible from the server. In doing so, it is preferably also verified on the server whether the at least one key sent by the terminal device is valid for the user and/or for the existing printing devices.

[0011] Information is then transmitted by the server to the mobile terminal device via at least some of the usable printing devices. This information is used by the user of the mobile terminal device to select a suitable printing device on which the content is to be printed. In this context, usable means that the printers are usable for the user, in other words that all technical conditions for triggering a printing process on this device are fulfilled. Providing the terminal device with information via printers in the user profile is known to the prior art. These printers are always offered to the user as soon as the latter has triggered the printing process. The accessibility thereof is not verified. For example, it is therefore possible that these devices may have been removed, that the administrator has assigned them a new address or a new name, or that they have simply been turned off. In the prior art, the user only learns of this when an error message is generated. Because these printers are filtered out during the verification performed on the server, the invention presented herein also expands the prior art here.

[0012] According to a preferred embodiment, at least some of the keys are contained in the network name of the printers. If a user has selected a printing device, established the print settings and authorized the print-out, the key is transmitted in the network name of the printer to the server, where the key and the selected printing device are extracted from the network name. The key is used to verify the authorization of the user to use the printing device and/or the set print settings. If the user is authorized, the print data are sent to the determined printing device. However, the keys can also be transmitted by the terminal device to the server on alternative paths, for instance as parameters within the communication protocol.

[0013] In a preferred embodiment, printer objects are set up on the server, which each address a printing device. A

preferred embodiment makes provision such that the printer objects define print settings. The particular advantage of this lies in the fact that different printer objects are created for a printer, which differ in terms of the print settings or the name of the printer object. It has furthermore been proven advantageous if the printer objects are assigned to a user. In this manner it is possible to create a first printer object, which addresses a first printing device, provides first print settings and is assigned to a first user, and a second printer object, which likewise addresses the first printing device but provides second print settings and is assigned to the first or to a second user. The information about at least some of the usable printing devices preferably comprises the printer objects which are assigned to the user and which address usable printing devices. The printer objects are therefore preferably created as a user specific.

[0014] After selection of the printing device, statements about the selected printing device and optionally further statements about print settings and the data intended for printing, or information which the server can use to acquire the data intended for printing from a remote storage site, are transmitted to the server. In a preferred embodiment of the invention, provision is made such that after activation of the print function (and transmission of the printer objects), the user of the mobile terminal device is offered a choice of printer objects. After selecting a printer object, the user then has the option of defining print settings or changing default settings of printer settings. After the printing device has been selected via the corresponding printer object and the print settings have been made, the selection and the print settings are confirmed and transmitted, together with the data intended for printing and the key assigned to the printer object, to the server. In a further embodiment, provision is made such that information enabling the server to retrieve the data intended for printing from a remote

storage site in a data network is sent to the server in lieu of the data intended for printing. The information enabling the server to retrieve the data can be, for example, a network address (e.g., a uniform resource locator (URL)) of the data.

[0015] In a preferred embodiment, provision is made for verifying, on the server, whether the key sent by the terminal device is valid for the selected printing device, for the user and/or for the print settings that were made. If it is established that the key is valid, the data intended for printing are sent to the selected printing device and printed out thereon.

[0016] A preferred embodiment makes provision such that at least some of the printing device names and keys contained in the user profile of the user are sent to the server immediately after the connection is established between the mobile terminal device and the server (in response to the activation of the print function), and that the server, in accordance with the forwarded printing device names, determines the (currently) available printing devices to which a valid key has been forwarded. This has the advantage that the server only transmits information pertaining to printing devices for which a valid key exists to the mobile terminal device of the user. In addition, provision can be made for performing another verification of the validity of the key after the print settings are made, even if the print settings are linked to a valid key.

[0017] In a further preferred embodiment, provision is made for using a special server with a user management for the management of the user profiles and for the key verification. The server with the user management can be arranged in the communication connection between the mobile terminal device and the print server such that all communication between the mobile terminal device and the print server runs via the server with the user management. However, it is also possible for the server with the user management to be accessible only from the print server. In

any case, the print server communicates with the server for user management in order to obtain information as to whether the data intended for printing may be sent to the selected printing device. In a preferred embodiment, the data intended for printing are transformed into a format adapted to the selected printing device prior to transmission to the selected printing device.

