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(54) **WIRELESS NETWORK ACCESS METHODS, COMMUNICATIONS DEVICE CONFIGURATION METHODS, CONFIGURATION DEVICES, COMMUNICATIONS SYSTEMS, AND ARTICLES OF MANUFACTURE**
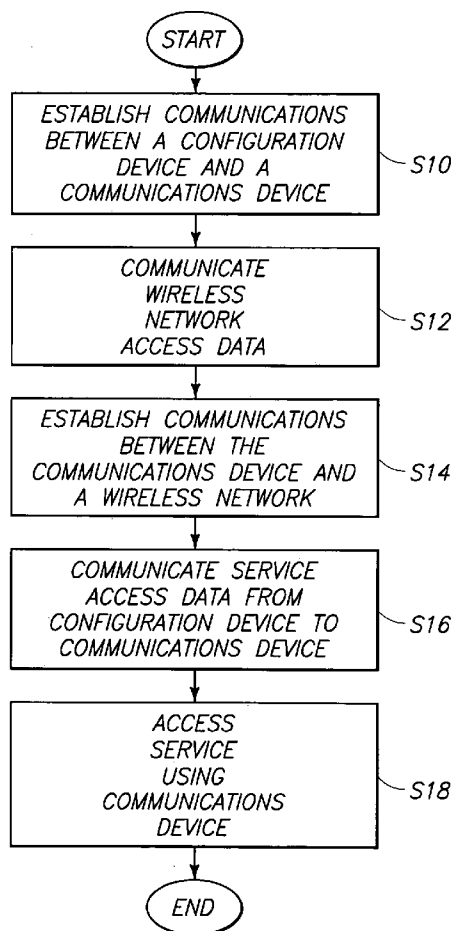
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(57) **ABSTRACT**

