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(54) **SERVER, SERVER SYSTEM, NON-TRANSITORY COMPUTER-READABLE RECORDING MEDIUM STORING COMPUTER-READABLE INSTRUCTIONS FOR SERVER, AND METHOD PERFORMED BY SERVER**

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(57) **ABSTRACT**

A server may receive a specific signal including specific information from a terminal device via the Internet, the specific information being obtained by using relative information related to a peripheral device that is used by a user of the terminal device, the peripheral device being different from the terminal device, and the relative information including at least one of identification information for identifying the peripheral device and model information indicating a model of the peripheral device; acquire output data corresponding to the relative information by using the specific information included in the specific signal received from the terminal device, and send the acquired output data to an external device via the Internet.

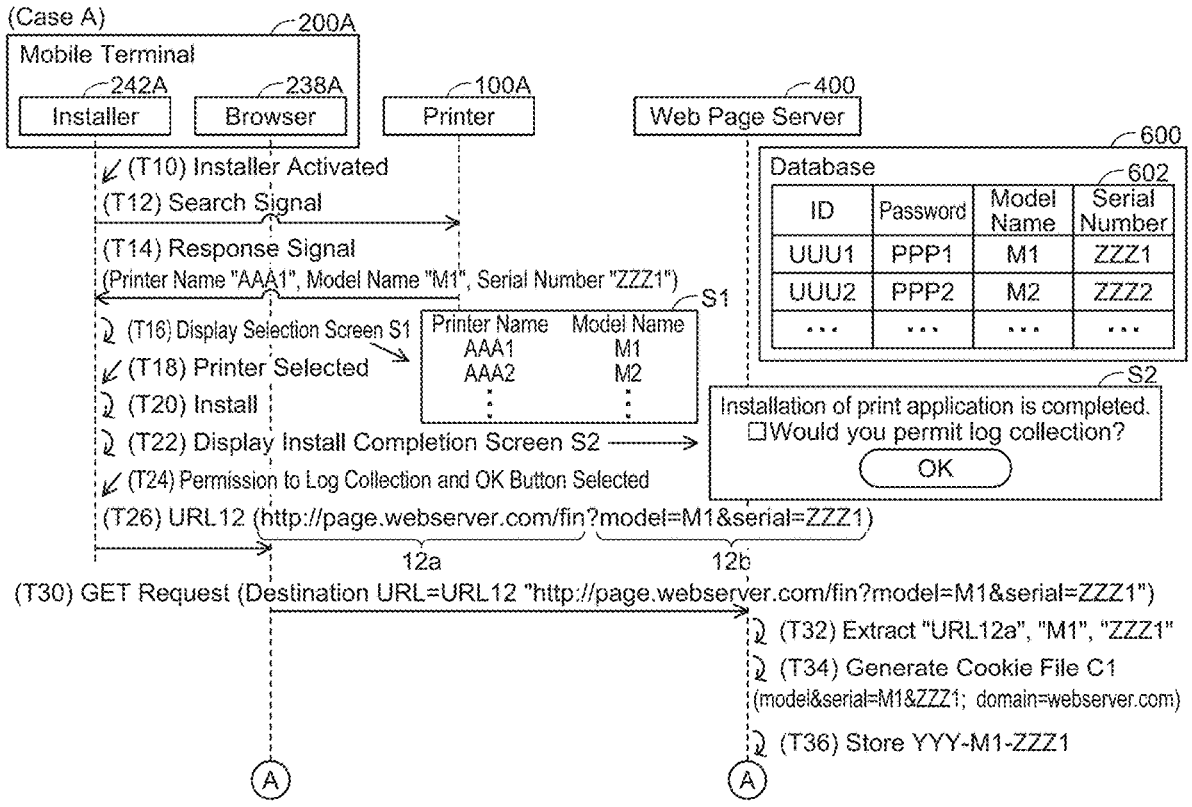


FIG. 1

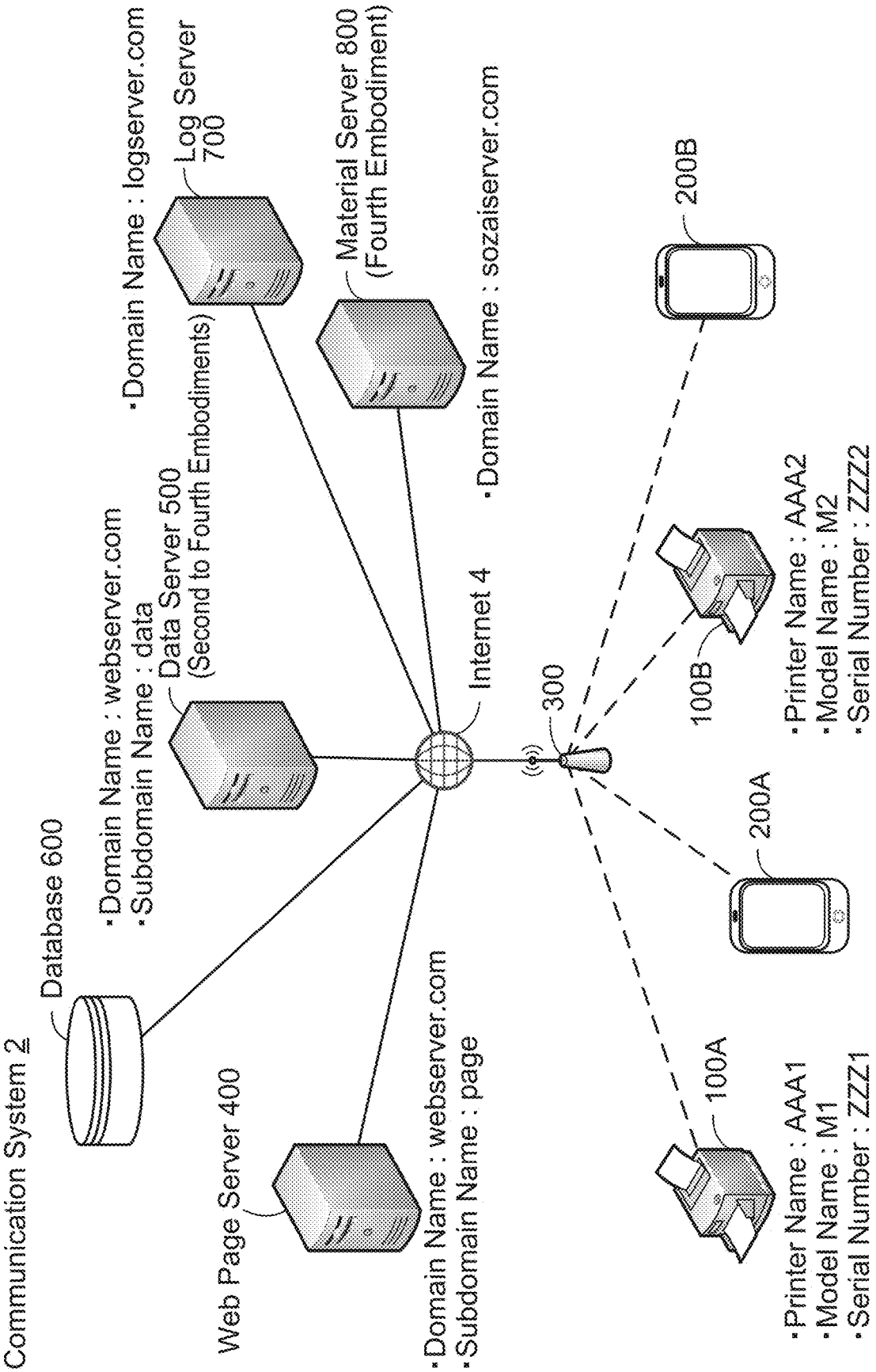

Communication System 2
Database 600
▪Domain Name : webserver.com
▪Subdomain Name : data
Data Server 500
(Second to Fourth Embodiments)
▪Domain Name : logserver.com
Log Server
700
Material Server 800
(Fourth Embodiment)
▪Domain Name : sozaiserver.com
Internet 4
300
200B
100B
▪Printer Name : AAA2
▪Model Name : M2
▪Serial Number : ZZZ2
200A
100A
▪Printer Name : AAA1
▪Model Name : M1
▪Serial Number : ZZZ1
Web Page Server 400
▪Domain Name : webserver.com
▪Subdomain Name : page

FIG. 2A

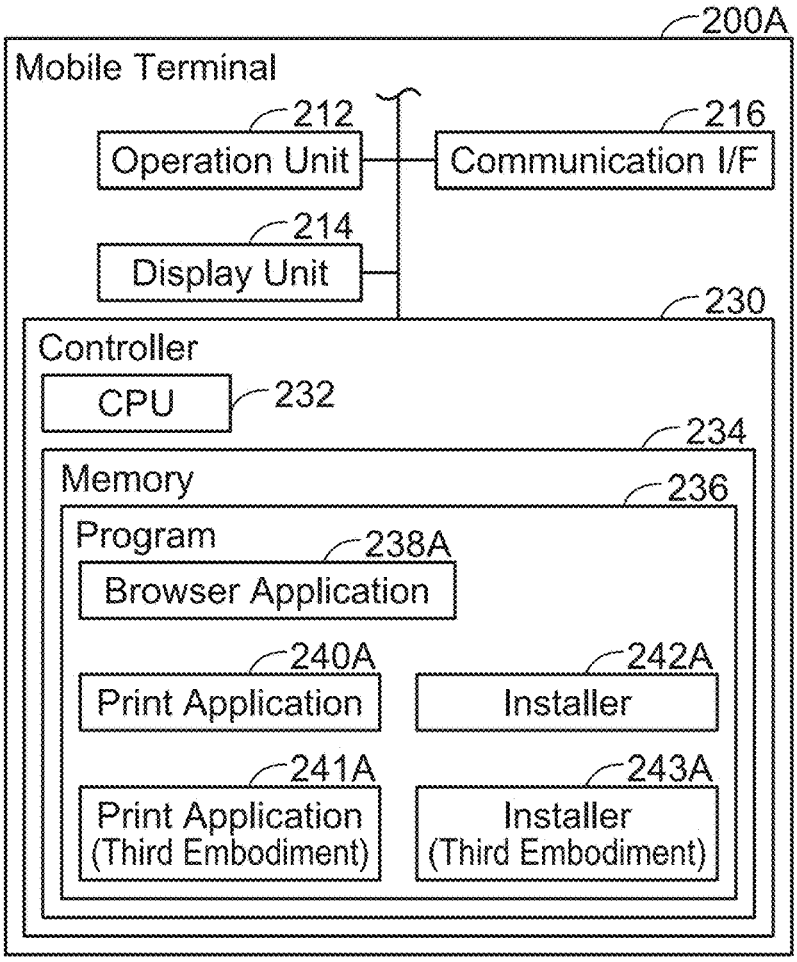

200A
Mobile Terminal
212
Operation Unit
216
Communication I/F
214
Display Unit
230
Controller
CPU
232
234
Memory
236
Program
238A
Browser Application
240A
Print Application
242A
Installer
241A
Print Application
(Third Embodiment)
243A
Installer
(Third Embodiment)

FIG. 2B

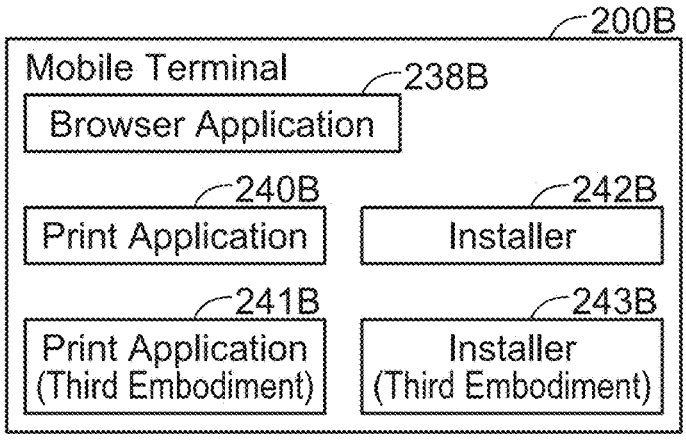

200B
Mobile Terminal
238B
Browser Application
240B
Print Application
242B
Installer
241B
Print Application
(Third Embodiment)
243B
Installer
(Third Embodiment)

FIG. 2C

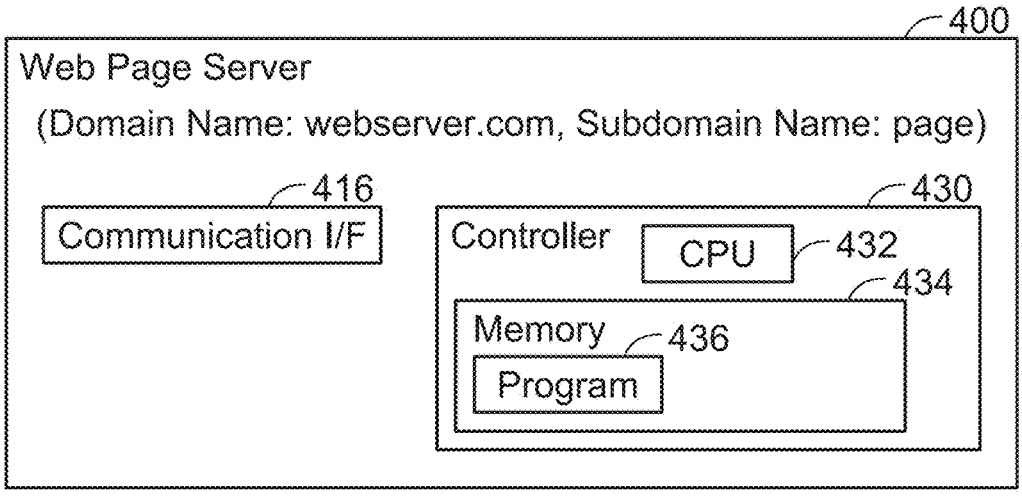
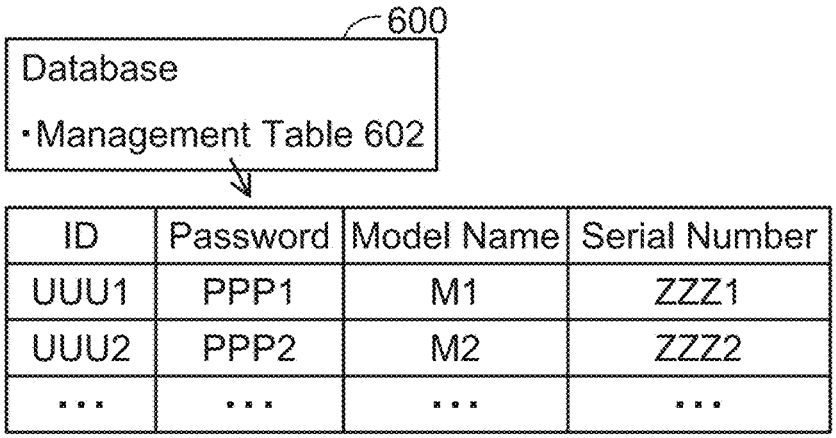


FIG. 2D



ID	Password	Model Name	Serial Number
UUU1	PPP1	M1	ZZZ1
UUU2	PPP2	M2	ZZZ2
...	...	...	...

FIG. 2E

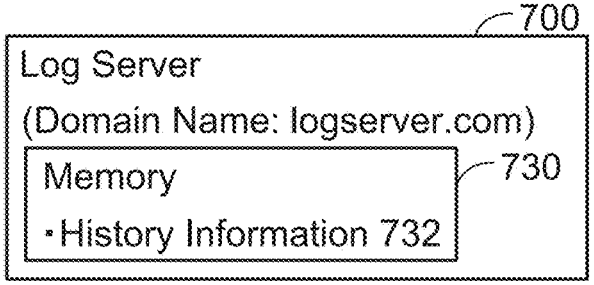


FIG. 3

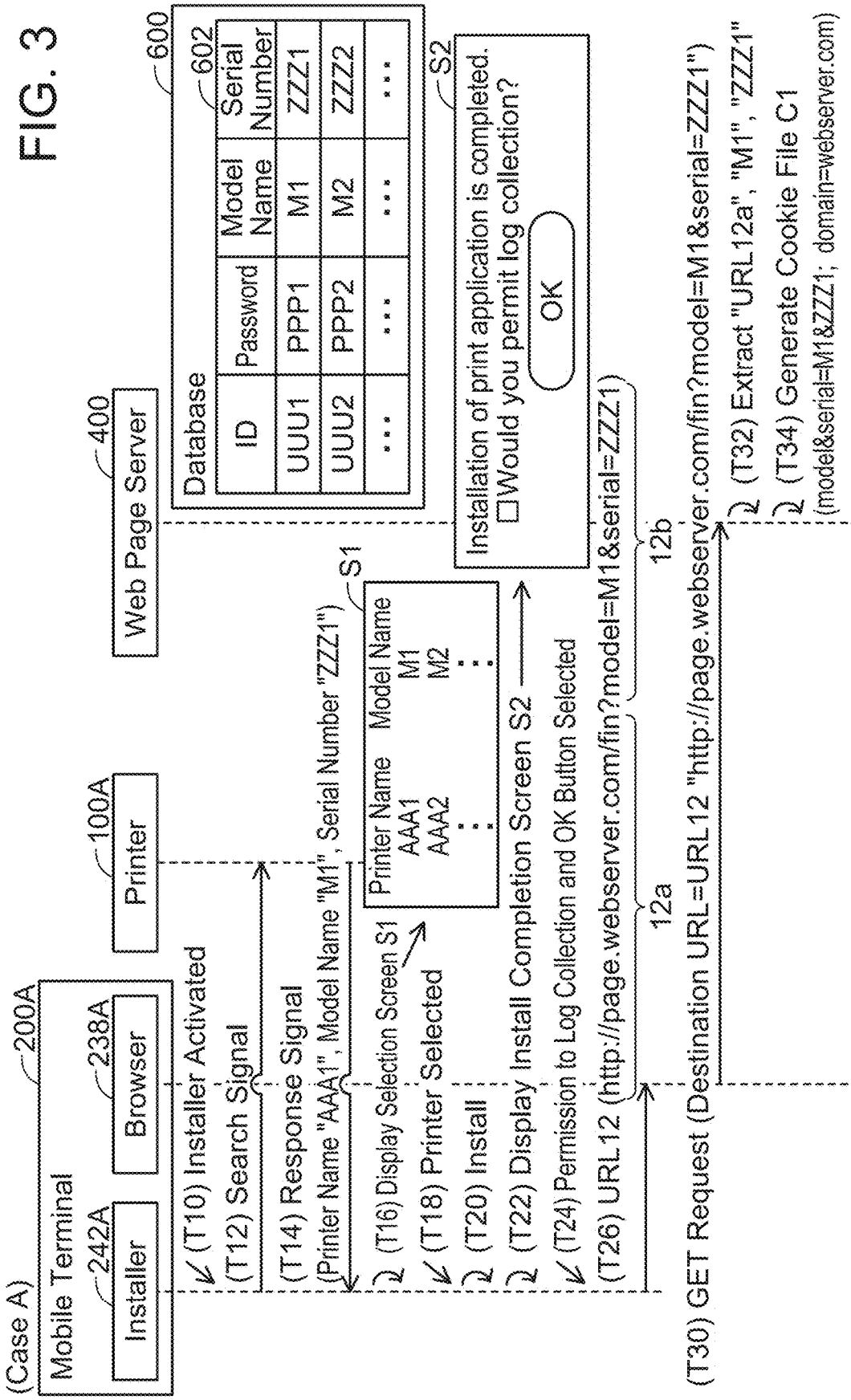
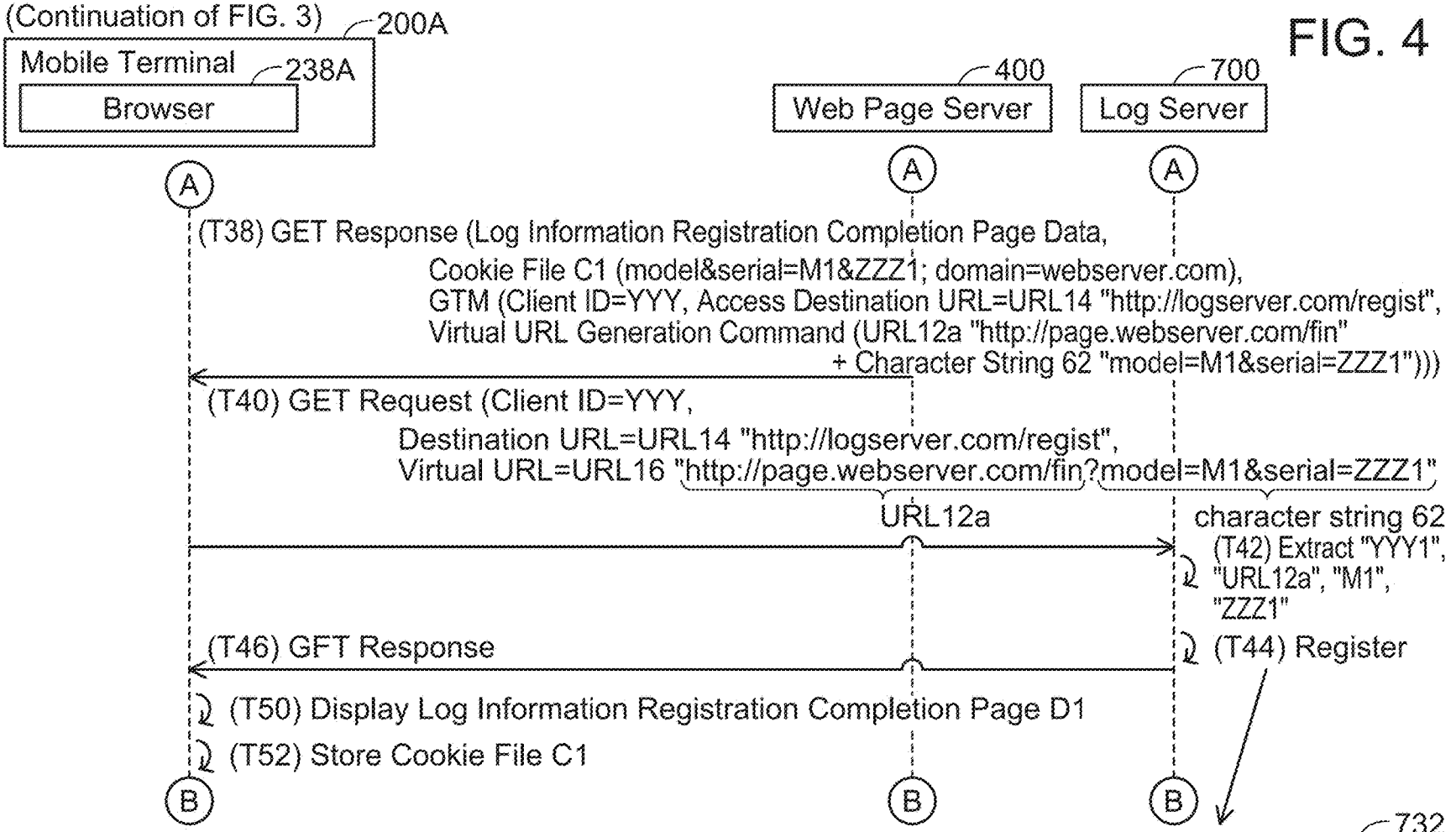