[0018] The invention can be implemented by, for example, a method for printing from mobile terminal devices via a wireless connection on network printers using at least one print server, in which

printer objects, which are offered to the central user management as printers, are set up on the print server,
a list of users and a list of the existing printers is kept on a central user management,
each user is provided with his own list of printers in the central user management,
a unique key is created for each combination of users and printers,
upon login, the list of printers assigned to the user, together with the keys, is transmitted from the print server to the mobile terminal device on which the user logs into the system,
for each print job, the key is transmitted to the print server,
after selection of a printer and transmission of the print job to the print server, the print server verifies the key in the central user management, and
the print server forwards the print job to the selected printer.

[0019] The server that transmits the printer list to the mobile terminal device can be an email server, a web server or an MDM server and the mobile terminal devices can be devices with the iOS operating system.

[0020] Provision can be made such that the AirPrint™ protocol is used for communication between the mobile terminal device and the print server.

[0021] An assembly according to the invention has at least one chip and/or processor and is set up in such a way that a printing method can be carried out in which a mobile terminal device communicates via an interface for a wireless communication with a server and sends data intended for print-out to a printing device via the server, wherein data comprising at least information designating a printing device and at least one key assigned to the printing device are stored on the mobile terminal device, and wherein the method comprises the following steps:

- Establishment of a communication connection between the mobile terminal device and the server,
- Identification, on the server, of usable printing devices,
- Sending of information about the usable printing devices by the server to the mobile terminal device,
- Selection, on the mobile terminal device, of a usable printing device,
- Sending of the data intended for print-out, or of information that will enable the server to retrieve the data intended for print-out from a remote storage site in a data network, by the mobile terminal device to the server,
- Prior to the sending of the data intended for print-out to the selected printing device, verification, on the server, of the validity of one or multiple keys sent by the mobile terminal device, and
- Sending of the data intended for print-out to the selected printing device, depending upon the validity of the key or keys.

[0022] The description of the method steps is not intended to establish any sequence for the carrying out of the same. In particular, the verification of the keys sent by the

mobile terminal device can also take place immediately after the establishment of the communication connection between the mobile terminal device and the server.

[0023] A computer program according to the invention, after having been loaded into the memory of a data processing device, enables the data processing device to carry out a printing method in which a mobile terminal device communicates, via an interface for a wireless communication, with a server and sends, via the server, data intended for print-out to a printing device, wherein data comprising at least information designating a printing device and at least one key assigned to the printing device are stored on the mobile terminal device, and wherein the method comprises the following steps:

- Establishment of a communication connection between the mobile terminal device and the server,
- Identification, on the server, of usable printing devices,
- Sending of information about the usable printing devices by the server to the mobile terminal device,
- Selection, on the mobile terminal device, of a usable printing device,
- Sending of the data intended for print-out, or of information that will enable the server to retrieve the data intended for print-out from a remote storage site in a data network, by the mobile terminal device to the server,
- Verifying, on the server, the validity of one or multiple keys sent by the mobile terminal device, and
- Sending of the data intended for print-out to the selected printing device, depending upon the validity of the key or keys.

[0024] In a further preferred embodiment of the invention, provision is made such that the computer program according to the invention has a modular structure, wherein

individual modules are installed on different data processing devices.

[0025] Advantageous embodiments make further provision of computer programs by which further method steps or process sequences mentioned in the description can be carried out.

[0026] For example, such computer programs can be provided in downloadable form (for a fee or free of charge, freely accessible or password-protected) in a data or communication network. The computer programs thus provided can then be made usable by a method in which a computer program according to Claim 6 is downloaded from an electronic data network, for example from the internet, onto a data processing device connected to the data network.