Wireless network access methods, communication device configuration methods, configuration devices, communications systems, and articles of manufacture are described. According to one aspect, a wireless network access method includes providing a communications device, providing a wireless network including access to a service, storing wireless network access data and service access data using a configuration device, communicating the wireless network access data and the service access data to the communications device using the configuration device, communicating the wireless network access data to the wireless network using the communications device to establish the communications device as a node on the wireless network, communicating the service access data to the wireless network using the communications device, and accessing the service using the communications device responsive to the communicating the service access data.
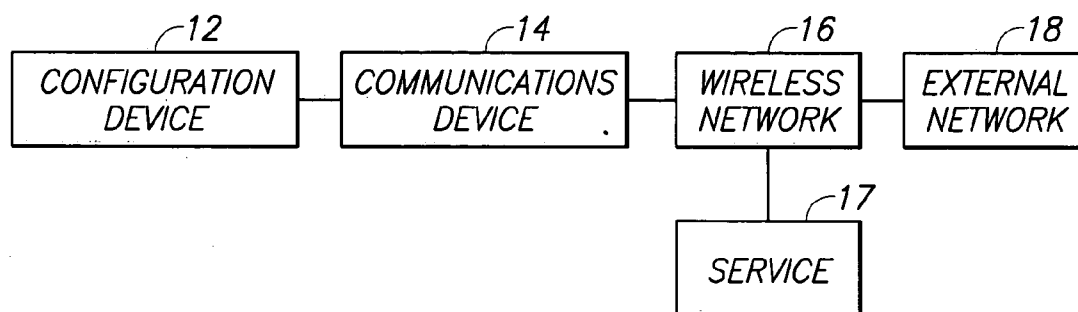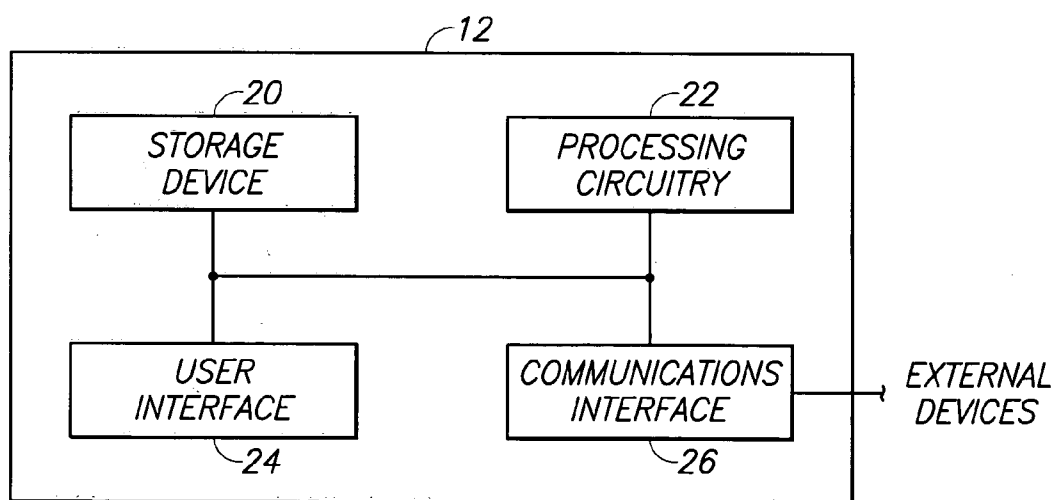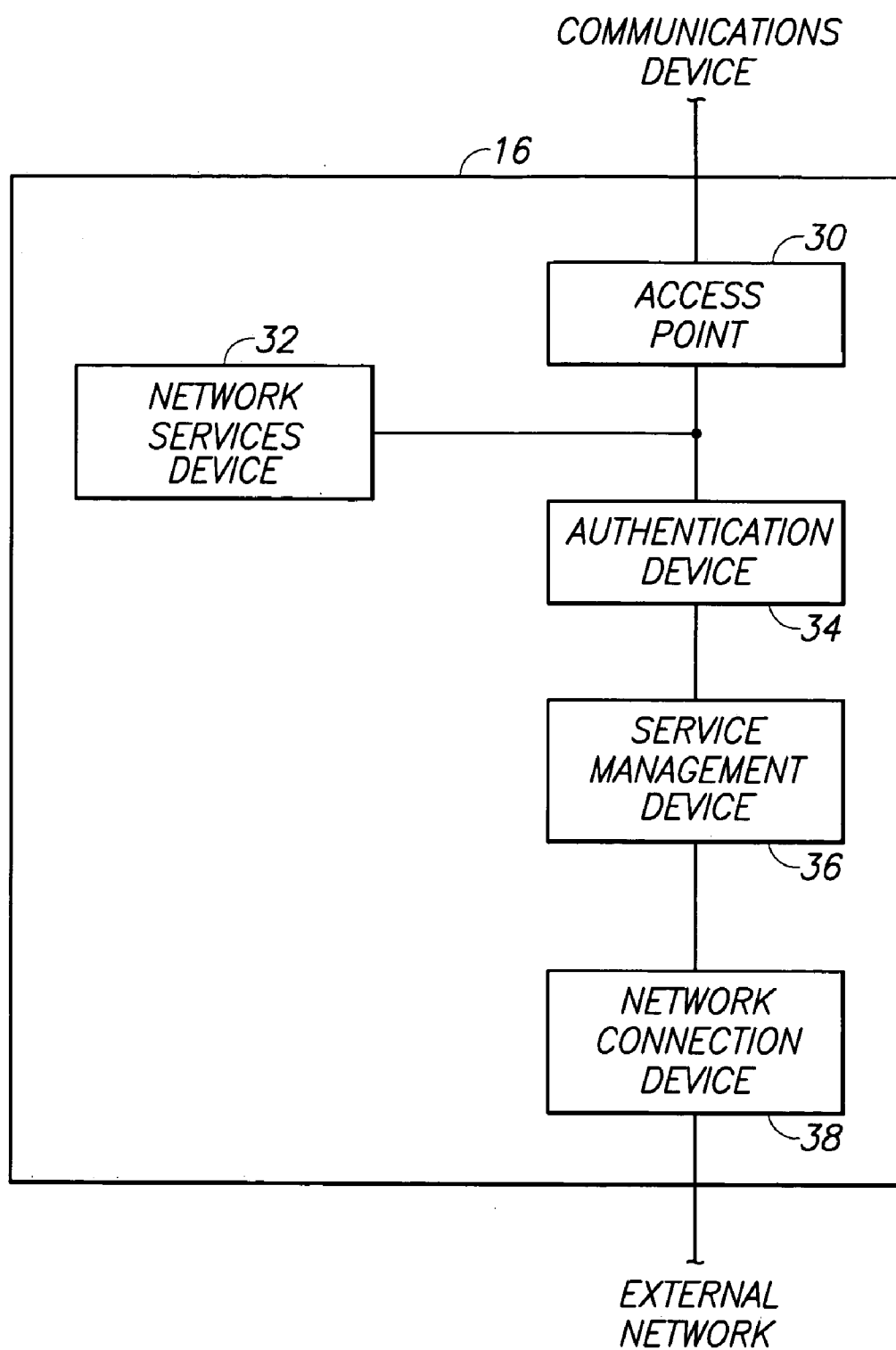
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                        │
                        ▼
        ┌──────────────────────────────┐
        │  ESTABLISH COMMUNICATIONS     │
        │  BETWEEN A CONFIGURATION      │
        │  DEVICE AND A                 │─── S10
        │  COMMUNICATIONS DEVICE        │
        └──────────────────────────────┘
                        │
                        ▼
        ┌──────────────────────────────┐
        │      COMMUNICATE              │
        │      WIRELESS                 │
        │      NETWORK                  │─── S12
        │      ACCESS DATA              │
        └──────────────────────────────┘
                        │