(Case A)
Mobile Terminal
200A
Installer
242A
Browser
238A
Printer
100A
Web Page Server
400
Database
600
ID
Password
Model Name
Serial Number
602
UUU1
PPP1
M1
ZZZ1
UUU2
PPP2
M2
ZZZ2
(T10) Installer Activated
(T12) Search Signal
(T14) Response Signal
(Printer Name "AAA1", Model Name "M1", Serial Number "ZZZ1")
S1
(T16) Display Selection Screen S1
Printer Name
Model Name
AAA1
M1
AAA2
M2
(T18) Printer Selected
(T20) Install
(T22) Display Install Completion Screen S2
S2
Installation of print application is completed.
☐Would you permit log collection?
OK
(T24) Permission to Log Collection and OK Button Selected
(T26) URL12 (http://page.webserver.com/fin?model=M1&serial=ZZZ1)
12a
12b
(T30) GET Request (Destination URL=URL12 "http://page.webserver.com/fin?model=M1&serial=ZZZ1")
(T32) Extract "URL12a", "M1", "ZZZ1"
(T34) Generate Cookie File C1
(model&serial=M1&ZZZ1; domain=webserver.com)
(T36) Store YYY-M1-ZZZ1
A
A

FIG. 4



732

Client ID	History URL	Model Name	Serial Number	Reception Time
YYY	URL12a	M1	ZZZ1	16:00
		...	...	...

FIG. 5

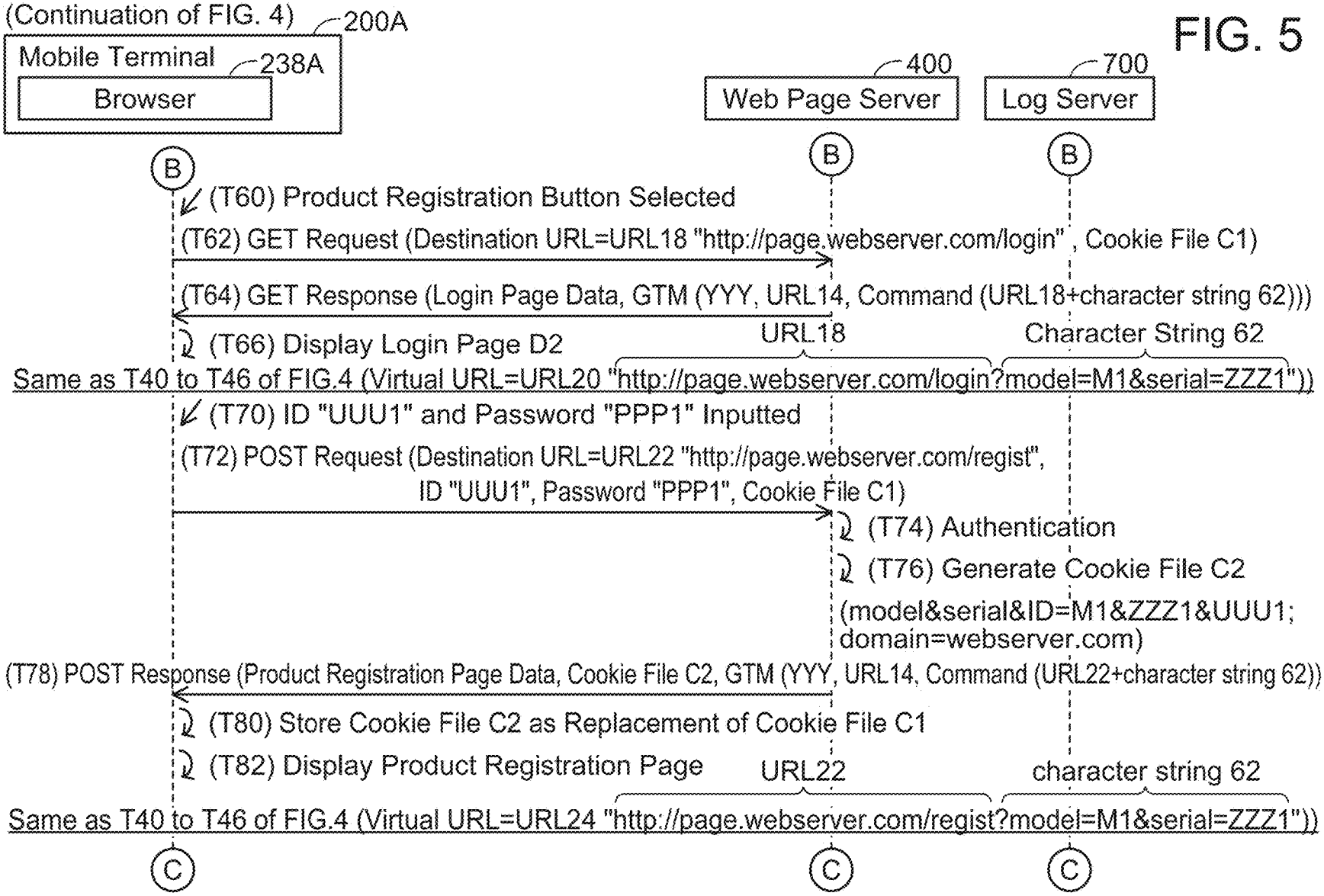
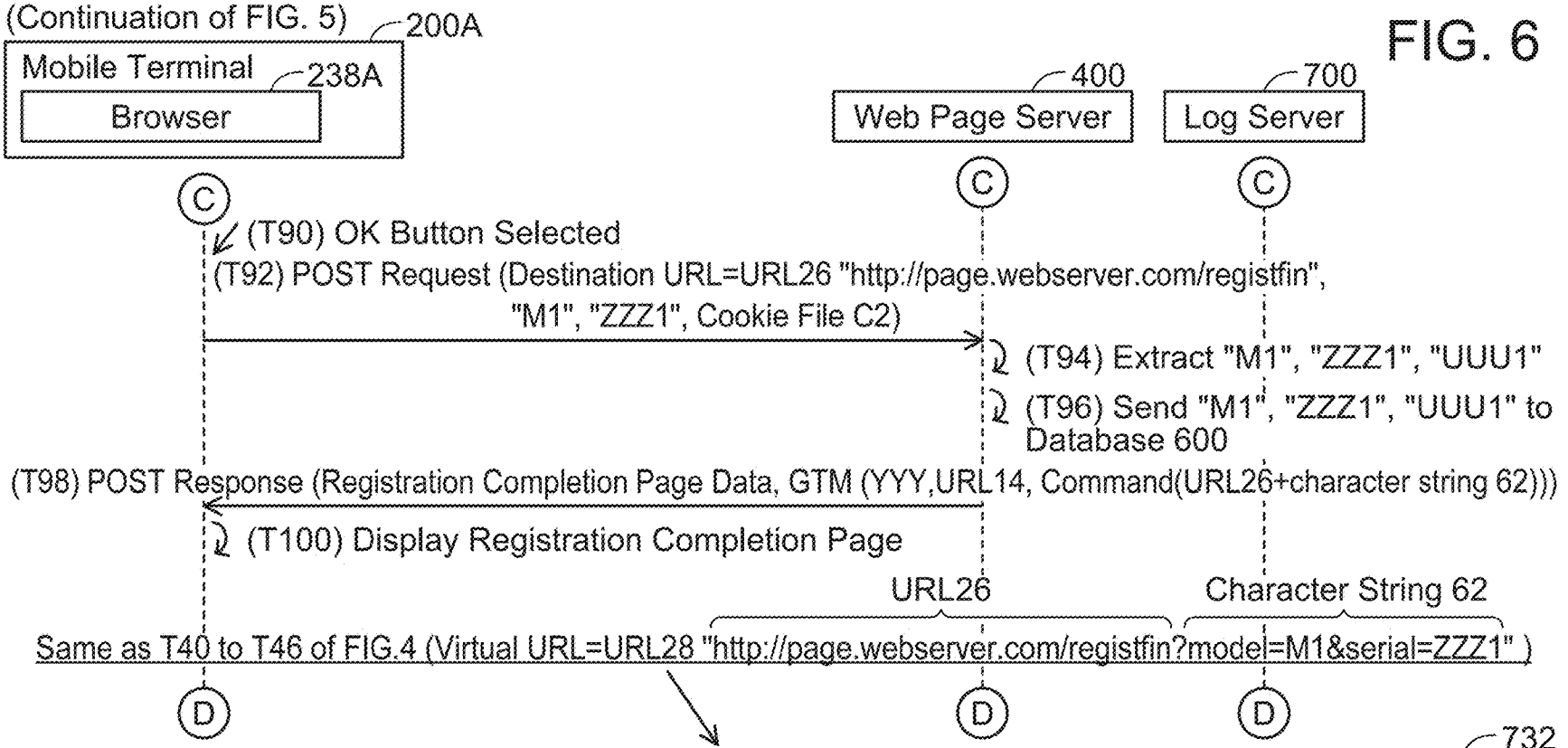

(Continuation of FIG. 4)
200A
Mobile Terminal
238A
Browser
400
Web Page Server
700
Log Server
B
B
B
(T60) Product Registration Button Selected
(T62) GET Request (Destination URL=URL18 "http://page.webserver.com/login" , Cookie File C1)
(T64) GET Response (Login Page Data, GTM (YYY, URL14, Command (URL18+character string 62)))
(T66) Display Login Page D2
URL18
Character String 62
Same as T40 to T46 of FIG.4 (Virtual URL=URL20 "http://page.webserver.com/login?model=M1&serial=ZZZ1"))
(T70) ID "UUU1" and Password "PPP1" Inputted
(T72) POST Request (Destination URL=URL22 "http://page.webserver.com/regist",
ID "UUU1", Password "PPP1", Cookie File C1)
(T74) Authentication
(T76) Generate Cookie File C2
(model&serial&ID=M1&ZZZ1&UUU1;
domain=webserver.com)
(T78) POST Response (Product Registration Page Data, Cookie File C2, GTM (YYY, URL14, Command (URL22+character string 62))
(T80) Store Cookie File C2 as Replacement of Cookie File C1
(T82) Display Product Registration Page
URL22
character string 62
Same as T40 to T46 of FIG.4 (Virtual URL=URL24 "http://page.webserver.com/regist?model=M1&serial=ZZZ1"))
C
C
C

FIG. 6



732

Client ID	History URL	Model Name	Serial Number	Reception Time
YYY	URL12a	M1	ZZZ1	16:00
		...	...	...
	URL18	M1	ZZZ1	16:05
	URL22	M1	ZZZ1	16:10
	URL26	M1	ZZZ1	16:15

FIG. 7

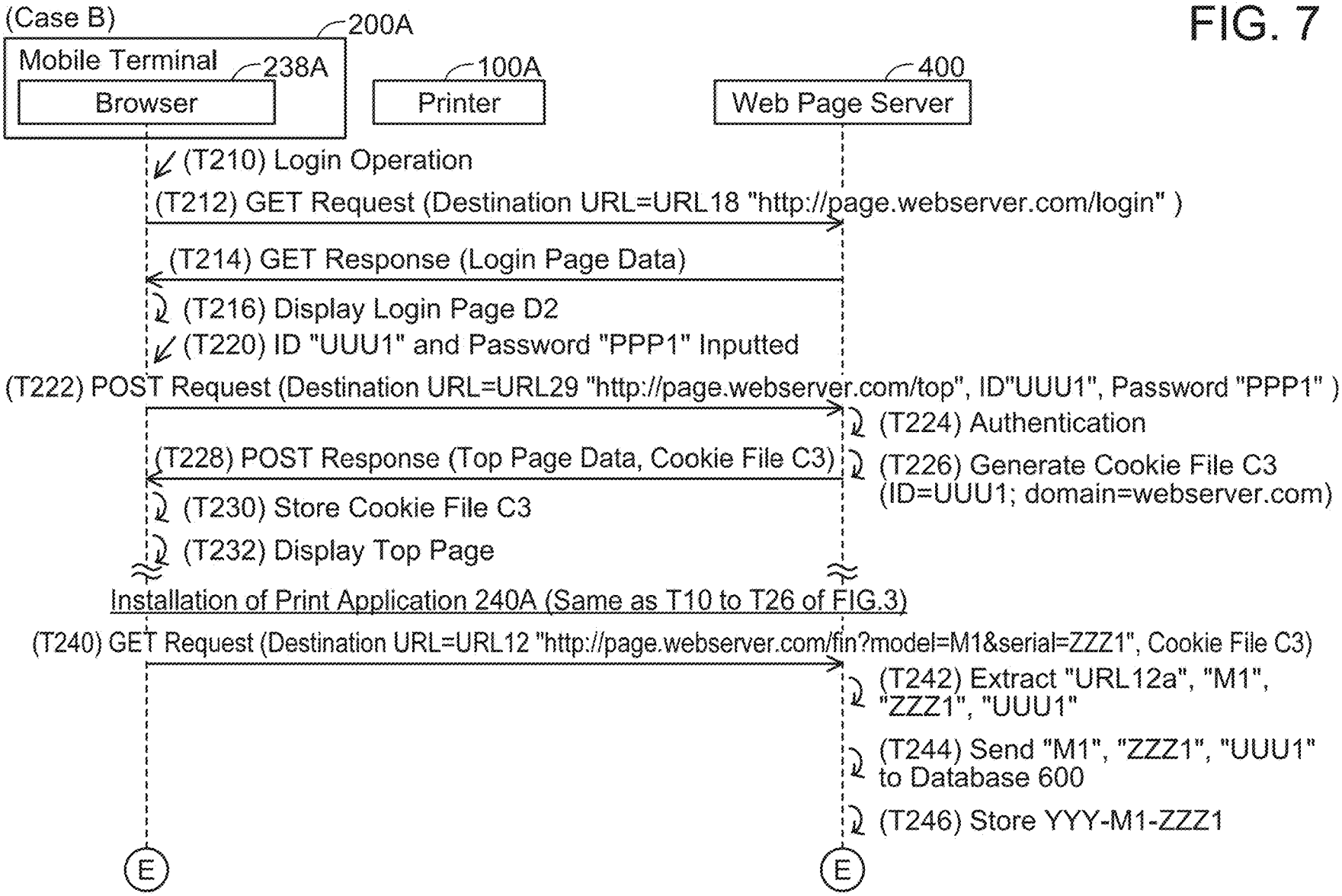

(Case B)
200A
Mobile Terminal
238A
Browser
100A
Printer
400
Web Page Server
(T210) Login Operation
(T212) GET Request (Destination URL=URL18 "http://page.webserver.com/login")
(T214) GET Response (Login Page Data)
(T216) Display Login Page D2
(T220) ID "UUU1" and Password "PPP1" Inputted
(T222) POST Request (Destination URL=URL29 "http://page.webserver.com/top", ID"UUU1", Password "PPP1")
(T224) Authentication
(T228) POST Response (Top Page Data, Cookie File C3)
(T226) Generate Cookie File C3 (ID=UUU1; domain=webserver.com)
(T230) Store Cookie File C3
(T232) Display Top Page
Installation of Print Application 240A (Same as T10 to T26 of FIG.3)
(T240) GET Request (Destination URL=URL12 "http://page.webserver.com/fin?model=M1&serial=ZZZ1", Cookie File C3)
(T242) Extract "URL12a", "M1", "ZZZ1", "UUU1"
(T244) Send "M1", "ZZZ1", "UUU1" to Database 600
(T246) Store YYY-M1-ZZZ1
E
E