[0027] In order to carry out the method according to the invention, provision is made for using a computer-readable storage medium, on which is stored a program which, after it has been loaded into the memory of the data processing device, enables the data processing device to carry out a printing method in which a mobile terminal device communicates, via an interface for a wireless communication, with a server and sends, via the server, data intended for print-out to a printing device, wherein data comprising at least information designating a printing device and at least one key assigned to the printing device are stored on the mobile terminal device and wherein the method comprises the following steps:

- Establishment of a communication connection between the mobile terminal device and the server,
- Identification, on the server, of usable printing devices,
- Sending of information about the usable printing devices by the server to the mobile terminal device,
- Selection, on the mobile terminal device, of a usable printing device,
- Sending of the data intended for print-out, or of information that will enable the server to retrieve the

data intended for print-out from a remote storage site in a data network, by the mobile terminal device to the server,

- Verifying, on the server, the validity of one or multiple keys sent by the mobile terminal device, and
- Sending of the data intended for print-out to the selected printing device, depending upon the validity of the key or keys.

[0028] Among other things, the method of the invention still provides the user with the familiar environment for printing while avoiding the shortcomings of the prior art. The user will go through the same steps 1-7 that were described above as a typical scenario for an AirPrint™ environment, except for step 1. The abortion in step 6 is likewise excluded by the invention.

[0029] In the following, the invention shall be explained in more detail with reference to an exemplary embodiment illustrated, at least partially, in the figures. Shown are:

Fig. 1: an example of a system for carrying out the printing method according to the invention and

Fig. 2: an example of a user profile.

[0030] In the following, the invention will be described on an exemplary network, which is configured to embody an exemplary embodiment of the method according to the invention. However, the invention is not limited to the network or method described by way of example. Rather, it is also possible to embody the method according to the invention with differently structured networks or with methods having other method steps. For example, the print server 110, the communication server 114 and/or the central user management 112 can also be installed on a data processing device. It is also possible to equip the print server 110 with information that enables it to verify the validity of the keys without connection to the central user

management 112. The validity of the keys can also be verified at any point between the time that the user logs onto the network and the time that the data intended for print-out is sent to the selected printing device 108.

[0031] In addition to the components 'mobile terminal device 102, printing devices 104, 106, 108 and the server using the AirPrint™ protocol (AirPrint™ server)', a central user management 112 and a communication server 114 are introduced in an example of a printing system 100. According to the invention, the AirPrint™ server is equipped with further functionalities, which chiefly relate to user management and key verification. The AirPrint™ server enhanced by the additional functionalities is designated as 'enhanced AirPrint™ server' in the following. The communication server 114 transmits the user profiles 200 to the mobile terminal device 102. The communication server can be an MDM, web or email server; any other technical device that sends the user profiles 200 to the terminal device 102 is also possible.

[0032] The central user management 112 replaces the rights management that previously had to be carried out on each individual printing device 104, 106, 108 for each individual mobile terminal device 102. In addition, it offers further advantages. The user and the terminal device 102 are thus decoupled. Each user who has logged on and with a mobile terminal device 102 onto the central user management 112 can use the print devices 104, 106, 108 assigned to him, regardless of the mobile terminal device 102 used.

[0033] In order to carry out a printing rights management in the first place, in the prior art a terminal device 102 had to be registered on each printing device 104, 106, 108 intended to be used. The user was therefore also restricted a specific terminal device 102 if he wanted to use his preferred printing devices 104, 106, 108. In the method presented herein, a registration (login) is still necessary; this takes place one time in the system 100 and

is valid for all printing devices 104, 106, 108 and for all mobile terminal devices 102 used by the user. The central user management 112 contains a list of the printing devices and users. A list of printing devices 104, 106, 108 is managed for each user. In addition, a unique key is created for each combination of a user with a printing device 104, 106, 108. At this point the prior art is already surpassed multiple times; the management of the users is solved by the terminal device 102, the cumbersome rights management on the individual printing devices 104, 106, 108 is replaced by a central instance (the central user management 112), the connection of a user to a printing device 104, 106, 108 is secured by a key.

[0034] The print server 110 is centrally responsible for the management of the print jobs of all users. It communicates with the mobile terminal devices 102 via the AirPrint™ protocol. It furthermore maintains a connection to the central user management 112 in order to verify the validity of the keys. This verification is not known from the prior art.