                        ▼
        ┌──────────────────────────────┐
        │  ESTABLISH COMMUNICATIONS     │
        │      BETWEEN THE              │
        │  COMMUNICATIONS DEVICE AND    │─── S14
        │  A WIRELESS NETWORK           │
        └──────────────────────────────┘
                        │
                        ▼
        ┌──────────────────────────────┐
        │   COMMUNICATE SERVICE         │
        │   ACCESS DATA FROM            │
        │   CONFIGURATION DEVICE TO     │─── S16
        │   COMMUNICATIONS DEVICE       │
        └──────────────────────────────┘
                        │
                        ▼
        ┌──────────────────────────────┐
        │      ACCESS                   │
        │      SERVICE                  │
        │      USING                    │─── S18
        │      COMMUNICATIONS           │
        │      DEVICE                   │
        └──────────────────────────────┘
                        │
                        ▼
                    ( END )
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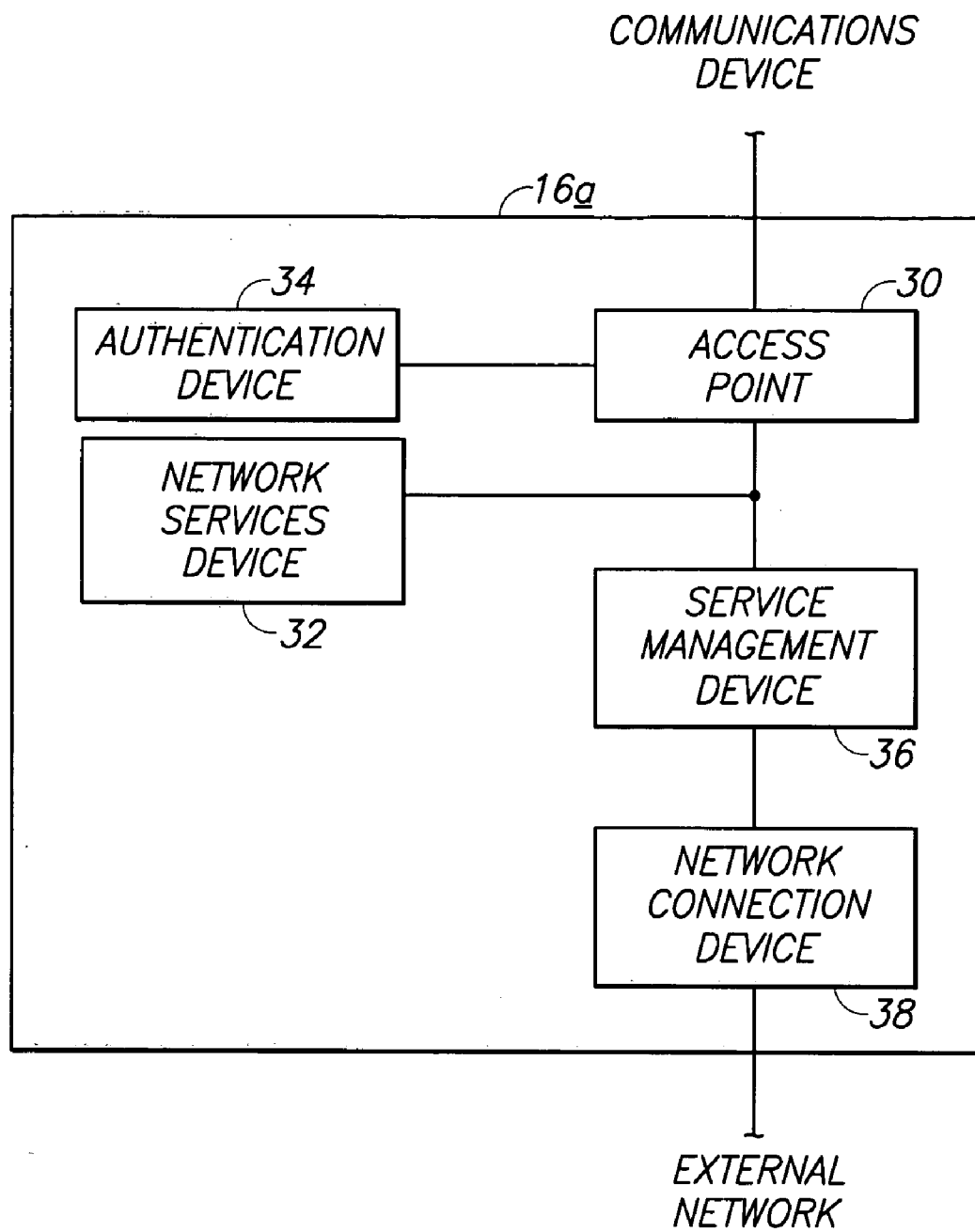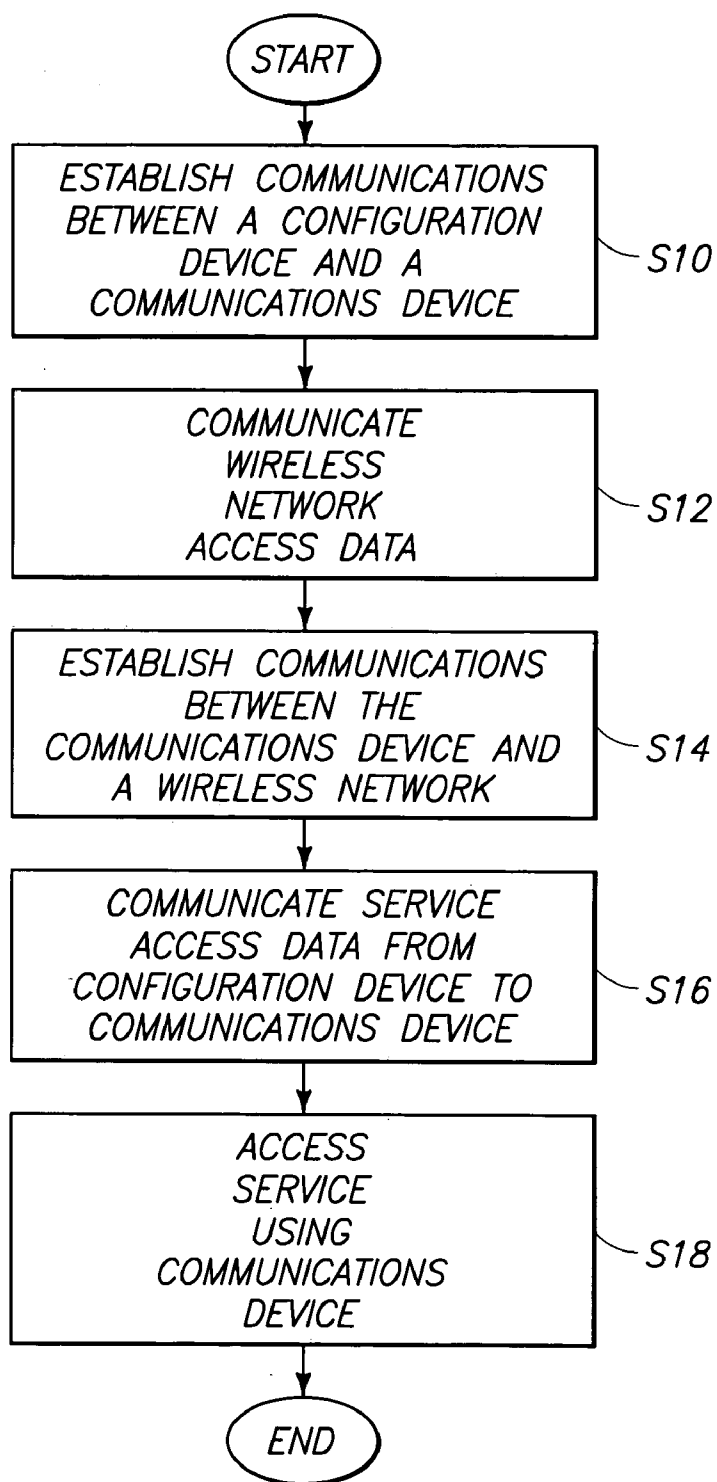
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│ ⌐12   │   │ ⌐14   │   │ ⌐16   │   │ ⌐18   │
│ CONFIGURATION   │───│ COMMUNICATIONS │───│ WIRELESS   │───│ EXTERNAL   │
│ DEVICE   │   │ DEVICE   . │   │ NETWORK   │   │ NETWORK   │
└─────────────────┘   └─────────────────┘   └─────────────────┘   └─────────────────┘
                                                     │
                                              ⌐17   │
                                           ┌─────────────────┐
                                           │ SERVICE   │
                                           └─────────────────┘