FIG. 8

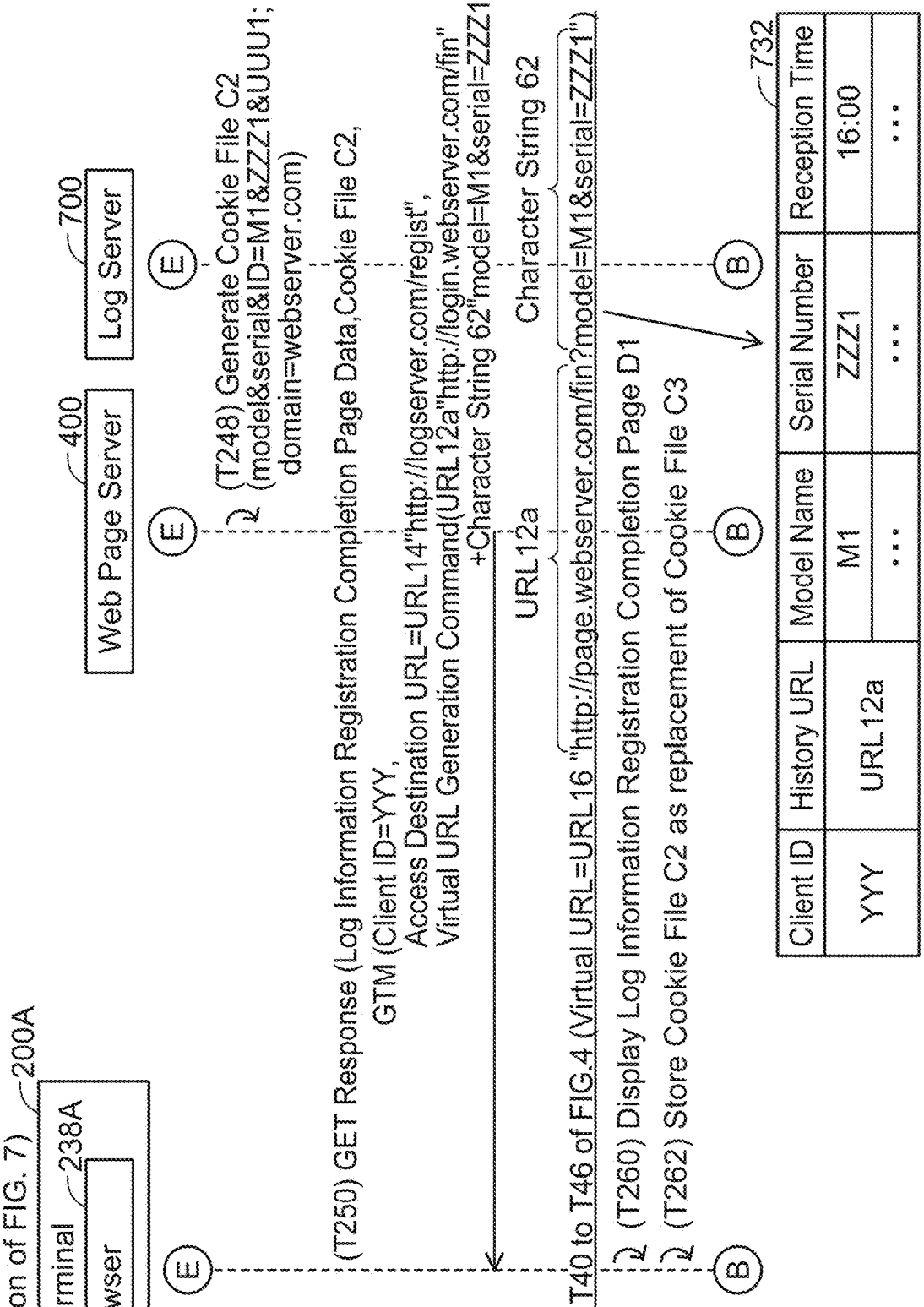
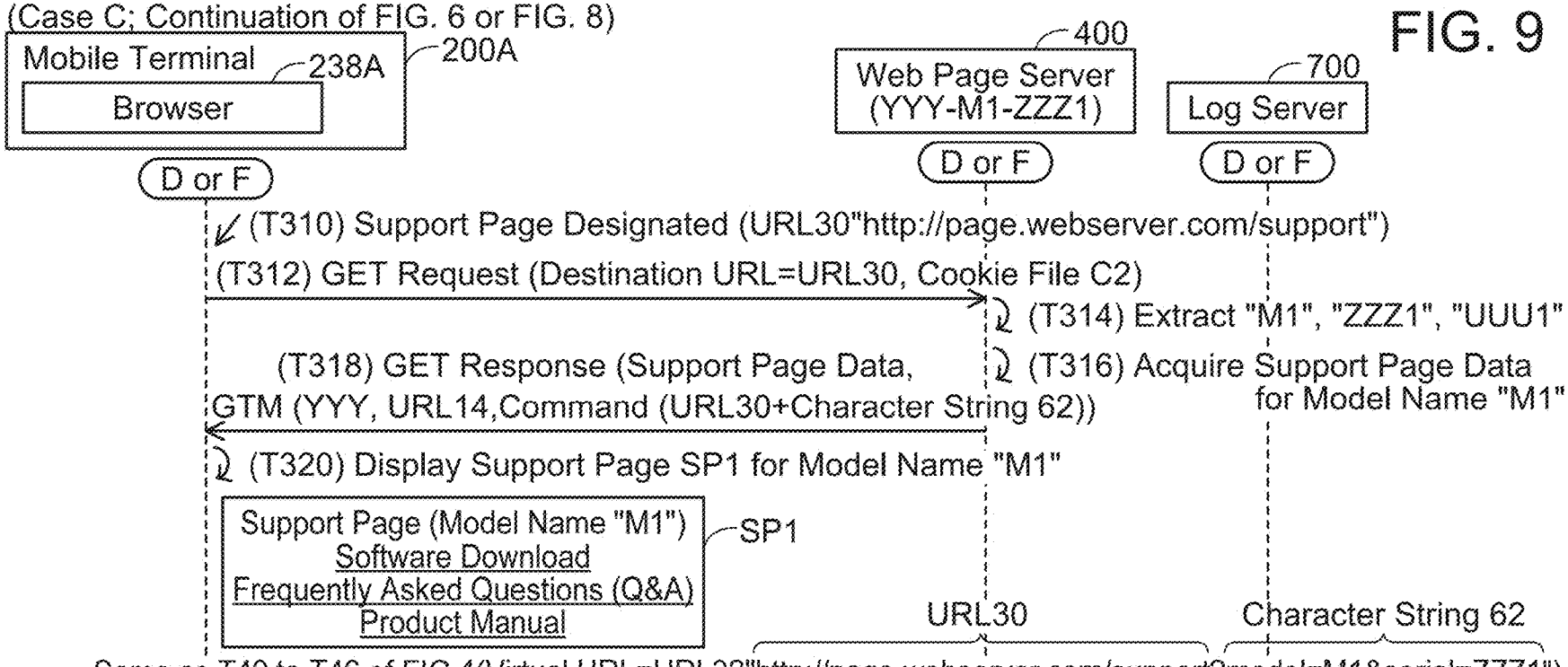

(Continuation of FIG. 7)
200A
Mobile Terminal
238A
Browser
400
Web Page Server
700
Log Server
E
E
(T248) Generate Cookie File C2
(model&serial&ID=M1&ZZ1&UUU1;
domain=webserver.com)
(T250) GET Response (Log Information Registration Completion Page Data,Cookie File C2,
GTM (Client ID=YYY,
Access Destination URL=URL14"http://logserver.com/regist",
Virtual URL Generation Command(URL12a"http://login.webserver.com/fin"
+Character String 62"model=M1&serial=ZZZ1")
URL12a
Character String 62
Same as T40 to T46 of FIG.4 (Virtual URL=URL16 "http://page.webserver.com/fin?model=M1&serial=ZZZ1")
(T260) Display Log Information Registration Completion Page D1
(T262) Store Cookie File C2 as replacement of Cookie File C3
B
B
732
Client ID
History URL
Model Name
Serial Number
Reception Time
YYY
URL12a
M1
ZZZ1
16:00
...
...
...

FIG. 9



Client ID	History URL	Model Name	Serial Number	Reception Time
YYY	URL12a	M1	ZZZ1	16:00
		...	...	...
	URL18	M1	ZZZ1	16:05
	URL22	M1	ZZZ1	16:10
	URL26	M1	ZZZ1	16:15
	URL30	M1	ZZZ1	18:00

732

FIG. 10

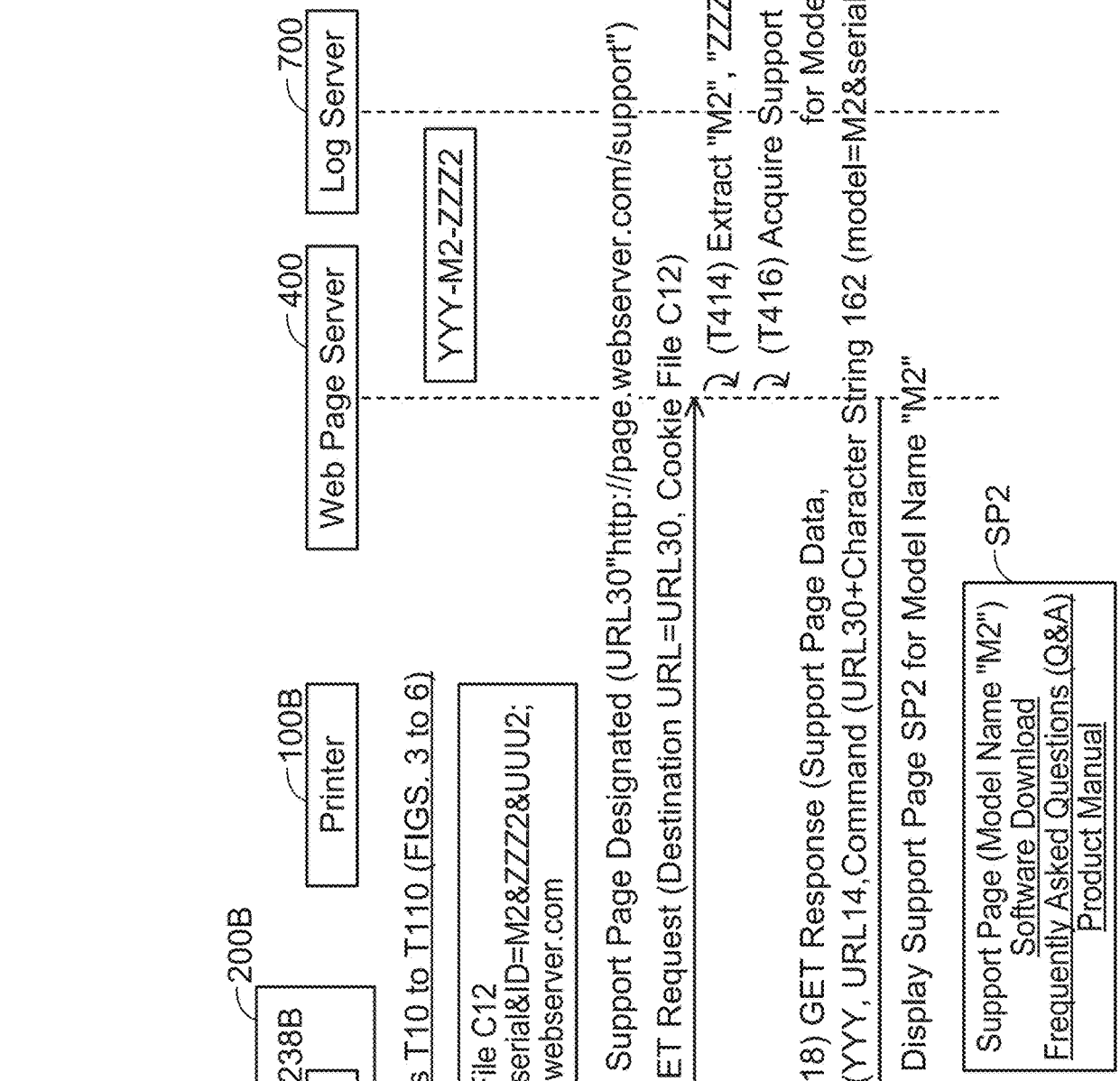

(Case D)
Mobile Terminal
200B
Browser
238B
Printer
100B
Web Page Server
400
Log Server
700
YYY-M2-ZZZ2
Same as T10 to T110 (FIGS. 3 to 6)
Cookie File C12
(model&serial&ID=M2&ZZZ2&UUU2;
domain=webserver.com
(T410) Support Page Designated (URL30"http://page.webserver.com/support")
(T412) GET Request (Destination URL=URL30, Cookie File C12)
(T414) Extract "M2", "ZZZ2", "UUU2"
(T416) Acquire Support Page Data
for Model Name "M2"
(T418) GET Response (Support Page Data,
GTM (YYY, URL14,Command (URL30+Character String 162 (model=M2&serial=ZZZ2)))
(T420) Display Support Page SP2 for Model Name "M2"
Support Page (Model Name "M2")
Software Download
Frequently Asked Questions (Q&A)
Product Manual
SP2

FIG. 11A

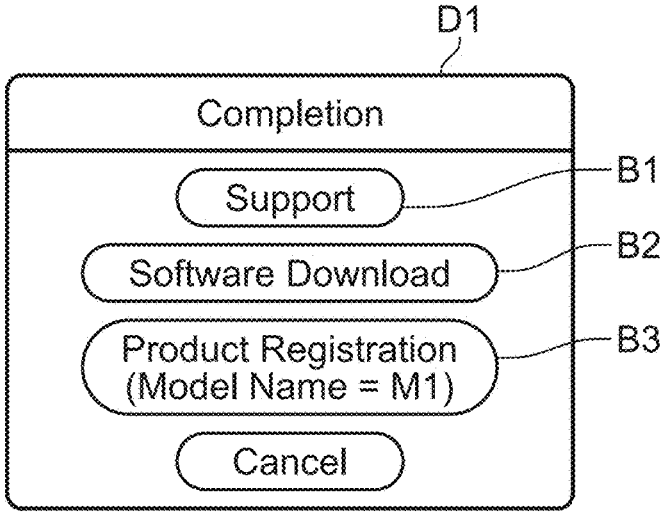


FIG. 11B

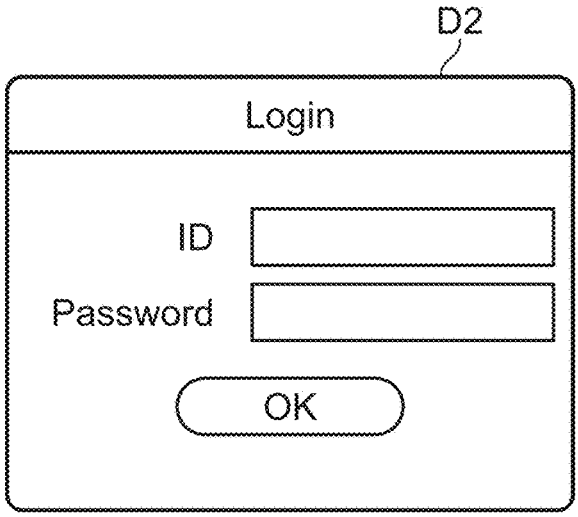


FIG. 11C

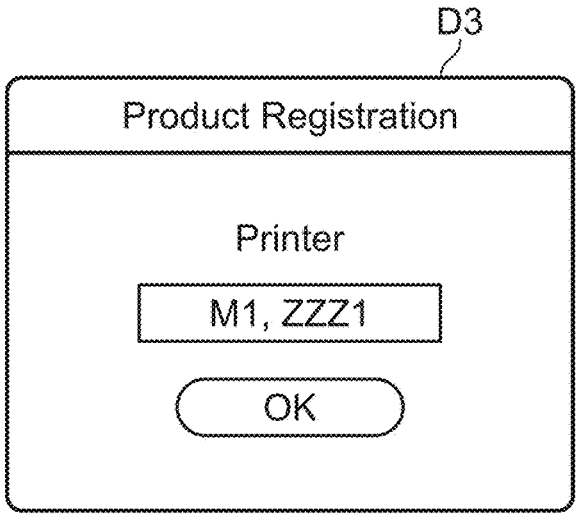


FIG. 12

(Second to Fourth Embodiments)

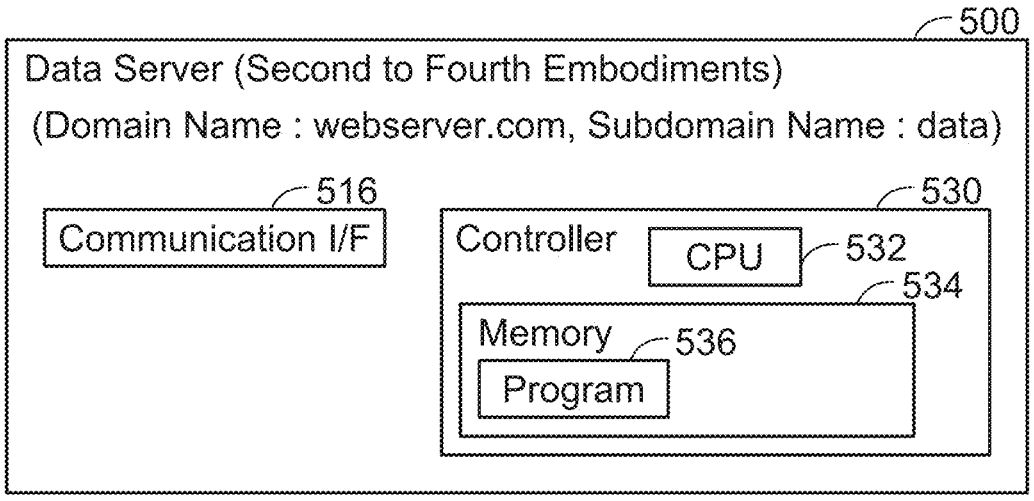


FIG. 13

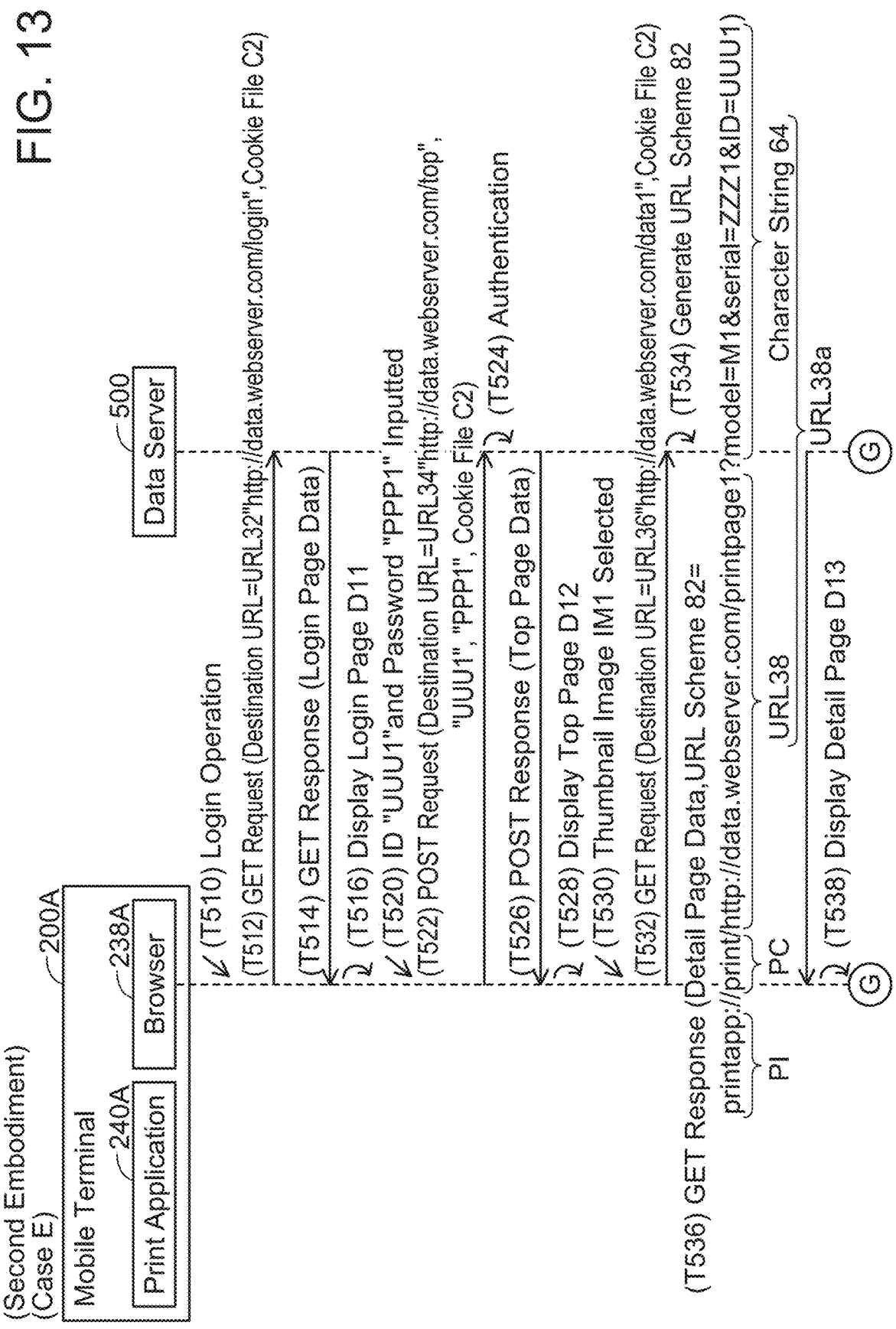

(Second Embodiment)
(Case E)
Mobile Terminal
200A
Print Application
240A
Browser
238A
Data Server
500
(T510) Login Operation
(T512) GET Request (Destination URL=URL32"http://data.webserver.com/login",Cookie File C2)
(T514) GET Response (Login Page Data)
(T516) Display Login Page D11
(T520) ID "UUU1"and Password "PPP1" Inputted
(T522) POST Request (Destination URL=URL34"http://data.webserver.com/top",
"UUU1", "PPP1", Cookie File C2)
(T524) Authentication
(T526) POST Response (Top Page Data)
(T528) Display Top Page D12
(T530) Thumbnail Image IM1 Selected
(T532) GET Request (Destination URL=URL36"http://data.webserver.com/data1",Cookie File C2)
(T534) Generate URL Scheme 82
(T536) GET Response (Detail Page Data,URL Scheme 82=
printapp://print/http://data.webserver.com/printpage1?model=M1&serial=ZZZ1&ID=UUU1)
PI
PC
URL38
Character String 64
URL38a
(T538) Display Detail Page D13
G
G