[0035] Different printer objects, which address the same printing device 104, 106, 108 but differ in the print settings, can be set up on the print server 110. Different printer objects with the same settings are also possible, for example in order to be able to assign explanatory names. These printer objects are managed as printers in the central user management 112 and transmitted as printers to the terminal device 102 by the communication server 114. For example, it is thus possible to assign the same printing device 104, 106, 108 to multiple users, but to define the print settings individually for each user. For example, user A has the option of color printing, whereas user B can only print in black and white on the same printing device 104, 106, 108. This is achieved via two different printer objects, which are stored for the various users as different printers in the central user management. It is also possible to set up printer objects with

different properties for a printing device 104, 106, 108 for a user. The user is thus offered multiple printers, which print on the same printing device 104, 106, 108 but with different properties; for example, user A receives two printers D1 and D2, wherein D1 prints in color and D2 prints in black and white, and the print data are then forwarded to the same printing device 104, 106, 108. According to the invention, the settings are not limited to what has been described here. Each setting or combination of settings capable of being made for a printing device 104, 106, 108 can form, together with a printer, its own printer object. A printing device 104, 106, 108 can be used in any number of printer objects, whereas a printer object appears as precisely one printer in the central user management. Two example user profiles 200, which illustrate such printer objects as combinations of printing devices 104, 106, 108, print settings and keys, are shown in Figure 2. The printer objects are then assigned to the users in the central user management 112. A further advantage over the prior art is the greater number of available printing devices 104, 106, 108. Because the printing devices 104, 106, 108 no longer communicate with the mobile terminal device 102, all printing devices 104, 106, 108 for which a driver for the print server 110 exists can be used. The manufacturers implement the AirPrint™ protocol as a further protocol along with their own or a further standard. The prior art therefore limits the user to a smaller number of printing devices 104, 106, 108.

[0036] The communication server 114 and the central user management 112 jointly create a user profile 200 with the printers (the printer objects on the print server 110) set up for this user. The user profile 200 with the list of printers and the keys can be transmitted to the user (to the mobile terminal device 102 currently being used) in three ways:

Automated transmission: When the user logs into the system 100, the communication system 114 transmits the user profile 200 to the terminal device 102. This is the case if, for example, an MDM server is used.

Semi-automated transmission: After the user has logged into the system 100, the communication server 114 sends him a message containing the data of the user profile 200 or at least a link to the data. This can happen via an email, for example. The user is then at liberty to use the data received.

Manual request: The user must actively request the data of the user profile 200 from the communication server 114. For example, this is possible by email or by visiting a specific website. Once the user has done this, the procedure is the same as in a semi-automated transmission.

[0037] The user can log in via, for example, an LDAP (lightweight directory access protocol) server or the like. For the method according to the invention, it is merely important that the central user management 112 and the communication server 114 have knowledge of the login and that the communication server 114 is able to communicate with the terminal device 102 used for the login in order to transmit the user profile 200.

[0038] In the prior art, the printing devices found by the AirPrint™ protocol are displayed on the terminal device 102. Even with this invention, this is unavoidable. To prevent the use of these printing devices and thus enable the implementation of the invention, either the acceptance of print jobs can be barred for all printing devices, i.e., devices other than the print server 110, or the AirPrint™ functionality can be deactivated on the printing devices 104, 106, 108. Preference is given to the second method, as then only the printing devices 104, 106, 108 according to the invention are displayed on the terminal device 102. A

display of all printing devices found by AirPrint™/Bonjour™ does not preclude the process according to the invention.

[0039] An example of a flow of a printing process according to the invention is as follows:

- The user and the printing devices 104, 106, 108 assigned to him are stored in the central user management 112 by the administrator.
- The user logs into the system 100 on his mobile terminal device 102.
- He receives a list of printers along with the keys.
- The user triggers the print function.
- Before the list of printers is displayed, the client sends this list along with the keys to the print server 110.
- The print server verifies, in a step 116, whether the printing devices 104, 106, 108 contained in the list are currently accessible. The communication between the print server 110 and the printing devices 104, 106, 108 can take place via wireless, wired or a combination of wireless and wired communication connections.
- Printing devices 104, 106, 108 that do not respond are removed from the list.
- The print server 110 and the central user management 112 jointly verify the validity of the keys.
- The list of active printing device 104, 106, 108 with the valid key is sent back to the client.
- The user selects a printer.
- The print data are transmitted to the print server 110.
- The print server 110 processes the data for the selected printing device 108 and, in a step 118, forwards them to the selected printing device 108.