_IE II □] II_

┌──┐
│ ⌐12   │
│   │
│   ⌐20   ⌐22   │
│   ┌─────────────┐   ┌─────────────┐   │
│   │ STORAGE   │   │ PROCESSING │   │
│   │ DEVICE   │   │ CIRCUITRY   │   │
│   └─────────────┘   └─────────────┘   │
│   │   │   │
│   └────────────────────────────┘   │
│   │   │   │
│   ┌─────────────┐   ┌─────────────┐   │   EXTERNAL
│   │ USER   │   │ COMMUNICATIONS│───────────────│───┐   DEVICES
│   │ INTERFACE   │   │ INTERFACE   │   │
│   └─────────────┘   └─────────────┘   │
│   ╲24   ╲26   │
└──┘

_IE II □] □_

COMMUNICATIONS
DEVICE

_16

_30
ACCESS
POINT

_32
NETWORK
SERVICES
DEVICE

AUTHENTICATION
DEVICE
_34

SERVICE
MANAGEMENT
DEVICE
_36

NETWORK
CONNECTION
DEVICE
_38

EXTERNAL
NETWORK

FIG 3

COMMUNICATIONS
DEVICE

16a

34   30

AUTHENTICATION
DEVICE

ACCESS
POINT

NETWORK
SERVICES
DEVICE

32

SERVICE
MANAGEMENT
DEVICE

36

NETWORK
CONNECTION
DEVICE

38

EXTERNAL
NETWORK

Fig. 4

START

ESTABLISH COMMUNICATIONS BETWEEN A CONFIGURATION DEVICE AND A COMMUNICATIONS DEVICE — S10

COMMUNICATE WIRELESS NETWORK ACCESS DATA — S12

ESTABLISH COMMUNICATIONS BETWEEN THE COMMUNICATIONS DEVICE AND A WIRELESS NETWORK — S14

COMMUNICATE SERVICE ACCESS DATA FROM CONFIGURATION DEVICE TO COMMUNICATIONS DEVICE — S16

ACCESS SERVICE USING COMMUNICATIONS DEVICE — S18

END

FIG. 5

WIRELESS NETWORK ACCESS METHODS, COMMUNICATIONS DEVICE CONFIGURATION METHODS, CONFIGURATION DEVICES, COMMUNICATIONS SYSTEMS, AND ARTICLES OF MANUFACTURE

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is related to copending U.S. patent application entitled "Wireless Network Communications Methods, Communications Device Operational Methods, Wireless Networks, Configuration Devices, Communications Systems, And Articles Of Manufacture" having Attorney Docket No. 200308932-1, listing Brett Williams, Nathan Harmon, and Duane Mentze as inventors, and copending U.S. patent application entitled "Wireless Network Monitoring Methods, Configuration Devices, Communications Systems, And Articles Of Manufacture" having Attorney Docket No. 200308844-1, listing Brett Williams, Nathan Harmon, and Duane Mentze as inventors, which were filed concurrently and which are incorporated by reference herein.

FIELD OF THE INVENTION

[0002] Aspects of the invention relate to wireless network access methods, communications device configuration methods, configuration devices, communications systems, and articles of manufacture.

BACKGROUND OF THE INVENTION

[0003] Computing devices, such as personal computers, pocket PCs and other devices, continue to be used in new processing and communications applications. For example, the increased processing speeds and computational power of these devices has greatly enhanced the popularity and usage of the devices. More recently, advancements in networking and other communications between computing devices has also experienced significant improvements. Computing devices now quickly and efficiently communicate with other devices including e-mail, browsing, and other communications.

[0004] Portable computing devices have also experienced significant growth in capabilities and popularity. Wireless local area networks, such as wireless fidelity (WiFi) networks, have been developed to enable users to wirelessly access and communicate with other networked devices, such as Internet devices and other devices coupled with local area networks. For example, 802.11b networks are being used in an increased number of applications and locations to provide electronic connectivity. Coverage of the wireless local area network may be referred to as a hotspot. Public wireless local area networks may provide communications in office locations, public places, or other applications wherein electronic communications are desired. For example, wireless local area networks are now utilized in airport terminals, coffeehouses, and other establishments, providing public and/or membership access to the wireless local area network, and perhaps the Internet for browsing and e-mail communications.

