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(54) Title: METHOD AND APPARATUS FOR FACILITATING DATA SUBSCRIPTION SERVICES

(57) Abstract: A method and apparatus for facilitating wireless data subscription services over a localized area and tailored uniquely to subscribers is presented. The apparatus employs at least one uniquely identified user systems and a serving portion, wherein the serving portion continually receives a set of data from at least one data source, encrypts at least a portion of the data, and broadcasts it over a service area. Decryption keys corresponding to a particular portion of the data are generated by the serving portion in response to a user transaction. In another embodiment, the uniquely identified user system broadcast their identity, which either includes subscription-related information or may be used to query a database to determine the information to which the particular uses system is subscribed. The serving portion may then query the user system to determine if any modifications to the subscription information are desired. After a current subscription profile is developed, the serving portion generates and transmits a decryption key keyed to the identity of the user system and tailored to decrypt the part of the encrypted data corresponding to the subscription information. This decryption key is then used by the user system to decrypt the information. The decryption key may also allow the user system to send and receive electronic messages such as e-mail. Typically, a billing system is then employed to bill for the information received.



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**METHOD AND APPARATUS FOR FACILITATING DATA SUBSCRIPTION
SERVICES**

TECHNICAL FIELD

5 The present invention relates to data communications networks. More specifically, the present invention provides an apparatus and a method to allow users to obtain data subscription services by providing a link through which a user can download or upload subscribed-to data from a serving portion to a user system.

BACKGROUND

10 Currently, proposals exist by which a user may send and receive e-mail as well as use remote networks via touch-screen displays at kiosks. Systems of this type are already common at airports and malls and have been proposed for use at gasoline service stations. The goals of such systems include (1) allowing customers to make better use of their time spent waiting at various locations, and (2) satisfying customers' desire to
15 stay current with both their e-mail and other events of interest. Hard-wired communication is currently necessitated by the fact that roaming wireless data transfer means such as cellular modems, handheld computers, and "Internet phones" provide extremely limited bandwidth, and are thus insufficient for volume transfers of data such as large e-mail attachments. Additionally, even if sufficient bandwidth exists for a
20 particular transfer, cellular coverage is often "spotty", resulting in unreliable service. Current kiosk systems are limited in the sense that larger amounts of data may be transferred, but generally not directly to the users' computer. Thus, even if a data retention medium such as a floppy disk drive is available at a kiosk, the user is generally limited by the relatively small storage capacity of the medium. For larger
25 files, which exceed the capacity of a disk, there is typically no way for a kiosk-type system can provide for file transfer.

Some systems, including some pay phones, allow for the attachment of a laptop or other portable computing device directly to a phone line or a network connection, but typical
30 transfer rates are bottlenecked by modem speeds. Furthermore, when moving from locality to locality, a computer using a telephone connection often must be reconfigured for the particular locality from which a call is placed.

Both kiosk-type systems and telephone connections also have the significant drawback of generally being accessible by only one user at a time through each emplacement. Thus, hardware requirements increase in direct proportion to the number of users served.

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In summary, several shortcomings of both kiosk-type systems and telephone connections include, (1) potential delays suffered by users waiting in line for access, (2) limited interaction time because of the pressure of people waiting in line, which is especially apparent in places such as gasoline service stations, where time spent at the station is minimal and the ability to send e-mail or browse may need to be eliminated, (3) customers have to be in a close physical proximity to the kiosk or telephone, which, in some cases, such as a gasoline service station, may be inconvenient, necessitating leaving the car unattended or abandoning the car while fueling is in progress, (4) as stated, because of limited bandwidth, interaction is limited, and (5) kiosks require the provision of an input means such as a keyboard for each location, which increases the cost of hardware.

One advantage of fixed systems such as kiosks or telephone connections is that with the proper hardware, it is possible to provide the ability to obtain printed materials such as event tickets and maps. Although current printers available at some locations such as fuel pumps could be modified to print items such as tickets or coupons, considerable modification would be required to print visually detailed items such as maps.