[0040] In its embodiment, the invention is limited to the claims.

Patentkrav

1. Printmetode, hvor en mobil terminal (102) via et interface til trådløs kommunikation kommunikerer med en server (110) og via serveren (110) sender bestemte data til en printer (108) til udskrivning, hvor der på den mobile terminal (102) er lagret en brugerprofil, som, for i det mindste en printer (104, 106, 108), omfatter

- informationer, der betegner printeren (104, 106, 108), og

- en brugerspecifik nøgle tilknyttet printeren (104, 106, 108), ved hjælp af hvilken brugerens autorisation til at anvende printeren kan kontrolleres af serveren,

og hvor metoden omfatter følgende:

- etablering af en kommunikationsforbindelse mellem den mobile terminal (102) og serveren (110),

- fremsendelse af brugerprofilen fra den mobile terminal (102) til serveren (110);

- fastlæggelse, ved hjælp af serveren (110), af anvendelige printere (104, 106, 108), hvor en printer anses som anvendelig for brugeren, hvis

- printeren er teknisk mulig at nå og

- brugerprofilen omfatter en nøgle, som viser brugerens autorisation til at anvende printeren;

- fremsendelse af informationer om de anvendelige printere (104, 106, 108) fra serveren (110) til den mobile terminal (102),

- valg på den mobile terminal (102) af en anvendelig printer (108), på basis af de fremsendte informationer;

- fremsendelse af data bestemt til udskrivning eller af informationer, som gør serveren (110) i stand til at hente de data, der er beregnet til

udskrivning, fra et fjernliggende lager i et datanetværk, fra den mobile terminal (102) til serveren (110), sammen med informationer, der betegner printeren

- fremsendelse af dataene bestemt til udskrivning fra serveren til den valgte printer (108);

hvor der på serveren (110) er defineret printerobjekter, som formidles til den mobile terminal (102) som anvendelige printere,
hvor der for en printer (104, 106, 108) kan være defineret flere printerobjekter, som hver har forskellige printindstillinger,
hvor printerobjekterne er anlagt brugerspecifikt på en sådan måde, at hvert printerobjekt på serveren (110) mindst er tilknyttet en bruger.

2. Printmetode ifølge krav 1, hvor de anvendelige printere (104, 106, 108) fastlægges som reaktion på aktivering af en printfunktion på den mobile terminal (102).

3. Printmetode ifølge krav 1 eller 2, hvor brugerprofilen oprettes og/eller administreres på databehandlingsenheden, som serveren (110) er installeret på, eller en anden databehandlingsenhed (112, 114), og overføres til den mobile terminal (102) efter oprettelsen.

4. Printmetode ifølge et af de foregående krav, hvor nøglen er indeholdt i printerens (104, 106, 108) adresse.

5. Indretning med mindst en chip og/eller processor, hvor indretningen er konfigureret på en sådan måde, at der kan udføres en printmetode ifølge et af kravene 1 til 4.

6. Computerprogram, som gør det muligt for en databehandlingsenhed at gennemføre en printmetode ifølge et af kravene 1 til 4, efter at det er indlæst i lagerenheder i databehandlingsenheden.

7. Computerlæseligt lagermedium, hvorpå der er lagret et program, som gør det muligt for en databehandlingsenhed at gennemføre en printmetode ifølge et af kravene 1 til 4, efter at det er indlæst i lagerenheder i databehandlingsenheden.