[0005] Some drawbacks have been experienced with respect to connecting devices to wireless local area networks. For example, to connect to some networks, a com-

puting device may use appropriate connection information including a network name (e.g., SSID) and mode of operation. In addition, the device may need to be authenticated and use appropriate encryption to send and receive communications with respect to the wireless local area network. Other information may also be necessary to establish communications between a given computing device and a wireless local area network. Accordingly, a user would manually configure the appropriate parameters or settings to provide network access. Without appropriate configuration of the computing device, a user may be unable to access the wireless local area network. However, manual configuration may be difficult for some users, subject to user errors, etc.

[0006] In one example, a user may desire to access a hotspot service provider (e.g., t-mobile.com) to access the public Internet. The user may setup the device for wireless access, purchase time from the provider, provide a computer at the location of the hotspot and manually attempt to connect to the service. At least some users may have difficulty manually configuring their computer to access the service, and as a result, become frustrated and avoid using the service.

[0007] According to at least some embodiments of the disclosure, improved methods and apparatus of accessing wireless networks and/or services associated therewith are described.

SUMMARY OF THE INVENTION

[0008] Wireless network access methods, communications device configuration methods, configuration devices, communications systems, and articles of manufacture are described.

[0009] According to one aspect, a wireless network access method comprises providing a communications device, providing a wireless network including access to a service, storing wireless network access data and service access data using a configuration device, communicating the wireless network access data and the service access data to the communications device using the configuration device, communicating the wireless network access data to the wireless network using the communications device to establish the communications device as a node on the wireless network, communicating the service access data to the wireless network using the communications device, and accessing the service using the communications device responsive to the communicating the service access data.

[0010] According to another aspect, a communications device configuration method comprises providing a communications device configured to implement wireless communications, providing a configuration device comprising wireless network access data for a respective wireless network and service access data for a service accessible using the wireless network, communicating the wireless network access data from the configuration device to the communications device to configure the communications device to access the respective wireless network, and communicating the service access data from the configuration device to the communications device to configure the communications device to access the service via communications using the wireless network.

[0011] According to a further aspect, a configuration device comprises a communications interface configured to

implement electronic communications of the configuration device with an external device which is externally located with respect to the configuration device, a storage device configured to store wireless network access data and service access data and to output the wireless network access data and service access data to the communications interface for communication externally of the configuration device to the external device using the communications interface, and wherein the wireless network access data comprises information enabling the external device to access and to implement communications with a respective wireless network, and the service access data comprises information enabling the external device to access a service associated with wireless network and configured to perform an action with respect to the external device responsive to a command from the external device.

[0012] Other aspects are disclosed as is apparent from the following description.

DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a functional block diagram illustrating a communications system according to one embodiment.

[0014] FIG. 2 is a functional block diagram illustrating hardware components of a configuration device or a communications device according to illustrative exemplary embodiments.

[0015] FIG. 3 is a functional block diagram of a wireless network according to one embodiment.

[0016] FIG. 4 is a functional block diagram of a wireless network according to another embodiment.

[0017] FIG. 5 is a flow chart illustrating a methodology for accessing a service associated with a wireless network according to one embodiment.

DETAILED DESCRIPTION OF THE INVENTION

[0018] Referring to FIG. 1, an exemplary communications system 10 is shown. The depicted components of communications system 10 are configured to electronically communicate with another. The illustrated communications system 10 includes a configuration device 12, a communications device 14, a wireless network 16, a service 17, and an external network 18. Other configurations of system 10 are possible in other embodiments. For example, external network 18 may be omitted in at least one other embodiment.

[0019] Configuration device 12 operates to configure communications device 14 in one embodiment. In exemplary aspects, configuration device 12 configures communications device 14 to communicate with wireless network 16 and/or access service 17 associated with the wireless network 16. Exemplary services 17 are described below.

[0020] Communications device 14 is arranged by configuration device 12 to communicate with wireless network 16 and access one or more service 17 associated therewith. Exemplary configurations of communications device 14 include a personal computer (PC) or pocket PC (e.g., iPAQ available from the Hewlett-Packard Company). Other embodiments of communications device 14 are possible. For example, communications device 14 may be arranged as any

electrical device configured to implement wireless communications. Communications device 14 may include computational or data processing capabilities in some embodiments.

[0021] Wireless network 16 is configured to implement wireless communications with at least some devices or networks coupled with the network 16. Wireless network 16 may also provide wired connectivity to one or more devices or networks coupled therewith. An exemplary arrangement of wireless network 16 comprises a wireless local area network, such as a 802.11b network, in one example. Wireless network 16 is configured to provide access between communications device 14 and service 17 associated with wireless network 16. Wireless network 16 may comprise a public wireless network and be referred to as a hotspot.

[0022] Service 17 is associated with wireless network 16 in the depicted example. As shown, service 17 is directly coupled with wireless network 16 in one embodiment. Service 17 may also be coupled with external network 18 and accessible using wireless network 16 and external network 18.

[0023] Service 17 performs electronic actions with respect to communications device 14 in at least one example. For example, service 17 may perform desired actions responsive to commands, requests, or other communications originating from communications device 14. Service 17 may be tailored to the location and application of the wireless network 16. One example of service 17 includes a hotspot service provider for exemplary embodiments wherein wireless network 16 provides public communications in an airport terminal, coffeehouse, or other location. Another example of service 17 includes managing image forming devices (e.g., printers) available on the wireless network 16. Another possible service 17 includes accessing services of a library via wireless network 16. The described services 17 are exemplary and provision of other electrical actions may be performed by service 17 with respect to communications device 14 in other embodiments.