Thus, it is desirable to provide a means for overcoming these limitations by introducing (1) batch data transmissions to allow for faster downloading, (2) two-way transmissions to facilitate the upload of data as well as the receipt of data, as in the case of e-mail, (3) means for data transfer, wherein the user need not be physically present at a terminal such as a kiosk or telephone, (4) the ability to send and receive large amounts of data, and (5) a single access point which can service multiple users.

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SUMMARY OF THE INVENTION

It is a primary object of the present invention to provide a method and an apparatus for facilitating wireless data subscription services. The apparatus of the present invention,

in one embodiment, comprises a user system for receiving and decrypting a set of user-system-specific data subscription segments from a serving portion. The serving portion provides a dataset including a plurality of data subscription segments with at least a portion of the plurality of data subscription segments being encrypted. An encryption
5 key is provided for a portion of the encrypted data subscription segments corresponding to the user-system-specific data subscription segments. The user system comprises a data connection for receiving the dataset from the serving portion, and a user system processor to accept and use the encryption key to decrypt the encrypted data
10 subscription segments corresponding to the user-system-specific data subscription segments.

In addition, the data connection may be a unidirectional data connection from the serving portion to the user system. The data connection may be wireless, wired, or it may comprise the physical transfer of a medium such as a disk, flash memory, or other
15 data storage device.

In addition, an encryption key may be provided in response to a user transaction, in which the user may purchase rights to the materials to which they are subscribed. In this case, the data connection may be configured as a bi-directional data connection
20 which transfers transaction information from the user system to the serving portion in exchange for the encryption key. This data may simply be data required for the transaction, i.e. account numbers, or it may include consumer information about the user and their preferences, among other information items.

25 Furthermore, either the user system or the serving portion may include a printer or other similar device for making hard copies of the data to which the user is subscribed. The user system may include a user interface connected with the user system processor to allow for user interaction with the user system processor. The user interface may include components such as a video monitor, a speech system, or an interface with other
30 systems such as an automotive system.

In another embodiment or aspect, the present invention comprises a serving portion for transmitting a dataset to at least one user system. The dataset includes a plurality of

data subscription segments. At least a portion of the plurality of data subscription segments are encrypted, and at least a portion of the encrypted data subscription segments corresponds to a set of user-system-specific data subscription segments. The serving portion comprises a serving portion processor for providing an encryption key
5 for the encrypted data subscription segments corresponding to the user-system-specific data subscription segments and a connection for transmitting the dataset to the at least one user system. The data connection may take the form of a unidirectional data connection from the serving portion to the user system. The encryption key may be provided in response to a user transaction. In this case, the data connection may take
10 the form of a bi-directional data connection, and the data connection may be configured to transfer transaction information from the user system to the serving portion in exchange for the encryption key.

The data connection for transmitting the dataset to the user system may take the form of
15 a wireless connection, a wired connection, or it may comprise a data storage device that is physically transferred from the serving portion to the user system by a user.

Furthermore, in this embodiment, as with the embodiment discussed above, either the user system or the serving portion may include a printer or other similar device for
20 making hard copies of the data to which the user is subscribed. The user system may include a user interface connected with the user system processor to allow for user interaction with the user system processor. The user interface may include components such as a video monitor, a speech system, or an interface with other systems such as an
automotive system.

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In yet another embodiment or aspect, the present invention comprises an apparatus for facilitating data subscription services comprising a serving portion and at least one user system, wherein the serving portion includes a serving portion data processor for receiving data from at least one data source, for encrypting a portion of the data
30 received from the at least one data source. This generates an encrypted data portion and an unencrypted data portion. The serving portion also provides an encryption key for at least part of the encrypted data portion in response to a user transaction. The serving portion also includes a data connection in communication with the data processor of the

serving portion for transmitting the encrypted data portion and the unencrypted data portion between the serving portion and the at least one user system.

5 The least one user system includes a processor in communication with the data connection and configured to accept an encryption key to decrypt the part of the encrypted data portion corresponding to a particular encryption key to provide a decrypted data portion.

10 The user transaction may take the form of a billing transaction. Also, the encryption key may be transmitted from the serving portion to the user system via the data connection. The data connection may take forms such as a wireless data connection, a wired data connection, or it may take the form of a data storage device that is physically transferred from the serving portion to the user system by a user. In addition, the user transaction may take place via the data connection.