5

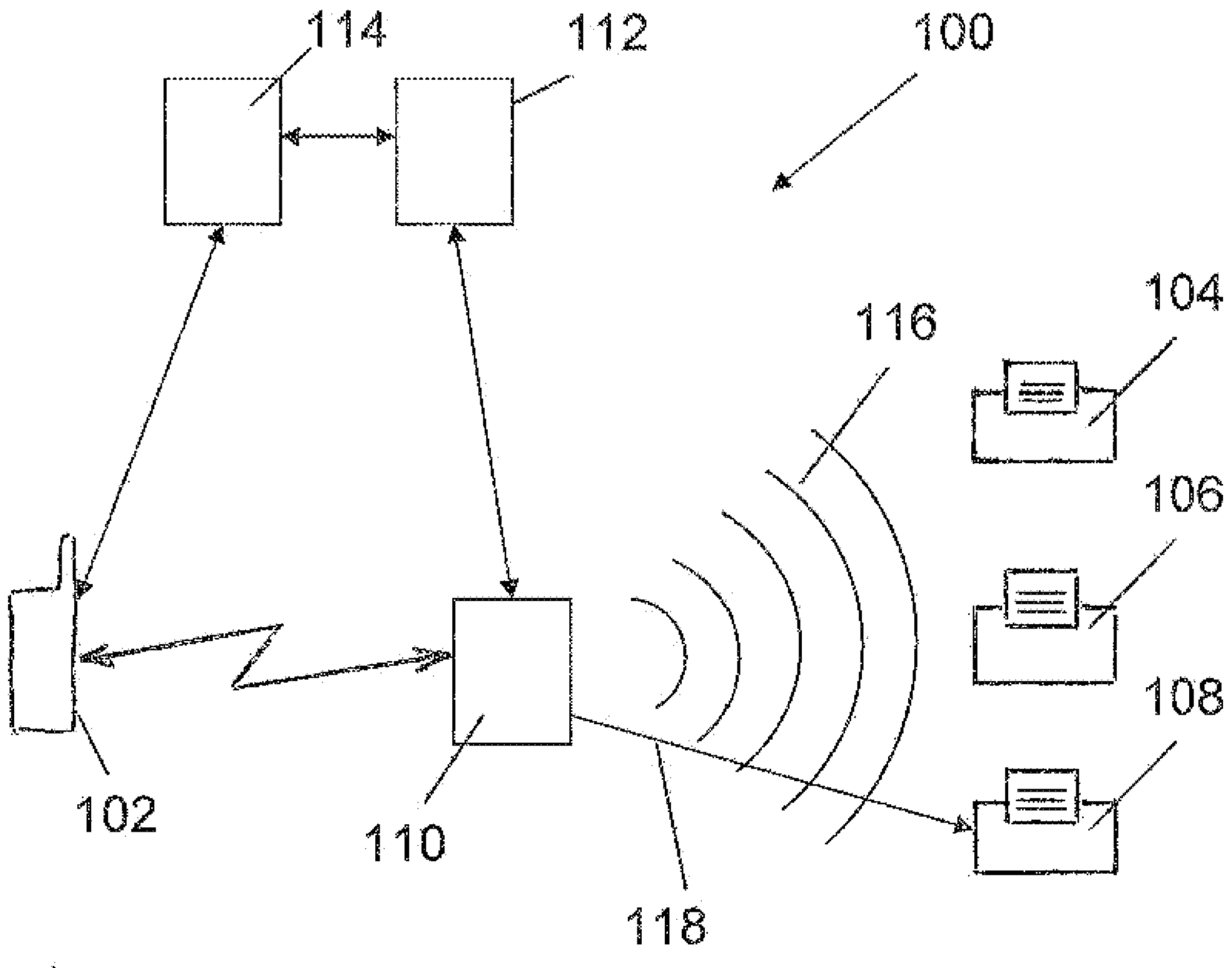

Figure 1

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User A	Printer object D1	Printing device 1	Print setting 1	Key A1
	Printer object D2	Printing device 1	Print setting 2	Key A2
	Printer object D3	Printing device 2	Print setting 3	Key A3
User B	Printer object D1	Printing device 1	Print setting 1	Key B1
	Printer object D4	Printing device 3	Print setting 4	Key B2

Figure 2