[0024] External network 18 is coupled with wireless network 16. Communications device 14 may access external network 18 via wireless network 16 in the depicted example. One embodiment of external network 18 comprises the public Internet. Other arrangements of external network 18 are possible and may include wireless and/or wired components. As mentioned previously, communications device 14 may desire to access a service 17 coupled with external network 18.

[0025] Referring to FIG. 2, an exemplary arrangement of configuration device 12 is shown. The depicted arrangement may also correspond to one embodiment of communications device 14. The illustrated configuration device 12 includes a storage device 20, processing circuitry 22, user interface 24, and communications interface 26.

[0026] Configuration device 12 (or communications device 14) may include more, less, or alternative components. For example, for configuration device embodiments, the processing circuitry 22 and/or user interface 24 may be omitted.

[0027] Storage device 20 is configured to store electronic data and/or programming such as executable instructions (e.g., software and/or firmware), data, or other digital infor-

mation and may include processor-usable media. Processor-usable media includes any article of manufacture that can contain, store, or maintain programming, data and/or digital information for use by or in connection with an instruction execution system including processing circuitry in the exemplary embodiment. For example, exemplary processor-usable media may include any one of physical media such as electronic, magnetic, optical, electromagnetic, infrared or semiconductor media. Some more specific examples of processor-usable media include, but are not limited to, a portable magnetic computer diskette, such as a floppy diskette, zip disk, hard drive, random access memory, read only memory, flash memory, cache memory, and/or other configurations capable of storing programming, data, or other digital information.

[0028] In one embodiment, processing circuitry 22 may comprise circuitry configured to implement desired programming. For example, the processing circuitry 22 may be implemented as a processor or other structure configured to execute executable instructions including, for example, software and/or firmware instructions. Other exemplary embodiments of processing circuitry 22 include hardware logic, PGA, FPGA, ASIC, and/or other structures. These examples of processing circuitry 22 are for illustration and other configurations are possible.

[0029] User interface 24 may be embodied as any appropriate apparatus configured to display or convey user information and/or receive user input. Exemplary embodiments of user interface 24 comprise a display, speaker, keyboard, mouse, etc.

[0030] Communications interface 26 is configured to couple with and implement communications with respect to external devices. Communications interface 26 may provide wired and/or wireless communications. Exemplary embodiments of communications interface 26 comprise electromagnetic transmit and receive circuitry (e.g., radio frequency, infrared, etc.) or other wireless circuitry, USB port, parallel port, or serial port. Communications interface 26 may be embodied in any appropriate configuration to externally communicate electronic data. In one embodiment, configuration device 12 is provided in communication with communications device 14 during communications between communications device and wireless network 16 and accessing service 17. In other embodiments, configuration device 12 may configure communications device 14 and then be removed from communication with device 14.

[0031] For configuration device embodiments, storage device 20 may store network access data and service access data to be used to configure communications device 14 to access wireless network 16 and to access service 17. Network access data is arranged to facilitate connection of communications device 14 with wireless network 16 to enable communications. Service access data is arranged to facilitate access between communications device 14 and service 17.

[0032] The network access data may be tailored to the associated type of wireless network 16 to be accessed. Exemplary wireless network access data may comprise network identification information of the wireless network 16. Exemplary network identification information includes the network name, or Service Set Identifier (e.g., SSID), which identifies the Extended Service Set (ESS). Network access data may comprise mode of operation information, for example specifying ad hoc peer-to-peer configuration, or infrastructure configuration. Network access data may comprise encryption information corresponding to encryption techniques utilized by wireless network 16, and may include a digital certificate or dynamic key information configured to permit encrypted communications of communications device 14 with wireless network 16. Network access data may comprise any other information configured to facilitate or assist a user with accessing and using wireless network 16.

[0033] Service access data may also be tailored to the type of service 17 to be accessed, and/or the location or implementation of the service 17. In one embodiment, service access data may comprise a navigation identifier associated with the service 17. For example, if service 17 comprises a node on wireless network 16, the navigation identifier may comprise an electronic address, such as an Internet Protocol (IP) address, of the service 17. If service 17 is coupled with external network 18 comprising the public Internet, the navigation identifier may comprise a Uniform Resource Locator (URL) of the service 17. Other types of navigation identifiers may be used providing any suitable navigation to service 17.

[0034] Service access data may additionally comprise authentication information usable to authenticate access between communications device 14 and service 17 and/or wireless network 16. For exemplary RADIUS authentication, authentication information may comprise a username and a password.

[0035] Service access data may also comprise a command to initiate performance of an action of service 17 with respect to communications device 14. For example, the command may automatically cause the loading of a web page associated with service 17 using communications device 14, display devices of service 17 accessible to communications device 14 (e.g., communicate a Universal Naming Convention (UNC) path command to initiate display of shared devices or services accessible to communications device 14, perhaps associated with the username) or provide other desired operations.

[0036] Exemplary service access data may include user information corresponding to a user of the communications device 14 and may initiate operations or actions of service 17 applicable and/or tailored to an identified user as identified by the user information (e.g., permit services for which the user has rights). The user information may cause service 17 to perform the action in consideration of the user information (e.g., automatically launch an application of service 17 using a command of the service access data and seed the application using user information of the service access data). Service access data may comprise any other information configured to facilitate or assist a user with accessing and using service 17.