FIG. 14

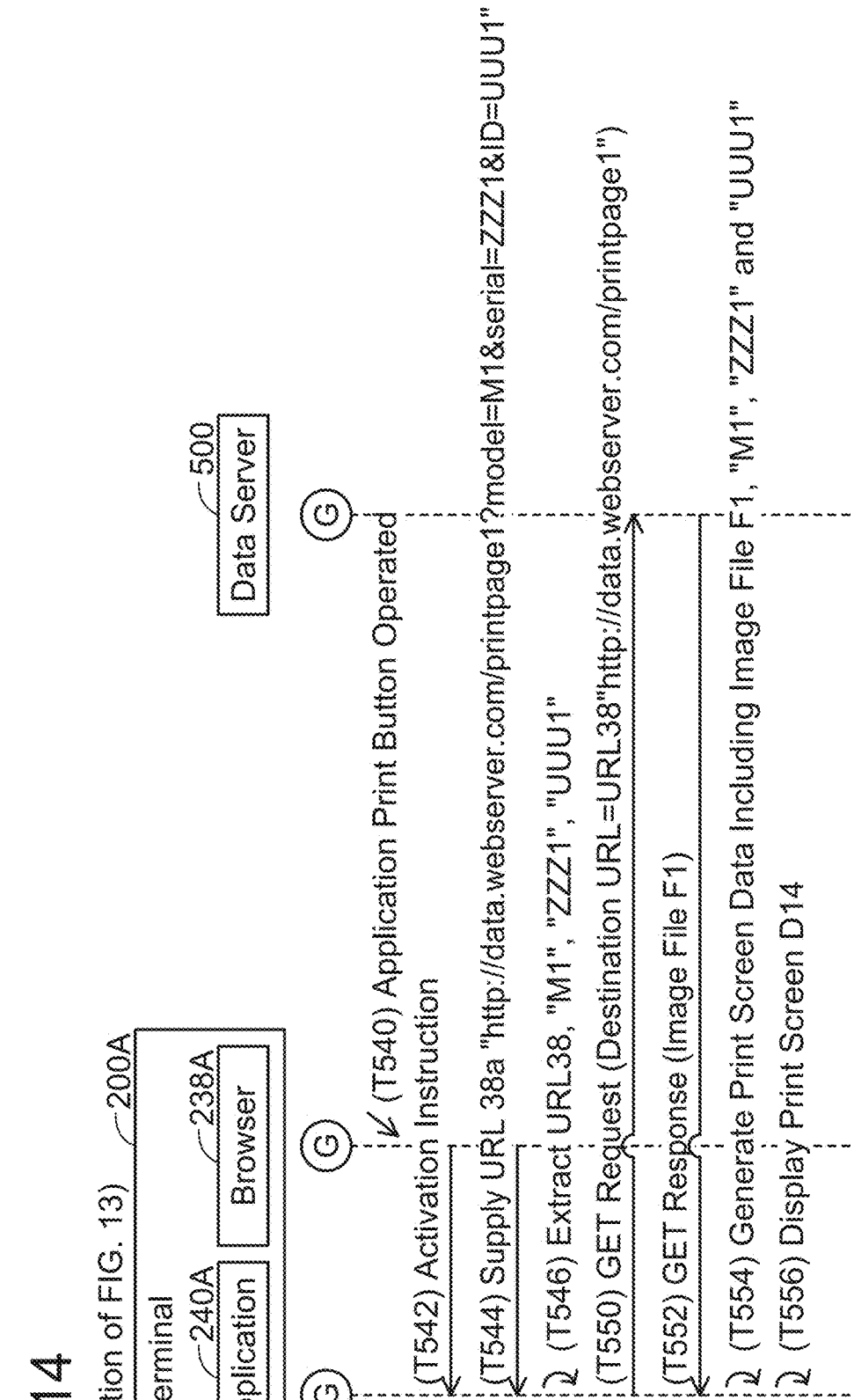

(Continuation of FIG. 13)
Mobile Terminal
200A
Print Application
240A
Browser
238A
Data Server
500
G
G
(T540) Application Print Button Operated
(T542) Activation Instruction
(T544) Supply URL 38a "http://data.webserver.com/printpage1?model=M1&serial=ZZZ1&ID=UUU1"
(T546) Extract URL38, "M1", "ZZZ1", "UUU1"
(T550) GET Request (Destination URL=URL38"http://data.webserver.com/printpage1")
(T552) GET Response (Image File F1)
(T554) Generate Print Screen Data Including Image File F1, "M1", "ZZZ1" and "UUU1"
(T556) Display Print Screen D14

FIG. 15

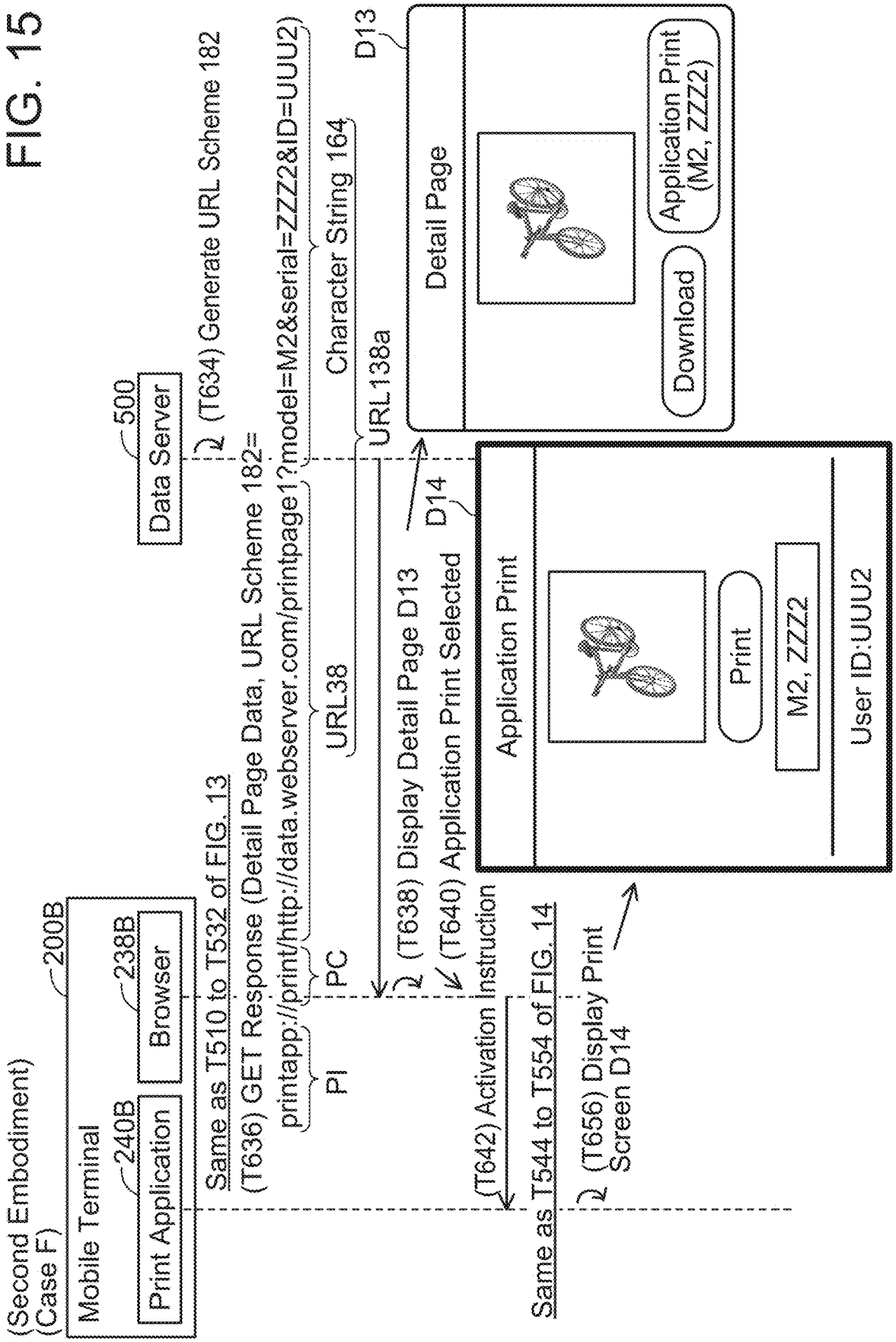

(Second Embodiment)
(Case F)
Mobile Terminal
200B
Print Application
240B
Browser
238B
Same as T510 to T532 of FIG. 13
(T636) GET Response (Detail Page Data, URL Scheme 182=
printapp://print/http://data.webserver.com/printpage1?model=M2&serial=ZZZ2&ID=UUU2)
PI
PC
URL38
Character String 164
URL138a
Data Server
500
(T634) Generate URL Scheme 182
D13
Detail Page
Download
Application Print
(M2, ZZZ2)
(T638) Display Detail Page D13
(T640) Application Print Selected
D14
Application Print
Print
M2, ZZZ2
User ID:UUU2
(T642) Activation Instruction
Same as T544 to T554 of FIG. 14
(T656) Display Print
Screen D14

FIG. 16A

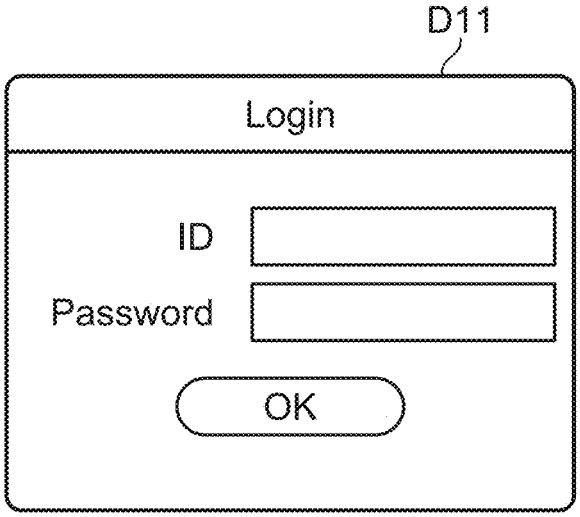


FIG. 16B

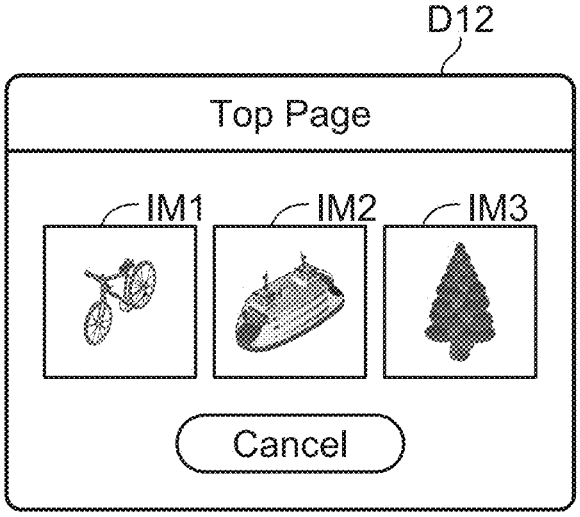


FIG. 16C

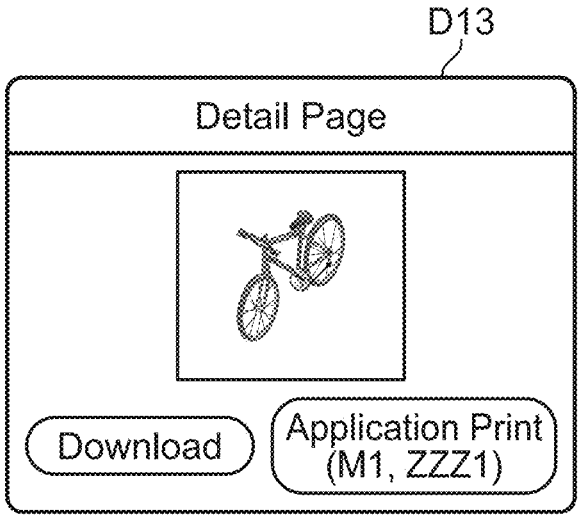


FIG. 16D

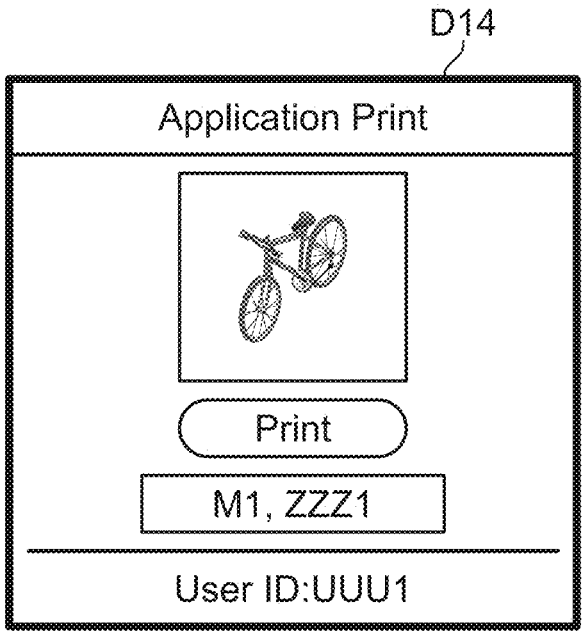


FIG. 17

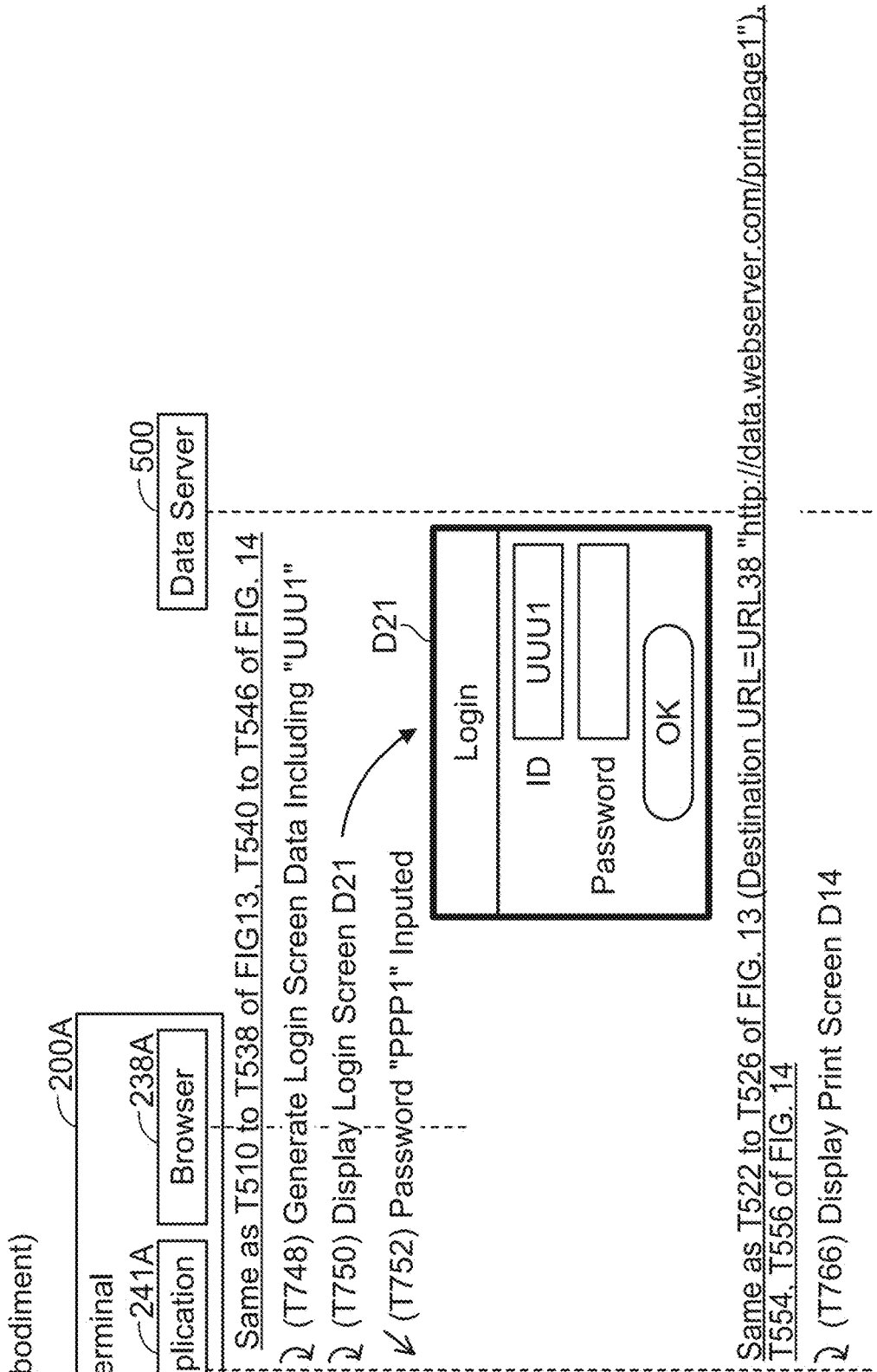

(Third Embodiment)
(Case G)
Mobile Terminal
200A
Print Application
241A
Browser
238A
500
Data Server
Same as T510 to T538 of FIG13, T540 to T546 of FIG. 14
(T748) Generate Login Screen Data Including "UUU1"
(T750) Display Login Screen D21
(T752) Password "PPP1" Inputed
D21
Login
ID
UUU1
Password
OK
Same as T522 to T526 of FIG. 13 (Destination URL=URL38 "http://data.webserver.com/printpage1"),
T554, T556 of FIG. 14
(T766) Display Print Screen D14

FIG. 18

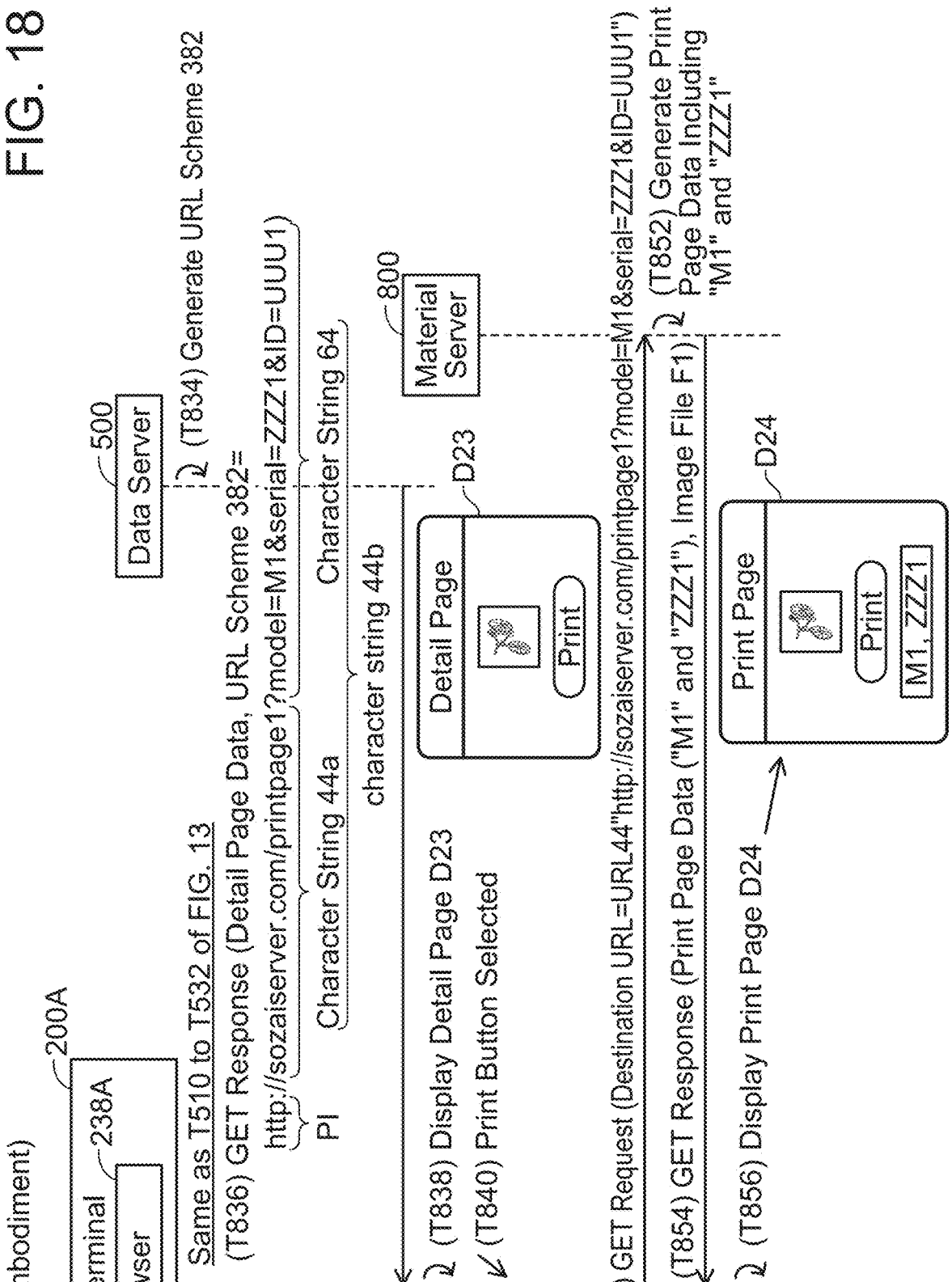
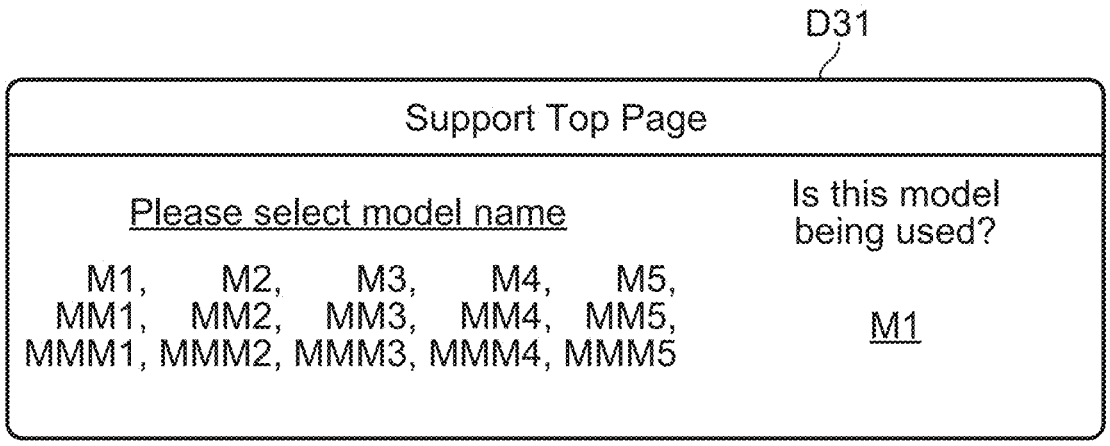

(Fourth Embodiment)
(Case H)
Mobile Terminal
200A
Browser
238A
Data Server
500
Material Server
800
Same as T510 to T532 of FIG. 13
(T834) Generate URL Scheme 382
(T836) GET Response (Detail Page Data, URL Scheme 382=
http://sozaiserver.com/printpage1?model=M1&serial=ZZZ1&ID=UUU1)
PI
Character String 44a
Character String 64
character string 44b
(T838) Display Detail Page D23
(T840) Print Button Selected
Detail Page
D23
Print
(T850) GET Request (Destination URL=URL44"http://sozaiserver.com/printpage1?model=M1&serial=ZZZ1&ID=UUU1")
(T852) Generate Print Page Data Including "M1" and "ZZZ1"
(T854) GET Response (Print Page Data ("M1" and "ZZZ1"), Image File F1)
(T856) Display Print Page D24
Print Page
D24
Print
M1, ZZZ1

FIG. 19

(Variant)



SERVER, SERVER SYSTEM, NON-TRANSITORY COMPUTER-READABLE RECORDING MEDIUM STORING COMPUTER-READABLE INSTRUCTIONS FOR SERVER, AND METHOD PERFORMED BY SERVER

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims priority to Japanese Patent Application No. 2018-091456, filed on May 10, 2018, the entire contents of which are hereby incorporated by reference into the present application.