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A user interface may be connected with the user system processor to allow for user interaction with the user system processor.

20 The present invention also comprises the provision of a method for facilitating the provision of data subscription services to a user system from a serving portion where the serving portion provides a dataset including a plurality of data subscription segments with at least a portion of the data subscription segments being encrypted, and where an encryption key is provided for a portion of the encrypted data subscription segments corresponding to the user-system-specific data subscription segments.

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Specifically, the method comprises the steps of:

- a. receiving and storing the dataset in the user system;
 - b. receiving the encryption key in the user system; and
 - c. decrypting the portion of the encrypted data subscription segments
- 30 corresponding to the user-system-specific data subscription segments.

In another embodiment, or aspect, the method comprises a method for transmitting a dataset to at least one user system, where the dataset includes a plurality of data

subscription segments with at least a portion of the plurality of data subscription segments being encrypted, and wherein at least a portion of the encrypted data subscription segments corresponds to a set of user-system-specific data subscription segments.

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Specifically, the method comprises the steps of:

- a. transmitting the dataset;
- b. receiving a request for a decryption key for the portion of the encrypted data subscription segments corresponding to a set of user-system-specific data subscription segments; and
- c. generating a decryption key for the portion of the encrypted data subscription segments corresponding to the set of user-system-specific data subscription segments for which the decryption key was requested in step (b).

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram that provides a generic overview of an embodiment of the present invention;

FIG. 2 is a block diagram that provides an overview, detailing the major components of an embodiment of the present invention;

20 **FIG. 3** is a flow chart depicting a typical transaction performed by the present invention; and

FIG. 4 is an illustration of an embodiment of the present invention in the context of a gasoline service station.

DETAILED DESCRIPTION

25 The present invention relates to a method and an apparatus for facilitating data subscription services. The following description and the accompanying drawings are presented to enable one of ordinary skill in the art to make and use the invention and to incorporate it in the context of particular applications. Various modifications to the preferred embodiment as presented herein, as well as a variety of uses in different

30 applications will be readily apparent to those skilled in the art, and the general principles defined herein may be applied to other embodiments. Thus, the present invention is not intended to be limited to the embodiments shown, but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

The present invention is useful for transferring data unidirectionally or bi-directionally between a user and a data server using a wireless link. A few of the goals of the present invention include providing (1) batch data transmissions to allow faster downloading,
5 (2) two-way transmissions to facilitate the upload of data as well as the receipt of data, as in the case of e-mail exchanges, (3) a means for data transfer where the user need not be physically present at a terminal such as a kiosk or telephone, (4) the ability to send and receive large amounts of data, and (5) a single access point which can service multiple users.

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A block diagram that provides a system overview of the major components of a generic embodiment of the present invention is shown in **FIG. 1**. The system includes a serving portion **100** and at least one user system **102**. The serving portion **100** includes a serving portion processor **104** connected to receive a dataset from at least one data
15 source **106**. Non-limiting and typical examples of data sources **106** used in the context of the present invention include cable sources **108** or wireless sources **110** with a receiver **112**, and other fixed/periodical data sources **114**. The data sources may include CD-ROMs or other physical media delivered periodically for use with the serving portion **100**. The user system **102** includes a user system processor **116**, which receives
20 data from the serving portion processor **104** via a data connection **118**. The data connection **118** may take such forms as a wireless connection, a fiber optic connection, a wired connection or a physical transfer of a medium such as a flash memory-type card.

25 Typically, in operation, a user is subscribed to a portion of the dataset. The dataset could, for example, include items such as magazine subscriptions, newsletter issues, musical recordings, audio books, and print books, where a user would typically subscribe to only a portion of the items available. At least a portion of the dataset, typically including proprietary items, is encrypted either before arriving at the serving
30 portion **100** for transmittal to the user system **102** or in the serving portion processor **104**. An encryption key **120** is provided for the user, corresponding to the items to which the user is subscribed. The encryption key **120** may be provided in several possible ways, non-limiting examples of which include being provided in response to a

user transaction in which the user pays for a physical memory device with the encryption key **120** stored therein, and being provided via the wireless connection in response to a “handshake” exchange between the user system **102** and the serving portion **100** in which the serving portion **100** receives information regarding the subscriptions of the user and billing information for the user system **102**.