[0037] Still referring to FIG. 2, the illustrated exemplary hardware may also comprise communications device 14. However, storage device 20 may store information in addition to the network access data and service access data received from configuration device 12. For example, storage device 20 may comprise an operating system and other applications for use by a user or processing circuitry 22 of communications device 14. Storage device 20 may comprise

programming to assist a user with accessing wireless network **16**. For example, storage device **20** may comprise programming to detect available wireless networks proximate communications device **14** and to display the options to a user (e.g., Windows XP™ Service Pack 1 available from Microsoft Corporation).

[0038] According to exemplary aspects described herein, processing circuitry **22** of the communications device **14** may access the network access data downloaded from configuration device **12**, and utilize the information to select one of a plurality of detected wireless networks **16** and use the network access data to establish communications device **14** as a node on the wireless network **16**. The processing circuitry **22** may also forward service access data to wireless network **16** to access service **17**. Further, the processing circuitry **22** of communications device **14** may also forward commands, user seed information or other information to assist with accessing wireless network **16** and/or service **17**. Accordingly, access to wireless network **16** and/or service **17** may be automated without user input. In other aspects, the processing circuitry **22** may request user input (or a user may input information without a request) during the process of accessing wireless network **16** and/or service **17** using respective ones of the network access data and service access data.

[0039] Additionally, storage device **20** may comprise programming to process encrypted communications from device **12** in one embodiment. Configuration device **12** may encrypt the network access data and/or service access data in the described exemplary embodiment.

[0040] Referring to **FIG. 3**, an exemplary configuration of wireless network **16** arranged in a service level authentication embodiment is illustrated. The depicted wireless network **16** comprises an access point **30**, a network services device **32**, an authentication device **34**, a service management device **36**, and a network connection device **38**. Although illustrated as separate devices in **FIG. 3**, it is possible to implement functions or operations of a plurality of the separate devices within a single device.

[0041] Access point **30** comprises a wireless access point in the depicted embodiment configured to provide interfacing between wireless communications (e.g., with communications device **14**) and wired devices. In addition, access point **30** may be arranged to control encryption operations (e.g., control management of encryption keys).

[0042] Network services device **32** is arranged to dynamically enable communications between nodes of wireless network **16**. An exemplary network services device **32** comprises a Dynamic Host Configuration Protocol (DHCP) server configured to assign temporary or permanent electronic addresses to devices coupled with wireless network **16** including communications device **14**.

[0043] Authentication device **34** is configured to authenticate communications from devices coupled with wireless network **16**. In the exemplary service level authentication model of **FIG. 3**, it is possible for users to communicate with one another via wireless access point **30** without authentication. However, proper authentication is used for communications to external network **18**. Accordingly, if the service (not shown in **FIG. 3**) is implemented using a device coupled with the access point **30**, the service may be

accessed without authentication. If the service is accessed via the external network **18**, proper authentication is used to access the service in the exemplary depicted embodiment. Communications device **14** may communicate authentication information received from configuration device **12** to authentication device **34** for authentication. In one exemplary embodiment, authentication device **34** may be implemented as a RADIUS server and communications device **14** may communicate authentication information comprising a username and a password as described previously.

[0044] Service management device **36** is configured to monitor and track usage of service **17** by one or more of communications devices **14**. Service management device **36** may be implemented within a server in one embodiment.

[0045] Network connection **38** is configured to implement communications intermediate wireless network **16** and one or more external network **18**. Network connection **38** may be implemented as a gateway, router and/or firewall in an exemplary embodiment wherein external network **18** comprises the public Internet.

[0046] Referring to **FIG. 4**, an alternate embodiment of wireless network is illustrated with respect to reference **16a** wherein like numerals represent like components with differences being represented by a suffix. The exemplary embodiment of **FIG. 4** uses connection level authentication for providing access to the service. Authentication device **34** is coupled with access point **30** and communications device **14** is authenticated before accessing wireless network **16a** or external network **18** in the embodiment of **FIG. 4**. Wireless network **16a** may be configured according to standard 802.1x that permits wireless network **16a** to scale by allowing centralized authentication of users. In one configuration, 802.1x uses authentication protocol Extensible Authentication Protocol (EAP). EAP messages are encapsulated within 802.1x messages and may be referred to as EAPOL or EAP over LAN. In the described example, access point **30** forwards EAP messages to authentication device **34** (e.g., messages comprising service access data) to authenticate communications device **14** before communications device **14** is given access to wireless network **16** or service **17**.

[0047] Other configurations of wireless network **16** and/or other configurations for authentication are possible. For example, authentication may be implemented at a remote location of the service **17** (e.g., website supported by the public Internet) instead of within the wireless network **16**. For example, the network connection **38** may redirect communications from a communications device **14** to the location of the service **17** for authentication, and if authenticated, the communications may be forwarded from the service **17** to an appropriate destination identified within the communications. Other embodiments are possible for authentication and implementing access to service **17**.

[0048] Referring to **FIG. 5**, a methodology illustrating exemplary operations of the configuration device **12**, communications device **14** and wireless network **16** for accessing a service **17** are illustrated.

[0049] At a step S10, communications are established between the configuration device and the communication device.

[0050] At a step S12, the configuration device communicates wireless network access data to the communications device.

[0051] At a step S14, the communications device uses the received wireless network access data to establish the communications device as a node on the wireless network and enable communications between the communications device and the wireless network.

[0052] At a step S16, the configuration device communicates service access data to the communications device.

[0053] At a step S18, the communications device accesses the service associated with the wireless network using the service access data.

[0054] In the described example, the communications device may be configured to automatically access the wireless network and/or service using the received respective data from the configuration device and without user input. Other methods are possible including more, less or alternative steps. For example, the communications of steps S12 and S16 between the configuration device and the communications device may be implemented simultaneously in a common step according to another method.