TECHNICAL FIELD

[0002] The disclosure herein discloses a server configured to send output data to an external device.

BACKGROUND ART

[0003] An advertisement distribution system provided with a client terminal, a web server, an advertisement distribution management server, and an advertisement distribution server is known. When accepting an access operation to a web page by a user, the client terminal receives HTML data from the web server. The client terminal accesses the advertisement distribution management server according to a script embedded in the HTML data and receives a cookie ID from the advertisement distribution management server. Then, the client terminal sends the cookie ID to the advertisement distribution server. The advertisement distribution management server uses the cookie ID to specify an access history of the client terminal and sends to the client terminal a web page corresponding to the access history.

SUMMARY

[0004] The disclosure herein provides a server configured to send to an external device suitable output data that corresponds to a peripheral device used by a user of a terminal device.

[0005] A server disclosed herein may comprise a processor; and a first memory storing computer-readable instructions therein, the computer-readable instructions, when executed by the processor, causing the server to: receive a specific signal including specific information from a terminal device via the Internet, the specific information being obtained by using relative information related to a peripheral device that is used by a user of the terminal device, the peripheral device being different from the terminal device, and the relative information including at least one of identification information for identifying the peripheral device and model information indicating a model of the peripheral device; acquire output data corresponding to the relative information by using the specific information included in the specific signal received from the terminal device; and send the acquired output data to an external device via the Internet, wherein a first specific signal including first specific information is received from a first terminal device via the Internet, the first specific information being obtained by using first relative information related to a first peripheral device that is used by a first user of the first terminal device, the first peripheral device being different from the first terminal device, and a second specific signal including second specific information is received from a second terminal device via the Internet, the second specific information being obtained by using second relative information related to a second peripheral device that is used by a second user of the second terminal device, the second peripheral device being different from the second terminal device, the second peripheral device is different from the first peripheral device, the second relative information is different from the first relative information, the second specific information is different from the first specific information, first output data corresponding to the first relative information is acquired by using the first specific information, in response to receiving the first specific signal including the first specific information from the first terminal device, second output data corresponding to the second relative information is acquired by using the second specific information, in response to receiving the second specific signal including the second specific information from the second terminal device, the second output data being different from the first output data, the acquired first output data is sent to a first external device in a case where the first output data is acquired, and the acquired second output data is sent to a second external device in a case where the second output data is acquired.

[0006] A control method and a computer program for realizing the above server, and a computer-readable recording medium storing the computer program are also novel and useful. Further, a system comprising the above server is also novel and useful.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. **1** shows a configuration of a communication system.

[0008] FIG. **2**A shows a configurational diagram of a mobile terminal.

[0009] FIG. **2**B shows a configurational diagram of a mobile terminal.

[0010] FIG. **2**C shows a configurational diagram of a web page server.

[0011] FIG. **2**D shows a configurational diagram of a database.

[0012] FIG. **2**E shows a configurational diagram of a log server.

[0013] FIG. **3** shows a sequence diagram of Case A in which an installer is activated.

[0014] FIG. **4** shows a sequence diagram continued from FIG. **3**.

[0015] FIG. **5** shows a sequence diagram continued from FIG. **4**.

[0016] FIG. **6** shows a sequence diagram continued from FIG. **5**.

[0017] FIG. **7** shows a sequence diagram of Case B in which the installer is activated.

[0018] FIG. **8** shows a sequence diagram continued from FIG. **7**.

[0019] FIG. **9** shows a sequence diagram of Case C in which a support page is designated.

[0020] FIG. **10** shows a sequence diagram of Case D in which a support page is designated.

[0021] FIG. **11**A shows a screen displayed on the mobile terminal.

[0022] FIG. **11**B shows a screen displayed on the mobile terminal.

[0023] FIG. **11**C shows a screen displayed on the mobile terminal.

[0024] FIG. **12** shows a configurational diagram of a data server.

[0025] FIG. **13** shows a sequence diagram of Case E according to a second embodiment.

[0026] FIG. **14** shows a sequence diagram continued from FIG. **13**.

[0027] FIG. **15** shows a sequence diagram of Case F according to the second embodiment.

[0028] FIG. **16**A shows a screen displayed on a mobile terminal according to the second embodiment.

[0029] FIG. **16**B shows a screen displayed on the mobile terminal according to the second embodiment.

[0030] FIG. **16**C shows a screen displayed on the mobile terminal according to the second embodiment.

[0031] FIG. **16**D shows a screen displayed on the mobile terminal according to the second embodiment.

[0032] FIG. **17** shows a sequence diagram of Case G according to a third embodiment.

[0033] FIG. **18** shows a sequence diagram of Case H according to a fourth embodiment.

[0034] FIG. **19** shows an example of a screen displayed on a mobile terminal according to a variant.

EMBODIMENTS

First Embodiment

[0035] (Configuration of Communication System **2**; FIGS. **1** and **2**)

[0036] As shown in FIG. **1**, a communication system **2** is provided with a plurality of printers **100**A, **100**B, a plurality of mobile terminals **200**A, **200**B, a web page server **400**, a database **600**, and a log server **700**. The printers **100**A, **100**B and the mobile terminals **200**A, **200**B are connected to a same Access Point (AP) **300** (that is, they belong to a same wireless Local Area Network (LAN)) and are capable of communicating with each other via the AP **300**. In a variant, a wired LAN may be used instead of the wireless LAN. Further, the printers **100**A, **100**B and the mobile terminals **200**A, **200**B are connected to the Internet **4** via the AP **300**. The servers **400**, **700** and the database **600**, which are separately configured from one another, are provided on the Internet **4**.

[0037] (Configurations of Printers **100**A, **100**B)

[0038] Each of the printers **100**A, **100**B is a peripheral device configured to execute a print function (that is, peripheral devices for the mobile terminals **200**A, **200**B, respectively). The printer **100**A has a printer name "AAA**1**", a model name "M**1**", and a serial number "ZZZ**1**". The printer **100**B has a printer name "AAA**2**", a model name "M**2**", and a serial number "ZZZ**2**". The printer names are given to the printers **100**A, **100**B by an administrator of the printers. The model names indicate models of the printers. The serial numbers are unique numbers given to the printers **100**A, **100**B by a vendor of the printers. The printers **100**A, **100**B are manufactured by the same vendor (hereinbelow termed "printer vendor"). Further, hereinbelow, the printers **100**A, **100**B may collectively be called "printers **100**".

[0039] (Configurations of Mobile Terminals **200**A, **200**B)

[0040] Each of the mobile terminals **200**A, **200**B is a portable terminal device such as a cellphone, a smartphone, a PDA, a notebook PC, a tablet PC, a portable music player, and a portable movie player. In a variant, a stationary terminal device may be used instead of the mobile terminal **200**A. As shown in FIG. **2**A, the mobile terminal **200**A includes an operation unit **212**, a display unit **214**, a communication interface (hereinbelow, an interface will be denoted "I/F") **216**, and a controller **230**.

[0041] The operation unit **212** includes a plurality of keys. A user can input various instructions to the mobile terminal **200**A by operating the operation unit **212**. The display unit **214** is a display configured to display various types of information and also functions as a so-called touch panel (that is, an operation unit). Hereinbelow, the operation unit **212** and the display unit **214** may collectively be termed "terminal operation unit". The communication I/F **216** is an I/F for establishing a wireless connection with the AP **300**.

[0042] The controller **230** includes a CPU **232** and a memory **234**. The CPU **232** is configured to execute various processes according to a program **236** stored in the memory **234**. The memory **234** is constituted of a ROM, a RAM, and the like. The program **236** includes a browser application **238**A (hereinbelow termed "browser **238**A"), a print application **240**A (hereinbelow termed "print app **240**A"), and an installer **242**A. The browser **238**A is general-purposed web page browsing software, such as Internet Explorer (IE (registered trademark)), Safari (registered trademark), and Google Chrome (registered trademark). The print app **240**A is an application for supplying print data representing a print target image to a printer (e.g., **100**A). The installer **242**A is a program for installing the print app **240**A to the mobile terminal **200**A. The installer **242**A may be installed in the mobile terminal **200**A from a computer-readable recording medium shipped with the printer, or may be installed in the mobile terminal **200**A from a server on the Internet **4**, for example.

[0043] The mobile terminal **200**B has a similar configuration as that of the mobile terminal **200**A. As shown in FIG. **2**B, the mobile terminal **200**B includes an installer **242**B, a browser application **238**B (hereinbelow termed "browser **238**B"), and a print application **240**B (hereinbelow termed "print app **240**B"). Hereinbelow, the mobile terminals **200**A, **200**B may collectively be termed "mobile terminals **200**".

[0044] (Configuration of Web Page Server **400**)

[0045] The web page server **400** is a server that is provided on the Internet **4** by the printer vendor and is configured to supply web page data representing web pages. A domain name and a subdomain name of the web page server **400** are respectively "webserver.com" and "page".

[0046] As shown in FIG. **2**C, the web page server **400** includes a communication I/F **416** and a controller **430**. The communication I/F **416** is connected to the Internet **4**. The controller **430** includes a CPU **432** and a memory **434**. The CPU **432** is configured to execute various processes according to a program **436** stored in the memory **434**. The memory **434** is constituted of a ROM, a RAM, and the like. Further, although not shown, the memory **434** stores web page data representing various web pages (such as data in a HyperText Markup Language (HTML) format, image data, etc.). The web page server **400** is configured to supply the web page data in the memory **434** to the mobile terminals **200** according to requests from the mobile terminals **200**.

[0047] (Configuration of Database **600**)

[0048] The database **600** is provided on the Internet **4** by the printer vendor and stores a management table **602** as shown in FIG. **2**D. In the management table **602**, an ID, a password, a model name, and a serial number are associated with each other. The server provided on the Internet **4** by the printer vendor (that is, the web page server **400**) can access

the database **600**. The ID is a character string allocated to each user, and the password is a character string set by the user. Hereinbelow, the ID, the password, the model name, and the serial number may collectively be termed "user information".

[0049] (Configuration of Log Server **700**)

[0050] The log server **700** is a server that is provided on the Internet **4** by a business entity different from the printer vendor and is configured to store an access history to web pages. In the present embodiment, the log server **700** is provided by Google (registered trademark). However, in a variant, the log server **700** may be provided by another business entity (such as the printer vendor). A domain name of the log server **700** is "logserver.com".

[0051] As shown in FIG. **2**E, the log server **700** includes a memory **730**. The memory **730** is constituted of a ROM, a RAM, and the like. The memory **730** is configured to store history information **732** indicating the access history to web pages.

[0052] (Case A; FIGS. **3** to **6**)

[0053] Next, Case A will be described with reference to FIGS. **3** to **6**. In Case A, the print app **240**A is installed in the mobile terminal **200**A and the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A are registered in the management table **602** of the database **600**. In an initial state of Case A, an ID "UUU**1**" and a password "PPP**1**" corresponding to a user of the mobile terminal **200**A and an ID "UUU**2**" and a password "PPP**2**" corresponding to a user of the mobile terminal **200**B are already registered in the management table **602** of the database **600**. Hereinbelow, to facilitate understanding, processes which the CPU **232** of the mobile terminal **200**A executes will be described with the browser **238**A or the installer **242**A of the mobile terminal **200**A as a subject of action instead of describing them with the CPU as the subject of action. Further, processes which the CPU **432** of the web page server **400** executes will be described with the web page server **400** as a subject of action instead of describing them with the CPU as the subject of action.

[0054] In T**10**, an operation to activate the installer **242**A is performed by the user on the terminal operation unit. In this case, in T**12**, the installer **242**A broadcasts a search signal. The search signal is a signal for requesting each of one or more peripheral devices connected to the AP **300** (such as the printers **100**A, **100**B) to send a response signal including device information of the peripheral device (that is, a printer name, a model name, and a serial number).

[0055] When the printer **100**A receives the search signal in T**12**, it sends a response signal including the device information of the printer **100**A (that is, the printer name "AAA**1**", the model name "M**1**", and the serial number "ZZZ**1**") to the mobile terminal **200**A in T**14**. Although not shown, the printer **100**B also executes a process similar to T**14**.

[0056] When the installer **242**A receives response signals from the one or more peripheral devices including the printer **100**A in T**14**, it causes the display unit **214** to display a selection screen S**1** in T**16**. The selection screen S**1** includes the printer name and the model name of each of the one or more peripheral devices.

[0057] In T**18**, an operation to select the printer name "AAA**1**" and the model name "M**1**" of the printer **100**A in the selection screen Si is performed on the terminal operation unit. In this case, in T**20**, the installer **242**A installs the print app **240**A. When installation of the print app **240**A is completed, the installer **242**A causes the display unit **214** to display an installation completion screen S**2** in T**22**. The installation completion screen S**2** includes a message indicating that the installation of the print app **240**A is completed, a message inquiring whether or not to permit log collection, a check box, and an OK button.

[0058] The installer **242**A determines that the log collection is permitted in T**24** when it accepts a check in the check box and an operation of the OK button, and then it generates a Uniform Resource Locator (URL) **12** and supplies (that is, delivers) the URL **12** to the browser **238**A in T**26**. In general, a URL includes a scheme component, an authority component, a path component, and a query component. For example, in a URL "http://page.webserver.com/aaa/bbb?xxx", "http" corresponds to the scheme component, "page.webserver.com" following characters ":" and "//" corresponds to the authority component, "aaa/bbb" corresponds to the path component, and "xxx" following a character "?" corresponds to the query component. A URL may not include the query component. The installer **242**A firstly specifies a preset URL **12***a* (that is, "http://page.webserver.com/fin"). The URL **12***a* includes the subdomain name "page" and the domain name "webserver.com" of the web page server **400**. Then, the installer **242**A adds a query character string **12***b* to the URL **12***a* to generate the URL **12**. The query character string **12***b* includes the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A selected in T**18** (that is, "model=M**1**&serial=ZZZ**1**"). Then, in T**26**, the installer **242**A supplies the generated URL **12** to the browser **238**A.

[0059] When acquiring the URL **12** from the installer **242**A in T**26**, the browser **238**A sends a GET request including the URL **12** as a destination URL to the web page server **400** in T**30**.

[0060] When receiving the GET request from the mobile terminal **200**A in T**30**, the web page server **400** extracts in T**32** a character string described preceding the character "?" in the URL **12** (that is, the scheme component, the authority component, and the path component) included in the GET request as the URL **12***a*, and extracts a character string described following the character "?" (that is, the query component) as the query character string **12***b*. The web page server **400** further extracts the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A from the query character string **12***b*. As above, the web page server **400** extracts the model name "M**1**" and the serial number "ZZZ**1**" from the destination URL **12**, thus the model name "M**1**" and the like do not have to be extracted from another region in the GET request where information different from the destination URL **12** is to be described. Due to this, the model name "M**1**" and the like can easily be extracted. However, in a variant, the model name "M**1**" and the like may be described in the aforementioned other region in the GET request, and the web page server **400** may extract the model name "M**1**" and the like from the other region.

[0061] In T**34**, the web page server **400** uses the extracted model name "M**1**" and serial number "ZZZ**1**" to generate a cookie file Cl. The cookie file C**1** includes a cookie name area where a cookie name is described and a domain area where domain information is described. The web page server **400** describes "M**1**" and "ZZZ**1**" (that is, "model&serial=M**1**&ZZZ**1**") in the cookie name area and describes the domain name of the web page server **400** in the

domain area (that is, "domain=webserver.com"). Since the cookie file C1 includes the information of the printer **100**A (that is, the model name "M1" and the serial number "ZZZ1"), the cookie file C1 and the information are associated with each other.

[0062] In T**36**, the web page server **400** stores a client ID "YYY", the model name "M1", and the serial number "ZZZ1" in association with each other. The client ID is a unique ID allocated to each vendor (that is, each client) that manages a server on the Internet **4**. The printer vendor, which is one of the clients, is allocated with the client ID "YYY".

[0063] In T**38** of FIG. **4**, the web page server **400** sends a GET response to the mobile terminal **200**A. This Get response includes log information registration completion page data corresponding to the URL **12***a*, the cookie file C1 generated in T**34** of FIG. **3**, and a Google (registered trademark) Tag Manager (GTM). The GTM is instruction information for causing the mobile terminal **200**A to access the log server **700**. The GTM includes the client ID "YYY", a URL **14** "http://logserver.com/regist" which is an access destination URL, and a virtual URL generation command. The access destination URL **14** includes the domain name of the log server **700** (that is, "logserver.com"). As such, the mobile terminal **200**A can access the log server **700** by using the access destination URL **14**. The virtual URL generation command is described in accordance with JavaScript (registered trademark) which the browser **238**A of the mobile terminal **200**A can interpret, and is a command for causing the mobile terminal **200**A to generate a virtual URL. The virtual URL generation command includes the URL **12***a* extracted in T**32** (that is, "http://page.webserver.com/fin") and a character string **62** including the model name "M1" and the serial number "ZZZ1" extracted in T**32** (that is, "model =M1&serial=ZZZ1").

[0064] When receiving the GET response from the web page server **400** in T**38**, the browser **238**A executes in T**40** the virtual URL generation command included in the response. Specifically, the browser **238**A generates a virtual URL **16** (that is, "http://page.webserver.com/fin?model=M1&serial=ZZZ1") that includes the URL **12***a* in the command and a query character string which is the character string **62** in the command. The browser **238**A further extracts the client ID "YYY" and the access destination URL **14** from the GTM included in the response. Then, the browser **238**A sends a GET request to the log server **700**. The GET request includes the extracted URL **14** as a destination URL and further includes the extracted client ID "YYY" and the generated virtual URL **16**. The virtual URL **16** is not a destination URL and serves a role for notifying a character string constituting the virtual URL **16** to the log server **700**.

[0065] When receiving the GET request from the mobile terminal **200**A in T**40**, the log server **700** extracts in T**42** the respective pieces of information from the GET request. Specifically, the log server **700** extracts the client ID "YYY", extracts a character string described preceding the character "?" in the virtual URL **16** as the URL **12***a*, and extracts a character string described following the character "?" in the virtual URL **16** as the query character string **62**. The log server **700** further extracts the model name "M1" and the serial number "ZZZ1" of the printer **100**A from the query character string **62**.

[0066] In T**44**, the log server **700** stores history information **732** in the memory **730**. In the history information **732**, the respective extracted pieces of information (that is, the client ID "YYY", the URL **12***a*, the model name "M1", and the serial number "ZZZ1") is associated with a reception time (e.g., "16:00, Apr. 30, 2018"). The reception time is a time when the GET request was received from the mobile terminal **200**A. Due to this, the URL **12***a* which was accessed by the mobile terminal **200**A according to an instruction by the user of the mobile terminal **200**A is associated with the information of the printer **100**A (that is, the model name "M1" and the serial number "ZZZ1").