[0055] Aspects of the disclosure facilitate configuration of a communications device to access a wireless network, such as a public wireless network, and a service associated with a wireless network. At least some embodiments of the disclosure simplify and condense tasks used to connect to a wireless network and a service available on the network.

[0056] The protection sought is not to be limited to the disclosed embodiments, which are given by way of example only, but instead is to be limited only by the scope of the appended claims.

What is claimed is:

1. A wireless network access method comprising:

providing a communications device;

providing a wireless network including access to a service;

storing wireless network access data and service access data using a configuration device;

communicating the wireless network access data and the service access data to the communications device using the configuration device;

communicating the wireless network access data to the wireless network using the communications device to establish the communications device as a node on the wireless network;

communicating the service access data to the wireless network using the communications device; and

accessing the service using the communications device responsive to the communicating the service access data.

2. The method of claim 1 wherein the service is configured to perform actions with respect to the communications device.

3. The method of claim 1 wherein the service comprises a hot spot service provider.

4. The method of claim 1 wherein the service access data comprises a navigation identifier associated with the service.

5. The method of claim 1 wherein the service access data comprises authentication information usable to authenticate access of the communications device to the service.

6. The method of claim 1 wherein the service access data comprises a command configured to initiate an action of the service with respect to the communications device.

7. The method of claim 6 wherein the service access data comprises user information corresponding to a user of the communications device and configured to cause initiation of the action using the user information.

8. The method of claim 1 wherein the wireless network is coupled with another network supporting the service, and the service access data comprises an address to the service on the another network.

9. The method of claim 1 wherein the communicating wireless network access data comprises communicating encryption information corresponding to encryption techniques of the wireless network.

10. The method of claim 1 wherein the communicating wireless network access data comprises communicating network identification information of the wireless network.

11. The method of claim 1 wherein the accessing the service comprises communicating a command from the communications device to the service, and performing an action using the service with respect to the communications device responsive to the command.

12. The method of claim 1 wherein the communicating the wireless network access data and the service access data intermediate the configuration device and the communications device comprises communicating encrypted data.

13. A communications device configuration method comprising:

providing a communications device configured to implement wireless communications;

providing a configuration device comprising wireless network access data for a respective wireless network and service access data for a service accessible using the wireless network;

communicating the wireless network access data from the configuration device to the communications device to configure the communications device to access the respective wireless network; and

communicating the service access data from the configuration device to the communications device to configure the communications device to access the service via communications using the wireless network.

14. The method of claim 13 wherein the communicating the service access data comprises communicating a navigation identifier associated with the service.

15. The method of claim 13 wherein the communicating the service access data comprises communicating authentication information usable to authenticate access of the communications device to the service.

16. The method of claim 13 wherein the communicating wireless network access data comprises communicating encryption information corresponding to encryption techniques of the wireless network.

17. The method of claim 13 wherein the communicating wireless network access data comprises communicating network identification information of the wireless network.

18. A configuration device comprising:

a communications interface configured to implement electronic communications of the configuration device with an external device which is externally located with respect to the configuration device;

a storage device configured to store wireless network access data and service access data and to output the wireless network access data and service access data to the communications interface for communication externally of the configuration device to the external device using the communications interface; and

wherein the wireless network access data comprises information enabling the external device to access and to implement communications with a respective wireless network, and the service access data comprises information enabling the external device to access a service associated with wireless network and configured to perform an action with respect to the external device responsive to a command from the external device.

19. The device of claim 18 wherein the service access data comprises a navigation identifier associated with the service.

20. The device of claim 18 wherein the service access data comprises authentication information usable to authenticate access of the communications device to the service.

21. The device of claim 18 wherein the wireless network access data comprises encryption information corresponding to encryption techniques of the wireless network.

22. The device of claim 18 wherein the wireless network access data comprises network identification information of the wireless network.

23. The device of claim 18 wherein the service access data comprises the command configured to initiate the action of the service.

24. A communications system comprising:

configuration means for providing wireless network access data and service access data;

communications means for communicating with the configuration means, for receiving the wireless network access data and the service access data from the configuration means, and for outputting the wireless network access data and the service access data externally of the communications means; and

wireless network means for establishing the communications device as a node on the wireless network means responsive to receiving the outputted wireless network access data and for implementing communications intermediate the service and the communications device using the service access data.

25. The system of claim 24 wherein the service access data comprises a navigation identifier associated with the service.

26. The system of claim 24 wherein the service access data comprises authentication information usable to authenticate access of the communications device to the service.

27. The system of claim 24 wherein the service access data comprises a command configured to initiate an action of the service with respect to the communications means.

28. The system of claim 24 wherein the wireless network access data comprises encryption information corresponding to encryption techniques of the wireless network means.

29. The system of claim 24 wherein the wireless network access data comprises network identification information of the wireless network means.

30. An article of manufacture comprising:

a processor-usable medium comprising processor-usable code configured to cause processing circuitry of a communications device to:

access wireless access network data from a configuration device;

access service access data from the configuration device;

communicate the wireless access network data to a wireless network to establish communications of the communications device with the wireless network;

communicate the service access data to a service coupled with the wireless network and configured to provide access of the communications device to the service;

output commands to the service with respect to performing actions by the service with respect to the communications device; and

access data received from the service responsive to the communication of the commands.

31. The article of claim 30 wherein the processor-usable code is configured to cause processing circuitry of the communications device to communicate the service access data comprising the navigational identifier associated with the service.

32. The article of claim 30 wherein the processor-usable code is configured to cause processing circuitry of the communications device to communicate the service access data comprising authentication information usable to authenticate access of the communications device to the service.

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