[0067] In T**46**, the log server **700** sends a GET response for the GET request in T**40** to the mobile terminal **200**A. This response does not include web page data. That is, the GET request in T**40** is not a signal for requesting web page data, but is a signal for storing the respective pieces of information included in the GET request in the log server **700**.

[0068] When receiving the GET response from the log server **700** in T**46**, the browser **238**A causes the display unit **214** in T**50** to display a log information registration completion page D1 represented by the log information registration completion page data included in the GET response of T**38**. As shown in FIG. **11**A, the page D1 includes a button B1 for displaying a support page, a button B2 for downloading software provided by the printer vendor, a button B3 for executing a product registration for the printer **100**A, and a cancel button. The product registration means to register the model name "M1" and the serial number "ZZZ1" of the printer **100**A in the database **600**. The button B3 includes the model name "M1" of the printer **100**A.

[0069] In T**52**, the browser **238**A stores the cookie file C1 included in the GET response of T**38** in the memory **234**. By doing so, in a case where an instruction for designating a URL including the character string "webserver.com" described in the domain area of the cookie file C1 is given by the user of the mobile terminal **200**A, the mobile terminal **200**A can send a GET request including that URL and the cookie file C1 to the web page server **400**. When selection of the button B3 in the page D1 is accepted in T**60** of FIG. **5**, the browser **238**A specifies a URL **18** "http://page.webserver.com/login" associated with the button B3. In this case, the browser **238**A refers to the stored cookie file C1 (see T**52** of FIG. **4**) and determines that the specified URL **18** includes the domain name "webserver.com" described in the domain area of the cookie file Cl. Then, in T**62**, the browser **238**A sends to the web page server **400** a GET request that includes the URL **18** as a destination URL and further includes the cookie file C1.

[0070] When receiving the GET request from the mobile terminal **200**A in T**62**, the web page server **400** sends to the mobile terminal **200**A in T**64** a GET response including login page data corresponding to the URL **18** and a GTM. This GTM is similar to the GTM in T**38** of FIG. **4** except that its virtual URL generation command includes the URL **18**.

[0071] When receiving the GET response from the web page server **400** in T**64**, the browser **238**A causes the display unit **214** in T**66** to display a login page D2 represented by the login page data. As shown in FIG. **11**B, the page D2 includes an ID input box to which an ID is to be inputted, a password input box to which a password is to be inputted, and an OK button. Further, the browser **238**A generates a virtual URL

 "http://page.webserver.com/

login?model=M1&serial=ZZZ1" including the URL **18** and the character string **62** in accordance with the GTM included in the response of T**64**. Then, processes similar to T**40** to T**46** of FIG. **4** are executed between the mobile terminal **200**A and the log server **700**. As a result, the URL **18** is stored in the log server **700**.

[0072] When input of the ID "UUU1" and the password "PPP1" is accepted from the user of the mobile terminal **200**A and an operation on the OK button is further accepted in T**70**, the browser **238**A specifies a URL **22** "http://page.webserver.com/regist" associated with the OK button. Then, the browser **238**A determines that the specified URL **22** includes the domain name "webserver.com" in the cookie file C**1** and sends to the web page server **400** in T**72** a POST request that includes the URL **22** as a destination URL and further includes the ID "UUU1", the password "PPP1", and the cookie file C1.

[0073] When receiving the POST request from the mobile terminal **200**A in T**72**, the web page server **400** executes authentication of the user. Specifically, the web page server **400** accesses the database **600** and determines whether or not user information including the ID "UUU1" and the password "PPP1" is already registered in the management table **602**. In the present case, the web page server **400** determines that the user information is already registered in the management table **602** (see the management table **602** of FIG. **3**), by which the user authentication succeeds in T**74**.

[0074] In T**76**, the web page server **400** generates a cookie file C**2** by using the cookie file C1 and the ID "UUU1". The web page server **400** adds the ID "UUU1" (that is, "model&serial&ID=M1&ZZZ1&UUU1") to the cookie name area of the cookie file C**1**. Then, in T**78**, the web page server **400** sends a POST response to the mobile terminal **200**A. This POST response includes product registration page data corresponding to the URL **22**, the cookie file C**2** generated in T**74**, and a GTM. This GTM is similar to the GTM in T**38** of FIG. **4** except that its virtual URL generation command includes the URL **22**. In a case where the user authentication fails, the web page server **400** does not generate the cookie file C**2** and sends to the mobile terminal **200**A a POST response that includes web page data indicating that the authentication has failed, instead of the product registration page data.

[0075] When receiving the POST response from the web page server **400** in T**78**, the browser **238**A causes the memory **234** in T**80** to store the cookie file C**2** in the response as a replacement of the cookie file C**1** in the memory **234**. Then, in T**82**, the browser **238**A causes the display unit **214** to display a product registration page D**3** represented by the product registration page data. As shown in FIG. **11**C, the page D**3** includes a printer input box to which a model name and a serial number of a printer are to be inputted and an OK button. In the printer input box, the model name "M1" and the serial number "ZZZ1" of the printer **100**A are already inputted. Due to this, the user can easily register the information of the printer **100**A in the management table **602** simply by selecting the OK button. Alternatively, the user may input a model name and a serial number different from the model name "M1" and the serial number "ZZZ1" in the printer input box. Further, the browser **238**A generates a virtual URL **24** (http://page.webserver.com/regist?model=M1&serial=ZZZ1) including the URL **22** and the character string **62**. Then, processes similar to T**40** to T**46** of FIG. **4** are executed between the mobile terminal **200**A and the log server **700**. As a result, the URL **22** is stored in the log server **700**.

[0076] In T**90** of FIG. **6**, when selection of the OK button is accepted in the state where the model name "M1" and the serial number "ZZZ1" are inputted in the printer input box in the page D**3**, the browser **238**A determines that the model name "M1" and the serial number "ZZZ1" are targets of the product registration and specifies a URL **26** "http://page.webserver.com/registfin" associated with the OK button. Then, the browser **238**A determines that the URL **26** includes the domain name "webserver.com" in the cookie file C**2**, and sends to the web page server **400**, in T**92**, a POST request that includes the URL **26** as a destination URL and further includes the model name "M1", the serial number "ZZZ1", and the cookie file C**2**.

[0077] When receiving the POST request from the mobile terminal **200**A in T**92**, the web page server **400** extracts in T**94** the model name "M1", the serial number "ZZZ1", and the ID "UUU1" from the POST request. Then, in T**96**, the web page server **400** sends the respective extracted pieces of information to the database **600**. When receiving the respective pieces of information from the web page server **400**, the database **600** determines that the received ID "UUU1" is already registered in the management table **602** and registers the received model name "M1" and serial number "ZZZ1" in association with the ID "UUU1". As a result, the ID "UUU1", the password "PPP1", the model name "M1", and the serial number "ZZZ1" are associated with each other.

[0078] In T**98**, the web page server **400** sends to the mobile terminal **200**A a POST response including registration completion page data corresponding to the URL **26** and a GTM. This GTM is similar to the GTM in T**38** of FIG. **4** except that its virtual URL generation command includes the URL **26**.

[0079] When receiving the POST response from the web page server **400** in T**98**, the browser **238**A causes the display unit **214** in T**100** to display a product registration completion page represented by the product registration completion page data in the response. This page includes a message indicating that the product registration has been completed. Further, the browser **238**A generates a virtual URL **28** (http://page.webserver.com/registfin?model=M1&serial=ZZZ1) including the URL **26** and the character string **62**. Then, processes similar to T**40** to T**46** of FIG. **4** are executed between the mobile terminal **200**A and the log server **700**. As a result, the URL **26** is stored in the log server **700**. FIG. **6** shows the history information **732** including the plurality of URLs **12***a*, **18**, and the like stored in the log server **700** by the processes of FIGS. **3** to **6**.

[0080] (Case B; FIGS. **7** and **8**)

[0081] Next, Case B will be described with reference to FIGS. **7** and **8**. In Case B, the print app **240**A is installed in the mobile terminal **200**A after login to the web page server **400** has been completed. An initial state of Case B is similar to the initial state of Case A in FIG. **3**. In T**210**, the browser **238**A accepts a login operation. The login operation includes an operation to activate the browser **238**A and an operation to input the URL **18**. In this case, the browser **238**A sends a GET request including the URL **18** as a destination to the web page server **400** in T**212**, and receives a GET response including login page data corresponding to the URL **18** from the web page server **400** in T**214**. T**216** and T**220** are respectively similar to T**66** and T**70** of FIG. **5**.

[0082] In T**220**, when input of the ID "UUU**1**" and the password "PPP**1**" is accepted and further operation on the OK button is accepted, the browser **238**A specifies a URL **29** "http://page.webserver.com/top" associated with the OK button. Then, in T**222**, the browser **238**A sends to the web page server **400** a POST request that includes the URL **29** as a destination URL and further includes the ID "UUU**1**" and the password "PPP**1**". T**224** is similar to T**74** of FIG. **5**. In T**226**, the web page server **400** generates a cookie file C**3** by using the ID "UUU**1**" in the POST request. The web page server **400** describes "UUU**1**" in the cookie name area (that is, "ID=UUU**1**") and describes the domain name of the web page server **400** in the domain area (that is, "domain=webserver.com"). In T**228**, the web page server **400** sends to the mobile terminal **200**A a POST response including top page data corresponding to the URL **29** and the cookie file C**3**.

[0083] When receiving the POST response from the web page server **400** in T**228**, the browser **238**A causes the memory **234** to store the cookie file C**3** in T**230** and then causes the display unit **214** in T**232** to display a top page represented by the top page data included in the POST response. After this, processes similar to T**10** to T**26** of FIG. **3** are executed between the installer **242**A, the browser **238**A, and the printer **100**A, by which the print app **240**A is installed in the mobile terminal **200**A.

[0084] When acquiring the URL **12** from the installer **242**A, the browser **238**A determines that the URL **12** includes the domain name "webserver.com" in the cookie file C**3**, and then sends in T**240** to the web page server **400** a GET request that includes the URL **12** as a destination URL and further includes the cookie file C**3**.

[0085] When receiving the GET request from the mobile terminal **200**A in T**240**, the web page server **400** extracts in T**242** the "URL **12***a*", the model name "M**1**", and the serial number "ZZZ**1**" in the URL **12** and the ID "UUU**1**" in the cookie file C**3**. Then, in T**244**, the web page server **400** sends to the database **600** the respective extracted pieces of information (that is, the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**"). When receiving the respective pieces of information from the web page server **400**, the database **600** determines that the received ID "UUU**1**" is already registered in the management table **602** and registers the model name "M**1**" and the serial number "ZZZ**1**" in association with the ID "UUU**1**". Due to this, the ID "UUU**1**", the password "PPP**1**", the model name "M**1**", and the serial number "ZZZ**1**" are associated with each other. T**246** is similar to T**36** of FIG. **3**.

[0086] In T**248** of FIG. **8**, the web page server **400** generates a cookie file C**2**. The web page server **400** adds the model name "M**1**" and the serial number "ZZZ**1**" (that is, "model&serial&ID=M**1**&ZZZ**1**=UUU**1**") to the cookie name area of the cookie file C**3**. A GET response of T**250** is similar to the GET response of T**38** of FIG. **4** except that it includes the cookie file C**2**. Further, processes similar to T**40** to T**46** of FIG. **4** are executed between the mobile terminal **200**A and the log server **700**. As a result, the URL **12***a* is stored in the log server **700**. T**260** is similar to T**50** of FIG. **4**.

[0087] In T**262**, the browser **238**A causes the memory **234** to store the cookie file C**2** included in the GET response of T**250** as a replacement of the cookie file C**3** in the memory **234**. As above, the mobile terminal **200**A can store the same cookie file C**2**, not only in Case A that installs the print app **240**A before the login to the web page server **400** is completed (FIGS. **3** to **6**) but also in Case B that installs the print app **240**A after the login to the web page server **400** is completed (FIGS. **7** and **8**).

[0088] (Case C; FIG. **9**)

[0089] Next, Case C will be described with reference to FIG. **9**. In Case C, the user of the mobile terminal **200**A (that is, the user of the printer **100**A) accesses a support page by using the mobile terminal **200**A. An initial state of Case C is a state after Case A (FIGS. **3** to **6**) or Case B (FIGS. **7** and **8**), that is, a state in which the mobile terminal **200**A already stores the cookie file C**2** and the web page server **400** already stores the client ID "YYY", the model name "M**1**", and the serial number "ZZZ**1**" in association with each other.

[0090] For example in a case where an error occurs in the printer **100**A, the user activates the browser **238**A of the mobile terminal **200**A and then inputs a URL **30** "http://page/webserver.com/support" corresponding to a support page in T**310**. In this case, the browser **238**A refers to the stored cookie file C**2** (T**80** of FIG. **5** or T**262** of FIG. **8**) and determines that the URL **30** includes the domain name "webserver.com" in the cookie file C**2**. Then, in T**312**, the browser **238**A sends to the web page server **400** a GET request that includes the URL **30** as a destination URL and further includes the cookie file C**2**. Although not shown, in a case where an instruction of designating a URL that does not include the domain name "webserver.com" is given to the mobile terminal **200**A by the user, the browser **238**A determines that this URL does not include the domain name "webserver.com" in the cookie file C**2**. In this case, the browser **238**A sends a GET request that includes that URL as a destination URL and does not include the cookie file C**2**.

[0091] When receiving the GET request from the mobile terminal **200**A in T**312**, the web page server **400** extracts in T**314** the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" from the cookie file C**2** in the GET request. In this case, the web page server **400** determines that the printer **100**A used by the user of the mobile terminal **200**A has the model name "M**1**" and acquires support page data for the printer having the model name "M**1**" in T**316**. Then, in T**318**, the web page server **400** sends to the mobile terminal **200**A a GET response including the acquired support page data and a GTM. Due to this, a support page for the printer having the model name "M**1**" can be displayed in the mobile terminal **200**A without the user selecting the model name "M**1**" from a list of a plurality of model names. Therefore, user convenience can be improved. Further, the aforementioned GTM is similar to the GTM in T**38** of FIG. **4** except that its virtual URL generation command includes the URL **30**. In a case where the GET request in T**312** does not include the cookie file C**2**, the web page server **400** sends to the mobile terminal **200**A a GET response that includes support page data representing a support page including a list of a plurality of model names.

[0092] When receiving the GET response from the web page server **400** in T**318**, the browser **238**A causes the display unit **214** in T**320** to display a support page SP**1** represented by the support page data in the response. The page SP**1** includes a message indicating that the page is a support page for the model name "M**1**", a button indicating software download for the model name "M**1**", a button indicating a Q&A page for the model name "M**1**", and a button indicating a product manual for the model name "M**1**". The user may search for a method to resolve the error

occurring in the printer **100**A, for example, by selecting the button indicating the Q&A page or the button indicating the product manual.

[0093] Further, the browser **238**A generates a virtual URL **32** (http://page.webserver.com/support?model=M**1**&serial=ZZZ**1**) including the URL **30** and the character string **62**. Then, processes similar to T**40** to T**46** of FIG. **4** are executed between the mobile terminal **200**A and the log server **700**. As a result, the URL **30** is stored in the log server **700**.

[0094] (Case D; FIG. **10**)

[0095] Next, Case D will be described with reference to FIG. **10**. In Case D, the user of the mobile terminal **200**B (that is, the user of the printer **100**B) accesses a support page by using the mobile terminal **200**B. An initial state of Case D is a state after processes similar to T**10** to T**100** (FIGS. **3** to **6**) have been executed between the installer **242**B and the browser **238**B of the mobile terminal **200**B, the web page server **400**, and the log server **700**. However, the user selects the printer name "AAA**2**" of the printer **100**B in the selection screen S**1** in T**18** of FIG. **3**. Further, a memory (not shown) of the mobile terminal **200**B stores a cookie file C**12** including the model name "M**2**" and the serial number "ZZZ**2**" of the printer **100**B. The model name "M**2**" and the serial number "ZZZ**2**" (that is, "model&serial=M**2**&ZZZ**2**") are described in the cookie name area of the cookie file C**12**, and the domain name of the web page server **400** (that is, "domain=webserver.com") is described in the domain name area thereof. Further, in the web page server **400**, the client ID "YYY", the model name "M**2**", and the serial number "ZZZ**2**" are stored in association with each other.

[0096] T**410** to T**414** are similar to T**310** to T**314** of FIG. **9** except that the communication counterpart is the mobile terminal **200**B. In this case, the web page server **400** determines that the printer **100**B used by the user of the mobile terminal **200**B has the model name "M**2**" and acquires support page data for the printer having the model name "M**2**" in T**416**. Then, in T**418**, the web page server **400** sends to the mobile terminal **200**B a GET response including the acquired support page data and a GTM. Due to this, a support page for the printer having the model name "M**2**" can be displayed in the mobile terminal **200**B without the user selecting the model name "M**2**" from a list of a plurality of model names Due to this, the user convenience is improved. Further, the aforementioned GTM is similar to the GTM in T**38** of FIG. **4** except that its virtual URL generation command includes the URL **30** and a character string **162** (that is, "model=M**2**&serial=ZZZ**2**").

[0097] When receiving the GET response from the web page server **400** in T**418**, the browser **238**B causes the display unit **214** in T**420** to display a support page SP**2** represented by the support page data in the response. The page SP**2** is similar to the page SP**1** displayed in T**320** of FIG. **9** except that it is a support page for the model name "M**2**".

[0098] (Effects of First Embodiment)

[0099] When the web page server **400** receives the GET request including the model name "M**1**" of the printer **100**A from the mobile terminal **200**A (T**312** of FIG. **9**), it uses the model name "M**1**" in the GET request to acquire the support page data for the model name "M**1**" (T**316**). Then, the web page server **400** sends the support page data for the model name "M**1**" to the mobile terminal **200**A (T**318**). In this case, the mobile terminal **200**A displays the support page SP**1** for the model name "M**1**" corresponding to the printer **100**A (T**320**). Further, when the web page server **400** receives the GET request including the model name "M**2**" of the printer **100**B from the mobile terminal **200**B (T**412** of FIG. **10**), it uses the model name "M**2**" in the GET request to acquire the support page data for the model name "M**2**" (T**416**). Then, the web page server **400** sends the support page data for the model name "M**2**" to the mobile terminal **200**B (T**418**). In this case, the mobile terminal **200**B displays the support page SP**2** for the model name "M**2**" corresponding to the printer **100**B (T**420**). As such, the web page server **400** can send the pieces of the support page data corresponding respectively to the printer **100**A and the printer **100**B (that is, the pages SP**1** and SP**2**) to the mobile terminal **200**A and the mobile terminal **200**B, respectively.

[0100] (Corresponding Relationships)

[0101] The web page server **400** is an example of "server". The mobile terminal **200**A is an example of "first terminal device" and "first external device". The mobile terminal **200**B is an example of "second terminal device" and "second external device". The printer **100**A and the printer **100**B are respectively examples of "first peripheral device" and "second peripheral device". The model name "M**1**" of the printer **100**A and the model name "M**2**" of the printer **100**B are respectively examples of "first relative information" and "second relative information". The cookie file C**2** and the cookie file C**12** are respectively examples of "first specific information" and "second specific information". The user of the mobile terminal **200**A and the user of the mobile terminal **200**B are respectively examples of "first user" and "second user". The support page data for the model name "M**1**" and the support page data for the model name "M**2**" are respectively examples of "first output data" and "second output data". The GET request in T**312** of FIG. **9** and the GET request in T**412** of FIG. **10** are respectively examples of "first specific signal" and "second specific signal".

[0102] The GET requests in T**30** of FIG. **3** and T**240** of FIG. **7** are examples of "first signal". The domain name "webserver.com" is an example of "domain of a server". The support pages SP**1**, SP**2** are examples of "specific web page". The URL **30** and the URL **32** are respectively examples of "first URL" and "second URL". The designations of the support pages in T**310** of FIG. **9** and in T**410** of FIG. **10** are examples of "instruction by the user". The GTM is an example of "command including the first URL and the relative information".

[0103] T**312** of FIG. **9** and T**412** of FIG. **10** are examples of "receive a specific signal". T**38** of FIG. **2**, T**318** of FIG. **9**, and T**418** of FIG. **10** are examples of "acquire output data". T**318** of FIG. **9** and T**418** of FIG. **10** are examples of "send the acquired output data".

[0104] In another aspect, the GET request in T**30** is an example of "specific signal". The cookie file C**1** is an example of "output data". T**30** and T**34** of FIG. **3** and T**38** of FIG. **4** are respectively examples of "receive a specific signal", "acquire output data", and "send the acquired output data".

Second Embodiment

[0105] As shown in FIG. **1**, in the present embodiment, the communication system **2** further includes a data server **500** provided on the Internet **4**.

[0106] (Configuration of Data Server **500**; FIG. **12**)

[0107] A configuration of the data server **500** will be described with reference to FIG. **12**. The data server **500** is a server that is provided on the Internet **4** by the printer vendor and is configured to supply an image file representing a print target image. A domain name and a subdomain name of the data server **500** are respectively "webserver.com" and "data".

[0108] As shown in FIG. **12**, the data server **500** includes a communication I/F **516** and a controller **530**. The communication I/F **516** is connected to the Internet **4**. The controller **530** includes a CPU **532** and a memory **534**. The CPU **532** is configured to execute various processes according to a program **536** stored in the memory **534**. The memory **534** is constituted of a ROM, a RAM, and the like. Further, although not shown, the memory **534** stores various types of web page data. The data server **500** is configured to supply the web page data in the memory **534** to the mobile terminals **200** according to requests from the mobile terminals **200**.

[0109] (Case E; FIGS. **13** and **14**)

[0110] Next, Case E will be described with reference to FIGS. **13** and **14**. In Case E, an image represented by print data is printed by using the print app **240**A installed in the mobile terminal **200**A. An initial state of Case E is a state after FIG. **6** or FIG. **8**, that is, a state in which the memory **234** of the mobile terminal **200**A already stores the cookie file C**2**.

[0111] In T**510**, the browser **238**A accepts a login operation. The login operation includes the operation to activate the browser **238**A and an operation to input the URL **32** "http://data.webserver.com/login". In this case, the browser **238**A determines that the URL **32** includes the domain name "webserver.com" in the cookie file C**2**, sends in T**512** to the data server **500** a GET request that includes the URL **32** as a sending destination URL and further includes the cookie file C**2**, and receives in T**514** a GET response including login page data corresponding to the URL **32** from the data server **500**. In T**516**, the browser **238**A causes the display unit **214** to display a login page D**11** represented by the login page data. As shown in FIG. **16**A, the page D**11** includes an ID input box to which an ID is to be inputted, a password input box to which a password is to be inputted, and an OK button. In FIGS. **16**A to **16**D, pages D**11** to D**13** outlined by narrow lines are pages displayed in accordance with the browser **238**A, and a screen D**14** outlined by a bold line is a screen displayed in accordance with the print app **240**A. T**520** to T**524** are similar to T**220** to T**224** of FIG. **7** except that the communication counterpart is the data server **500**.

[0112] When the authentication of the user succeeds in T**524**, the data server **500** sends in T**526** to the mobile terminal **200**A a POST response including top page data corresponding to a URL **34** "http://data.webserver.com/top".

[0113] When receiving the POST response from the data server **500** in T**526**, the browser **238**A causes the display unit **214** in T**528** to display a top page D**12** represented by the top page data in the response. As shown in FIG. **16**B, the page D**12** includes a plurality of thumbnail images IM**1** to IM**3** and a cancel button. The user can select one thumbnail image from among the plurality of thumbnail images IM**1** to IM**3** as a print target. When selection of the thumbnail image IM**1** is accepted in T**530**, the browser **238**A specifies a URL **36** "http://data.webserver.com/data**1**" associated with the thumbnail image IM**1**. Here, a character string "data**1**" is a character string corresponding to the thumbnail image IM**1**. That is, for example, when the thumbnail image IM**2** is selected, a URL including a character string "data**2**", instead of the character string "data**1**", is specified. Then, the browser **238**A determines that the URL **36** includes the domain name "webserver.com" in the cookie file C**2** and sends in T**532** to the data server **500** a GET request that includes the URL **36** as a destination and further includes the cookie file C**2**.

[0114] When receiving the GET request from the mobile terminal **200**A in T**532**, the data server **500** extracts the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" from the cookie file C**2** in the GET request and generates a URL scheme **82** in T**534**. The URL scheme **82** is a character string indicating instruction information to the browser **238**A of the mobile terminal **200**A, and includes a program name PI indicating a name of the print app **240**A, a process content PC indicating a print process, a URL **38** which the print app **240**A is to access, and a character string **64** indicating the respective extracted pieces of information. Since the cookie file C**2** includes the model name "M**1**" and the serial number "ZZZ**1**", the data server **500** firstly determines that the processes according to the installer **242**A have been executed, that is, that the print app **240**A is already installed in the mobile terminal **200**A. Due to this, the data server **500** determines that the mobile terminal **200**A is capable of executing print by using the print app **240**A, specifies a character string "printapp" for activating the printer app **240**A as the program name PI, and specifies "print" indicating the print process as the process content PC. Further, the data server **500** specifies the URL **38** "http://data.webserver.com/printpage**1**" corresponding to the character string "data**1**" included in the GET request. Here, a character string "printpage**1**" is a character string corresponding to the character string "data**1**". That is, for example, in a case where the GET request includes the character string "data**2**" instead of the character string "data**1**", a URL including a character string "printpage**2**", instead of the character string "printpage**1**", is specified. Then, the data server **500** uses the URL **38** and the respective extracted pieces of information to generate a URL **38***a* "http://data.webserver.com/printpage**1**?model=M**1**&serial=ZZZ**1**&ID=UUU**1**". The data server **500** further uses the specified program name PI, the specified process content PC, and the generated URL**38***a* to generate the URL scheme **82**. Further, the data server **500** generates detail page data by describing the model name "M**1**" and the serial number "ZZZ**1**" in page data corresponding to the URL **36** in the GET request.

[0115] In T**536**, the data server **500** sends to the mobile terminal **200**A a GET response including the generated detail page data and the generated URL scheme **82**. In a case where the GET request does not include a cookie file, the data server **500** does not generate a URL scheme.

[0116] When receiving the GET response from the data server **500** in T**536**, the browser **238**A causes the display unit **214** in T**538** to display a detail page D**13** represented by the detail page data. As shown in FIG. **16**C, the page D**13** includes an enlarged image of the thumbnail image IM**1**, a download button, and an app print button for executing print by using the print app **240**A (hereinbelow termed "app print"). The app print button has the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A described thereon. Due to this, the user can be informed of the printer **100**A in which the print is to be executed. In a case where

the app print button is selected, the browser **238**A executes a process in accordance with the URL scheme **82**. Further, in a case where the download button is selected, the **238**A downloads image data corresponding to the thumbnail image IM**1**.

[0117] When the app print button is operated in T**540** of FIG. **14**, the browser **238**A executes the process in accordance with the URL scheme **82** included in the GET response of T**536**. Firstly, the browser **238**A extracts the program name PI "printapp", the process content PC "print", and the URL **38***a* "http://data.webserver.com/printpage**1**?model=M**1**&serial=ZZZ**1**&ID=UUU**1**" from the URL scheme **82**. Then, in T**542**, the browser **238**A supplies to the print app **240**A an activation instruction for activating the print app **240**A that corresponds to the extracted program name PI. The print app **240**A is thereby activated. Then, the browser **238**A supplies the extracted URL **38***a* to the print app **240**A.

[0118] When acquiring the URL **38***a* from the browser **238**A in T**544**, the print app **240**A extracts in T**546** the URL **38**, the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" from the URL **38***a*, and sends in T**550** to the data server **500** a GET request including the URL **38** as a destination URL.

[0119] When receiving the GET request from the mobile terminal **200**A in T**550**, the data server **500** sends in T**552** to the mobile terminal **200**A a GET response including an image file F**1** corresponding to the character string "printpage**1**" in the GET request (that is, an image file corresponding to the thumbnail image IM**1**).

[0120] When receiving the GET response from the data server **500** in T**552**, the print app **240**A generates in T**554** print screen data that includes the image file F**1** in the GET response and the respective pieces of information extracted in T**546** (that is, the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**"). In T**556**, the print app **240**A causes the display unit **214** to display a print screen D**14** represented by the generated print screen data. As shown in FIG. **16**D, the screen D**14** includes an enlarged image of the thumbnail image IM**1**, a print button, printer information indicating the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A, and the user information indicating the ID "UUU**1**". Due to this, the user can be informed of the print target image, the printer **100**A in which the print is to be executed, and the ID of the user.

[0121] Although not shown, when the print button is operated by the user, the print app **240**A converts the image file F**1** included in the GET response of T**552** and generates print data which the printer **100**A is capable of interpreting. Then, the print app **240**A sends the print data to the printer **100**A. As a result, print according to the print data is executed in the printer **100**A.

[0122] (Case F; FIG. **15**)

[0123] Next, Case F will be described with reference to FIG. **15**. In Case F, an image represented by print data is printed by using the print app **240**B installed in the mobile terminal **200**B. An initial state of Case F is similar to the initial state of Case D. That is, the mobile terminal **200**B already stores the cookie file C**12**.

[0124] When processes similar to T**510** to T**532** of FIG. **13** are executed between the mobile terminal **200**B and the data server **500**, the data server **500** generates a URL scheme **182** in T**634**. The URL scheme **182** is similar to the URL scheme **82** except that it includes a URL **138***a* (specifically, a character string **164** "model=M**2**&serial=ZZZ**2**&ID=UUU**2**"). A character string "printapp" included in the URL scheme **182** is also a character string for activating the print app **240**B. Further, the data server **500** generates detail page data by describing the model name "M**2**" and the serial number "ZZZ**2**" in page data corresponding to the URL **36** in the GET request. T**636** and T**638** are respectively similar to T**536** and T**538** of FIG. **13** except that the communication counterpart is the mobile terminal **200**B. In the present case, the model name "M**2**" and the serial number "ZZZ**2**" of the printer **100**B are described on the app print button in the detail page D**13**. Due to this, the user can be informed of the printer **100**B in which print is to be executed. T**640** is similar to T**540** of FIG. **14**. In this case, in T**642**, the browser **238**B supplies the print app **240**B with an activation instruction for activating the print app **240**B corresponding to the extracted program name PI. Due to this, the print app **240**B is activated. After this, processes similar to T**544** to T**554** of FIG. **14** are executed between the browser **238**B, the print app **240**B, and the data server **500**. The print app **240**B generates in T**554** print screen data including the image file F**1**, the model name "M**2**", the serial number "ZZZ**2**", and the ID "UUU**2**" in the GET request. In this case, the print app **240**B causes the display unit **214** in T**656** to display a print screen D**14** represented by the generated print screen data. This screen D**14** includes an enlarged image of the thumbnail image IM**1**, a print button, and printer information indicating the model name "M**2**" and the serial number "ZZZ**2**" of the printer **100**B, and the user information indicating the ID "UUU**2**". Due to this, the user can be informed of the print target image, the printer **100**B in which the print is to be executed, and the ID of the user. Although not shown, when the print button is operated by the user, the print app **240**B converts the image file F**1** included in the GET response of T**552** and generates print data which the printer **100**B is capable of interpreting. Then, the print app **240**B sends the print data to the printer **100**B. As a result, the print according to the print data is executed in the printer **100**B.

[0125] (Effects of Second Embodiment)

[0126] In the present embodiment, when the data server **500** receives the GET request including the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A from the mobile terminal **200**A (T**532** of FIG. **13**), it acquires the URL scheme **82** corresponding to the model name "M**1**" and the serial number "ZZZ**1**" in the GET request (T**534**). Then, the data server **500** sends the GET response including the URL scheme **82** to the mobile terminal **200**A (T**536**). After this, when the app print button is operated by the user of the mobile terminal **200**A, the mobile terminal **200**A activates the print app **240**A and causes the printer **100**A to execute the print. Further, when the data server **500** receives the GET request including the model name "M**2**" and the serial number "ZZZ**2**" of the printer **100**B from the mobile terminal **200**B, it acquires the URL scheme **182** corresponding to the model name "M**2**" and the serial number "ZZZ**2**" in the GET request (T**634** of FIG. **15**). Then, the data server **500** sends the GET response including the URL scheme **182** to the mobile terminal **200**B (T**636**). After this, when the app print button is operated by the user of the mobile terminal **200**B, the mobile terminal **200**B activates the print app **240**B and causes the printer **100**B to execute the print. As above, the data server **500** can send the URL schemes corresponding respectively to the

printer **100**A and the printer **100**B (that is, the URL scheme **82** and the URL scheme **182**) to the mobile terminal **200**A and the mobile terminal **200**B respectively.

[0127] (Corresponding Relationships)

[0128] The detail page data including the URL scheme **82** and the detail page data including the URL scheme **182** are respectively examples of "first output data" and "second output data". The print app **240**A and the print app **240**B are examples of "specific application". The GET request in T**522** of FIG. **13** is an example of "second signal". The ID "UUU**1**" and the password "PPP**1**" are examples of "login information". The ID "UUU**1**" and the ID "UUU**2**" are examples of "user information". The detail page D**13** is an example of "specific web page".

Third Embodiment

[0129] In the present embodiment, the mobile terminal **200**A is provided with a print application **241**A (hereinbelow termed "print app **241**A") and an installer **243**A (see FIG. **2**A) instead of the print app **240**A and the installer **242**A. The print app **241**A is an application for supplying print data representing a print target image to a printer (e.g., **100**A). The installer **243**A is a program for installing the print app **241**A to the mobile terminal **200**A. Further, the mobile terminal **200**B is provided with a print application **241**B (hereinbelow termed "print app **241**B") and an installer **243**B (see FIG. **2**B) instead of the print app **240**B and the installer **242**B.

[0130] (Case G; FIG. **17**)

[0131] Case G will be described with reference to FIG. **17**. In Case G, an image represented by print data is printed by using the print app **241**A installed in the mobile terminal **200**A. An initial state of Case G is a state after processes similar to T**10** to T**100** (FIGS. **3** to **6**) have been executed between the installer **243**A and the browser **238**A of the mobile terminal **200**A, the web page server **400**, and the log server **700**. That is, it is a state in which the memory **234** of the mobile terminal **200**A already stores the cookie file C**2**. Further, the print app **241**A stores login screen data.

[0132] Processes similar to T**510** to T**538** of FIG. **13** and T**540** to T**546** of FIG. **14** are executed between the mobile terminal **200**A and the data server **500**. The character string "printapp" included in the URL scheme **82** generated in T**534** is a character string for activating the print app **241**A. Due to this, when the app print button is operated in T**540**, the browser **238**A supplies the print app **241**A in T**542** with an activation instruction for activating the print app **241**A corresponding to the extracted program name PI. The print app **241**A is thereby activated. When extracting the URL **38** and the respective pieces of information (that is, the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**") in T**546**, the print app **241**A determines that the URL **38** includes the subdomain name "data" and the domain name "webserver.com", and specifies login screen data corresponding to the data server **500**. Then, the print app **241**A generates in T**748** login screen data including the ID "UUU**1**" by describing the ID "UUU**1**" in the specified login screen data, and causes the display unit **214** in T**750** to display a login screen D**21** represented by the generated login screen data. The ID "UUU**1**" of the user is already inputted in an ID input box of the login screen D**21**. As such, the user does not have to input the ID and simply needs to input the password. When input of the password "PPP**1**" is accepted and an operation on the OK button is further accepted in T**752**, the print app **241**A specifies the URL **38** "http://data.webserver.com/printpage**1**" associated with the OK button. After this, processes similar to T**522** to T**526** of FIG. **13** are executed between the print app **241**A and the data server **500**. In this case, the print app **241**A receives a POST response that includes the image file F**1** corresponding to the character string "printpage**1**" in the URL **38** from the data server **500**. Then, processes similar to T**554** and T**556** of FIG. **14** are executed on the image file F**1**, by which print screen data including the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" is generated. Then, in T**766**, the print app **240**A causes the display unit **214** to display the print screen D**14** (see FIG. **16**D) represented by the generated print screen data.

[0133] Although not shown, when the mobile terminal **200**B accepts a login operation for logging into the data server **500**, processes similar to those of FIG. **17** are executed between the mobile terminal **200**B (specifically, the print app **241**B and the browser **238**B) and the data server **500**. In this case, the data server **500** generates the URL scheme **182** "printapp://print/http://data.webserver.com/login_printpage**1**?model=M**2**&serial=ZZZ**2**&ID=UUU**2**" including the character string **164** (that is "model=M**2**&serial=ZZZ**2**&ID=UUU**2**") instead of the URL scheme **82**, and sends a GET response including this URL scheme to the mobile terminal **200**B. Therefore, in this embodiment as well, effects similar to those of the second embodiment can be achieved.

Fourth Embodiment

[0134] As shown in FIG. **1**, in the present embodiment, the communication system **2** is further provided with a material server **800** provided on the Internet **4**.

[0135] The material server **800** is provided on the Internet **4** by a business entity different from the printer vendor and is a server for supplying an image file representing a print target image. A domain name of the material server **800** is "sozaiserver.com".

[0136] (Case H; FIG. **18**)

[0137] Case H will be described with reference to FIG. **18**. In Case H, an image represented by print data is printed by using the print app **240**A installed in the mobile terminal **200**A. An initial state of Case H is similar to the initial state of Case E of FIG. **13**. That is, it is a state in which the memory **234** of the mobile terminal **200**A already stores the cookie file C**2**.

[0138] When processes similar to T**510** to T**532** of FIG. **13** are executed between the mobile terminal **200**A and the data server **500**, the data server **500** generates a URL scheme **382** in T**834**. In the present case, the image file F**1** of the thumbnail image IM**1** is stored in the material server **800**. In this case, the data server **500** determines that the image file F**1** of the thumbnail image IM**1** selected by the user is stored in the material server **800** and specifies a URL "http://sozaiserver.com/printpage**1**" corresponding to the thumbnail image IM**1**. Then, the data server **500** specifies a character string "http" for executing communication according to a Hypertext Transfer Protocol (HTTP) as the program name PI and specifies a character string **44***a* "sozaiserver.com/printpage**1**" from the specified URL as an access destination. Then, the data server **500** generates a character string **44***b* "sozaiserver.com/printpage**1**?model=M**1**&serial=ZZZ**1**&ID=UUU**1**" by

using the specified character string **4** **4***a* and the respective extracted pieces of information. Further, the data server **500** generates the URL scheme **382** by using the specified program name PI and the generated character string **44***b*.

[0139] In T**836**, the data server **500** sends to the mobile terminal **200**A a GET response including detail page data corresponding to the URL **36** in the GET request and the generated URL scheme **382**.

[0140] When receiving the GET response from the data server **500** in T**836**, the browser **238**A causes the display unit **214** in T**838** to display a detail page D**23** represented by the detail page data. The page D**23** includes an enlarged image of the thumbnail image IM**1** and a print button. The browser **238**A executes processes according to the URL scheme **382** in a case where the print button is selected.

[0141] When the print button is operated in T**840**, the browser **238**A executes processes according to the URL scheme **382** included in the GET response of T**836**. The browser **238**A firstly extracts the program name PI "http" and the character string **44***b* "sozaiserver.com/printpage**1**?model=M**1**&serial=ZZZ**1**&ID=UUU**1**" from the URL scheme **382**. Then, the browser **238**A specifies to execute communication in accordance with the HTTP and specifies a URL **44** "http://sozaiserver.com/printpage**1**?model=M**1**&serial=ZZZ**1**&ID=UUU**1**" including the character string **44***b* as a destination URL. Then, in T**850**, the browser **238**A sends a GET request including the URL **44** as the destination URL to the material server **800**.

[0142] When receiving the GET request from the mobile terminal **200**A in T**850**, the material server **800** extracts the URL "http://sozaiserver.com/printpage**1**", the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" from the GET request and specifies page data corresponding to the extracted URL. Then, in T**852**, the material server **800** generates print page data by describing the model name "M**1**" and the serial number "ZZZ**1**" in the specified page data. Then, in T**854**, the material server **800** sends to the mobile terminal **200**A a GET response including the generated print page data and the image file F**1** corresponding to the character string "printpage**1**" in the GET request (that is, the image file corresponding to the thumbnail image IM**1**).

[0143] When receiving the GET response from the material server **800** in T**854**, the browser **238**A causes the display unit **214** in T**856** to display a print page D**24** represented by the print page data. This page D**24** includes an enlarged image of the thumbnail image IM**1**, a print button, and printer information indicating the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A. Due to this, the user can be informed of the print target image and the printer **100**A in which the print is to be executed.

[0144] Although not shown, when the mobile terminal **200**B accepts the login operation for logging into the data server **500**, processes similar to those of FIG. **18** are executed between the mobile terminal **200**B and the data server **500**. In this case, the data server **500** generates a URL scheme "http://sozaiserver.com/printpage**1**?model=M**2**&serial=ZZZ**2**&ID=UUU**2**" including a character string **164** (that is, "model=M**2**&serial=ZZZ**2**&ID=UUU**2**") instead of the URL scheme **382**, and sends a GET response including this URL scheme to the mobile terminal **200**B. As such, in the present embodiment as well, effects similar to those of the second embodiment can be achieved.

[0145] (Corresponding Relationships)

[0146] The URL scheme **382** and the URL scheme including the character string **164** are respectively examples of "first output data" and "second output data". The detail page D**23** is an example of "specific web page". T**834** and T**836** of FIG. **18** are respectively examples of "acquire output data" and "send the acquired output data".

[0147] (Variant 1) The memory **434** of the web page server **400** may store a cookie table including a plurality of cookie files in advance. In this variant, the web page server **400** stores, in the cookie table, the model name "M**1**" and the serial number "ZZZ**1**" extracted in T**32** of FIG. **3** in association with a first cookie file among the plurality of cookie files. Then, in T**38**, the web page server **400** sends a response including the completion page data and the first cookie file to the browser **238**A. That is, the web page server **400** does not generate a cookie file when it receives the GET request, and sends to the mobile terminal **200**A the first cookie file that is prepared in advance and does not include the model name "M**1**" or the serial number "ZZZ**1**". In this variant, "generate the output data" may be omitted.

[0148] (Variant 2) In T**36** of FIG. **3**, the web page server **400** may send a first specific file different from the cookie file C**1** to the mobile terminal **200**A. Further, in T**76** of FIG. **5**, the web page server **400** may send a second specific file different from the cookie file C**2** to the mobile terminal **200**A. The first and second specific files do not include the domain name "webserver.com" of the web page server **400**. The first specific file includes the model name "M**1**" and the serial number "ZZZ**1**", and the second specific file includes the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**". When the browser **238**A of the mobile terminal **200**A accesses any web server on the internet **4**, the first and second specific files are sent to the web server from the mobile terminal **200**A. In this case, the web page server **400** receives a GET request including the second specific file from the mobile terminal **200**A in T**312** of FIG. **9** and extracts the model name "M**1**", the serial number "ZZZ", and the ID "UUU**1**" from the second specific file, for example. The subsequent processes are similar to those of the first embodiment. In this variant as well, it is possible to cause the display unit **214** to display the support page corresponding to the model name of the printer used by the user of the mobile terminal **200**A. In this variant, the specific files are examples of "specific information", and "specific information" does not include the domain information.

[0149] (Variant 3) In a case of receiving the GET request in T**532** of FIG. **13** in a state where the user of the mobile terminal **200**A is not logging in the data server **500**, the data server **500** may generate in T**534** a URL scheme including the character string **62** (that is, "model=M**1**&serial=ZZZ**1**") instead of the character string **64**. In this case, the ID "UUU**1**" is not displayed in the user information in the print screen D**14**. In this variant, the URL scheme including the character string **62** is an example of "output data".

[0150] (Variant 4) In FIG. **9**, the web page server **400** may send the GET response of T**318** including the support page data to a device different from the mobile terminal **200**A (e.g., to the mobile terminal **200**B, a PC, etc.). In this variant, "terminal device" and "external device" are different devices.

[0151] (Variant 5) The mobile terminal **200**A may be an example of "first terminal device" and "second terminal device". In this variant, when the print app **240**A is uninstalled from the mobile terminal **200**A after FIG. **9**, and

thereafter an operation to activate the installer **242**A is performed on the terminal operation units by the user, processes similar to those of FIGS. **3** to **6** are executed between the mobile terminal **200**A, the printer **100**B, and the web page server **400**. When the printer name "AAA**2**" of the printer **100**B is selected in the selection screen S**1** in T**18** of FIG. **3**, the cookie file C**12** is stored in the memory **234** of the mobile terminal **200**A. In this situation, when the URL **30** "http://page/webserver.com/support" corresponding to the support page is inputted by the user of the mobile terminal **200**A, processes similar to those of FIG. **10** are executed between the mobile terminal **200**A and the web page server **400**. That is, the browser **238**A causes the display unit **214** to display the support page SP**2** for the model name "M**2**". Thus, in this variant, the web page server **400** can suitably provide the support page corresponding to the model name of the printer **100**B used by the user of the mobile terminal **200**A. In this variant, "first terminal device" and "second terminal device" are the same device.

[0152] (Variant 6) When the URL **12***a* "http://page.webserver.com/fin" is inputted instead of the URL **30** in T**310** of FIG. **9**, the browser **238**A sends to the web page server **400** a GET request that includes the URL **12***a* as a destination URL and further includes the cookie file C**2**. In this case, the web page server **400** sends to the mobile terminal **200**A a GET response that includes log information registration completion page data having the model name "M**1**" described therein. Then, the browser **238**A causes the display unit **214** to display the log information registration completion page D**1**. In this variant, the log information registration completion page data is an example of "output data".

[0153] (Variant 7) In T**316** of FIG. **9**, the web page server **400** may generate support top page data by specifying page data corresponding to the URL **30** and describing the model name "M**1**" in this page data. Then, the web page server **400** sends a GET response including the support top page data and a GTM to the mobile terminal **200**A. In this case, the browser **238**A of the mobile terminal **200**A causes the display unit **214** to display a top page D**31** represented by the support top page data. As shown in FIG. **19**, the top page D**31** includes a list of a plurality of model names and model information indicating the model name "M**1**" of the printer **100**A which the user is using. Due to this, the user does not have to select the model name "M**1**" from the list of the plurality of model names In this variant, the support top page data is an example of "output data".

[0154] (Variant 8) The communication system **2** may not be provided with the log server **700**. In this variant, when receiving the GET request including the cookie file C**2** from the mobile terminal **200**A in T**312** of FIG. **9**, the web page server **400** executes processes similar to T**314** and T**316** and stores in the memory **434** the history information in which the respective pieces of information extracted in T**314** (that is, the URL **30**, the model name "M**1**", and the serial number "ZZZ**1**") and a reception time are associated. Then, the web page server **400** sends a GET response including the support page data to the mobile terminal **200**A. That is, in this variant, the web page server **400** sends the GET response not including a GTM to the mobile terminal **200**A in the case of receiving the GET request from the mobile terminal **200**A. In this variant, "log server" may be omitted.

[0155] (Variant 9) In T**318** of FIG. **9**, the web page server **400** may send a GET response including the support page data but not including the GTM to the mobile terminal **200**A. In this case, the mobile terminal **200**A does not execute T**40** of FIG. **4**. The web page server **400** may send the client ID "YYY", the URL **30**, the model name "M**1**", and the serial number "ZZZ**1**" to the log server **700** before or after sending the aforementioned GET response to the mobile terminal **200**A, and may cause these respective information to be stored in the memory **730** of the log server **700**. In this variant, a combination of the memory **434** of the web page server **400** and the memory **730** of the log server **700** is an example of "memory".

[0156] (Variant 10) Each of the cookie files C**2** and C**12** simply need to include at least one of a model name, a serial number, a MAC address, an IP address, and a printer name The serial number, the MAC address, and the IP address are examples of "identification information", and the model name and the printer name are examples of "model information". As such, in general terms, relative information simply needs to include at least one of identification information for identifying a peripheral device and model information indicating a model of the peripheral device.

[0157] (Variant 11) "Peripheral device" is not limited to the printers **100** and may be a scanner, a multi-function peripheral, or the like.

[0158] (Variant 12) In the second to fourth embodiments, in a case of receiving a GET request including a destination URL and the cookie file C**2** from the mobile terminal **200**, the data server **500** may send to the mobile terminal **200** a GET response including page data corresponding to the destination URL and a GTM including this destination URL.

[0159] (Variant 13) In the second embodiment, the print screen data including the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" may be generated by the data server **500**. In this variant, the print app **240**A sends to the data server **500** in T**550** of FIG. **14** a GET request including the URL**38**, the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**". When receiving the GET request from the mobile terminal **200**A, the data server **500** specifies print screen data including the image file F**1** corresponding to the character string "printpage**1**" in the GET request and describes the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" in the specified screen data. Thereby, the print screen data including the image file F**1**, the model name "M**1**", the serial number "ZZZ**1**", and the ID "UUU**1**" is generated. Then, the data server **500** sends a GET response including the generated print screen data to the mobile terminal **200**A. When receiving the GET response from the data server **500**, the print app **240**A causes the display unit **214** to display the print screen D**14** represented by the print screen data in the GET response (see FIG. **16**D).

[0160] (Variant 14) In the third embodiment, the login screen data corresponding to the data server **500** may not be stored in the print app **241**A. In this variant, the print app **241**A generates the login screen data including the ID "UUU**1**" by using login screen data received from the data server **500**. In this variant, in T**534** of FIG. **13**, the data server **500** generates a URL scheme including a URL "http://data.webserver.com/login_printpage**1**?model=M**2**&serial&ZZZ**1**" for requesting login screen data, instead of the URL **38**. In this case, the print app **241**A sends to the data server **500** after T**546** a GET request including the URL "http://data.webserver.com/login_printpage**1**?model=M**2**&serial&ZZZ**1**" as a destination, and

then receives a GET response including login screen data from the data server **500**. Then, the print app **241**A generates the login screen data including the ID "UUU**1**" by describing the ID "UUU**1**" in the received login screen data, and causes the display unit to display the generated login screen D**21**.

[0161] (Variant 15) The print apps **240**A, **241**A may be installed in the mobile terminal **200**A. In this variant, the print app **240**A is an application for supplying print data to the printer **100**A, and the print app **241**A is an application for supplying print data to the printer **100**B.

[0162] In this variant, when processes similar to T**510** to T**528** of FIG. **13** are executed between the mobile terminal **200**A and the data server **500**, the browser **238**A causes the display unit **214** to display a top page including a printer input box. When input of the model name "M**1**" and the serial number "ZZZ**1**" to the printer input box and selection of the thumbnail image IM**1** are accepted, the browser **238**A generates a URL "http://data.webserver.com/data**1**?model=M**1**&serial=ZZZ**1**" by adding a query character string "model=M**1**&serial=ZZZ**1**" to the URL **36**. Then, the browser **238**A sends to the data server **500** a GET request that includes the generated URL as a destination and further includes the cookie file C**2**. When receiving the GET request from the mobile terminal **200**A, the data server **500** extracts the model name "M**1**" and the serial number "ZZZ**1**" of the printer **100**A from a character string described following the character "?" in the URL in the request. In this case, the data server **500** determines that print using the print app **240**A is to be executed and specifies the character string "printapp**1**" for activating the printer app **240**A as the program name Then, the data server **500** generates a URL scheme including the specified program name PI and sends a GET response including this URL to the mobile terminal **200**A. Due to this, the user of the mobile terminal **200**A can execute print using the print app **240**A and the printer **100**A.

[0163] On the other hand, when the input of the model name "M**2**" and the serial number "ZZZ**2**" to the printer input box and the selection of the thumbnail image IM**1** are accepted, the browser **238**A generates a URL "http://data.webserver.com/data**1**?model=M**2**&serial=ZZZ**2**" by adding a query character string "model=M**2**&serial=ZZZ**2**" to the URL **36**. Then, the browser **238**A sends to the data server **500** a GET request that includes the generated URL as a destination and further includes the cookie file C**2**. When receiving the GET request from the mobile terminal **200**A, the data server **500** extracts the model name "M**2**" and the serial number "ZZZ**2**" of the printer **100**B from a character string described following the character "?" in the URL in the request. In this case, the data server **500** determines that print using the print app

[0164] **241**A is to be executed and specifies the character string "printapp**2**" for activating the printer app **241**A as the program name. Then, the data server **500** generates a URL scheme including the specified program name PI and sends a GET response including this URL to the mobile terminal **200**A. Due to this, the user of the mobile terminal **200**A can execute print using the print app **241**A and the printer **100**B. In this variant, the URL scheme including the character string "printapp**1**" and the URL scheme including the character string "printapp**2**" are respectively examples of "first output data" and "second output data".

[0165] (Variant 16) The data server **500** may change the URL in the URL scheme depending on whether or not the ID "UUU**1**" is included in the cookie file in the GET request received in T**532**. For example, in a case where the cookie file in the GET request received in T**532** does not include the ID "UUU**1**", the data server **500** generates the URL scheme **82** including the URL **38**. In this case, the print app **240**A causes the display unit **214** to display the print screen D**14**. On the other hand, in a case where the cookie file in the GET request received in T**532** includes the ID "UUU**1**", the data server **500** generates a URL scheme including a URL "http://data.webserver.com/login_printpage**1**data**1**?model=M**2**&serial&ZZZ**1**". In this case, the print app **240**A causes the display unit **214** to display the login screen D**21**.

[0166] (Variant 17) In the respective embodiments as above, the processes of FIGS. **2** to **10**, **13** to **15**, **17**, and **18** are executed by the CPU **432** of the web page server **400**, the CPU **532** of the data server **500**, a CPU (not shown) of the log server **700**, the CPU **232** of the mobile terminal **200**A, a CPU (not shown) of the mobile terminal **200**B, and a CPU (not shown) of the material server **800** executing programs (that is, software). Instead of this, at least one of the processes of FIGS. **2** to **10**, **13** to **15**, **17**, and **18** may be realized by hardware such as a logic circuit.

What is claimed is:

1. A server comprising:

a processor; and

a first memory storing computer-readable instructions therein, the computer-readable instructions, when executed by the processor, causing the server to:

receive a specific signal including specific information from a terminal device via the Internet, the specific information being obtained by using relative information related to a peripheral device that is used by a user of the terminal device, the peripheral device being different from the terminal device, and the relative information including at least one of identification information for identifying the peripheral device and model information indicating a model of the peripheral device;

acquire output data corresponding to the relative information by using the specific information included in the specific signal received from the terminal device; and

send the acquired output data to an external device via the Internet,

wherein a first specific signal including first specific information is received from a first terminal device via the Internet, the first specific information being obtained by using first relative information related to a first peripheral device that is used by a first user of the first terminal device, the first peripheral device being different from the first terminal device, and

a second specific signal including second specific information is received from a second terminal device via the Internet, the second specific information being obtained by using second relative information related to a second peripheral device that is used by a second user of the second terminal device, the second peripheral device being different from the second terminal device,

the second peripheral device is different from the first peripheral device,

the second relative information is different from the first relative information,

the second specific information is different from the first specific information,

first output data corresponding to the first relative information is acquired by using the first specific information, in response to receiving the first specific signal including the first specific information from the first terminal device,

second output data corresponding to the second relative information is acquired by using the second specific information, in response to receiving the second specific signal including the second specific information from the second terminal device, the second output data being different from the first output data,

the acquired first output data is sent to a first external device in a case where the first output data is acquired, and

the acquired second output data is sent to a second external device in a case where the second output data is acquired.

2. The server as in claim **1**, wherein

the computer-readable instructions, when executed by the processor, further cause the server to:

receive a first signal including the relative information from the terminal device via the Internet;

generate the specific information by using the relative information included in the first signal; and

send the generated specific information to the terminal device via the Internet,

wherein after the specific information has been sent to the terminal device, the specific signal including the specific information is received from the terminal device.

3. The server as in claim **2**, wherein

the specific information is a cookie file,

the specific signal includes a first URL and the specific information which is the cookie file, the first URL including a domain of the server, and

the first signal including the relative information includes a second URL, the second URL including the domain of the server and the relative information described as a query.

4. The server as in claim **3**, wherein

the specific information includes the domain of the server, and

in a case where an instruction for designating the first URL including the domain of the serve is given to the terminal device by the user, the specific signal is received from the terminal device, the specific signal including the designated first URL and the specific information which is the cookie file including the domain included in the designated first URL.

5. The server as in claim **1**, wherein

the specific signal including the specific information includes a specific URL, and

the specific URL includes a domain of the server and the specific information described as a query.

6. The server as in claim **1**, wherein

the output data includes user information related to the user.

7. The server as in claim **6**, wherein

the computer-readable instructions, when executed by the processor, further cause the server to:

receive a second signal including login information from the terminal device via the Internet, the login information being for the user to login to the server; and

execute authentication of the user by using the login information included in the second signal in a case where the second signal including the login information is received from the terminal device,

the output data including the user information is acquired in a case where the specific signal including the specific information is received from the terminal device and the authentication of the user succeeds.

8. The server as in claim **1**, wherein

the output data is acquired by generating the output data using the specific information.

9. The server as in claim **1**, wherein

the terminal device is the external device.

10. The server as in claim **1**, wherein

the first terminal device is different from the second terminal device.

11. The server as in claim **1**, wherein

the output data includes web page data for causing the terminal device to display a specific web page corresponding to the relative information.

12. The server as in claim **11**, wherein

the output data includes at least one of:

the web page data representing the specific web page including the relative information;

the web page data representing the specific web page for providing the external device with information related to the peripheral device indicated by the relative information;

the web page data representing the specific web page for registering in a database information related to the peripheral device indicated by the relative information; and

the web page data representing the specific web page that includes plural pieces of link information to plural web pages corresponding to plural types of peripheral devices that include the peripheral device indicated by the relative information, the specific web page emphasizing, among the plural pieces of the link information, link information to a web page corresponding to the peripheral device indicated by the relative information.

13. The server as in claim **11**, wherein

the web page data includes a URL scheme including the relative information, and

the URL scheme includes at least one of information for causing the terminal device to access a server different from the server and information for activating a specific application installed in the terminal device.

14. The server as in claim **11**, wherein

the computer-readable instructions, when executed by the processor, further cause the server to:

execute a specific process for storing a first URL and the relative information related to the peripheral device in association with each other in a second memory such that the web page data accessed by the terminal device according to an instruction from the user using the peripheral device is able to be specified after the specific signal has been received, the first URL corresponding to the web page data accessed by the terminal device according to the instruction from the user, and the relative information corresponding to the specific information included in the specific signal.

15. A server system comprising:

the server as in claim **14**; and

a log server different from the server and comprising the second memory,

wherein the computer-readable instructions, when executed by the processor, further cause the server to:

execute the specific process for storing the first URL and the relative information in association with each other in the second memory of the log server.

16. The server system as in claim **15**, wherein

the computer-readable instructions, when executed by the processor, further cause the server to:

send a command including the first URL and the relative information to the terminal device in the specific process,

wherein the command is for causing the terminal device to send the first URL and the relative information to the log server so as to cause the log server to store the first URL and the relative information in association with each other in the second memory of the log server.

17. The server system as in claim **16**, wherein

the command is for causing the terminal device to generate a second URL and to send the second URL to the log server, the second URL including a character string indicating the first URL and the relative information described as a query.

18. A non-transitory computer-readable recording medium storing computer-readable instructions for a server,

wherein the computer-readable instructions, when executed by a processor of the server, cause the server to:

receive a specific signal including specific information from a terminal device via the Internet, the specific information being obtained by using relative information related to a peripheral device that is used by a user of the terminal device, the peripheral device being different from the terminal device, and the relative information including at least one of identification information for identifying the peripheral device and model information indicating a model of the peripheral device;

acquire output data corresponding to the relative information by using the specific information included in the specific signal received from the terminal device; and

send the acquired output data to an external device via the Internet,

wherein a first specific signal including first specific information is received from a first terminal device via the Internet, the first specific information being obtained by using first relative information related to a first peripheral device that is used by a first user of the first terminal device, the first peripheral device being different from the first terminal device, and

a second specific signal including second specific information is received from a second terminal device via the Internet, the second specific information being obtained by using second relative information related to a second peripheral device that is used by a second user of the second terminal device, the second peripheral device being different from the second terminal device,

the second peripheral device is different from the first peripheral device,

the second relative information is different from the first relative information,

the second specific information is different from the first specific information,

first output data corresponding to the first relative information is acquired by using the first specific information, in response to receiving the first specific signal including the first specific information from the first terminal device,

second output data corresponding to the second relative information is acquired by using the second specific information, in response to receiving the second specific signal including the second specific information from the second terminal device, the second output data being different from the first output data,

the acquired first output data is sent to a first external device in a case where the first output data is acquired, and

the acquired second output data is sent to a second external device in a case where the second output data is acquired.

19. A method performed by a server, the method comprising:

receiving a specific signal including specific information from a terminal device via the Internet, the specific information being obtained by using relative information related to a peripheral device that is used by a user of the terminal device, the peripheral device being different from the terminal device, and the relative information including at least one of identification information for identifying the peripheral device and model information indicating a model of the peripheral device;

acquiring output data corresponding to the relative information by using the specific information included in the specific signal received from the terminal device; and

sending the acquired output data to an external device via the Internet,

wherein the receiving includes:

receiving a first specific signal including first specific information from a first terminal device via the Internet, the first specific information being obtained by using first relative information related to a first peripheral device that is used by a first user of the first terminal device, the first peripheral device being different from the first terminal device; and

receiving a second specific signal including second specific information from a second terminal device via the Internet, the second specific information being obtained by using second relative information related to a second peripheral device that is used by a second user of the second terminal device, the second peripheral device being different from the second terminal device,

wherein the second peripheral device is different from the first peripheral device,

the second relative information is different from the first relative information, and

the second specific information is different from the first specific information,

wherein the acquiring includes:

acquiring first output data corresponding to the first relative information by using the first specific information, in response to receiving the first specific signal including the first specific information from the first terminal device; and

acquiring second output data corresponding to the second relative information by using the second specific information, in response to receiving the second specific signal including the second specific information from

the second terminal device, the second output data being different from the first output data,

wherein the sending includes:

sending the acquired first output data to a first external device in a case where the first output data is acquired; and

sending the acquired second output data to a second external device in a case where the second output data is acquired.

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