Once available to the user system **102**, the encryption key **120** is used in the user system processor **116** to decrypt the portion of the dataset corresponding to the items to which the user is subscribed, allowing the user to access the information to which they have subscribed.

Depending on the configuration of the system, there are a number of ways in which the user may be able to change the items to which they subscribe, non-limiting examples of which include transfer of pertinent subscription change information by interfacing with the user system **102** to provide the information to the serving portion **100**, with the serving portion **100** possibly exchanging the subscription update with a larger system, by requiring that the customer purchase a key specific to a certain set of items each time they obtain an encryption key **120**; by requiring that the customer make any desired subscription changes at the encryption key **120** point of sale; or by requiring that the customer make any desired subscription changes by accessing their account online from an Internet connection.

A block diagram, which provides a more detailed overview of the major components of a preferred embodiment of the present invention, is shown in **FIG. 2**. A serving portion **200** and a user system **202** are shown, with the serving portion processor **204** including a server **206** and a server data storage system **208** with the server **206** receiving data from at least one data source **210**. Although only one user system **202** is shown in **FIG. 1**, a plurality of user systems **202** may be serviced at the same time. The serving portion **200** and the user systems **202** include a data connection **212**, which comprises a serving portion transceiver **214** and a user system transceiver **216**, respectively. The serving portion transceiver **214** and the user system transceiver **216** provide for

signaling between the serving portion **200** and the user system **202**. As with the embodiment shown in **FIG. 1**, the plurality of sources from which the serving portion **200** receives data may include a receiver **218** to act as a gateway between the server **206** and external data sources via such means as transceivers, receivers, wires, and fiber optic cables. The serving portion **200** may also include fixed and/or periodical data sources **220**, such as CD-ROM and DVD-ROM drives, which may contain permanent data or periodical/subscription data. The data storage means **208** includes devices such as a hard drive or other medium that may be used in conjunction with the server **206** for the storage of server-related or other data, and for data stream buffering. A billing system **222** may be connected to the server **206** in order to bill users for accessing the system. The billing system may take various forms such as, for example, an automatic credit card charge system or an automatic cash collection system. The user system **202** includes a user system processor **226** and a user interface **228**, where the user system processor includes a server **230** and a user system data storage means **232** connected to the server **230** in order to receive and store information from the serving portion **200**. The user system processor **226** serves information to the user interface **228**, which, for example, in the case of an automotive embodiment, could include components such as a display **234**, an audio system **236**, and a set of automobile system controls **238**. It is important to note that additional features or components may be added to enhance the capabilities of the system.

A flow chart depicting a typical transaction performed by a preferred embodiment of the present invention is shown in **FIG. 3**. The transaction begins when the user system enters into the proximity of the serving portion, as shown by **300**. The serving portion continually transmits its current set of subscription information. Non-limiting examples of subscription information may include a set of current news clippings in audio or visual, i.e. text, picture, or video format, audio/text books, MP3 music files, stock market quotes, sporting event highlights and scores, and special interest programs. Optimally, subscription information is updated frequently to maintain user interest in obtaining the latest updates and other new information as soon as it becomes available. Once within the proximity of the serving portion, the user system begins to receive and buffer the current set of subscription information, as shown by **302**. Part or all of this information may be encrypted for subsequent decryption by the user system, after the

user's right to access the information has been properly verified by the serving portion. In addition to the subscription, the serving portion also periodically transmits a "welcome" signal inviting the user system to begin a transaction, as shown by 304. When the user system receives the "welcome" signal, in return, it transmits an
5 acknowledgement including its user system identity, as shown by 306. The "welcome" signal may be transmitted periodically along with the subscription information, but is preferably transmitted on a separate channel. After the serving portion receives the user system's acknowledgement, the serving portion determines whether the user system identity corresponds to an existing or active account 308. If the user system identity
10 corresponds to an inactive or non-existent account, the session is terminated 310. Optionally, the serving portion may query the user to determine whether a new account is desired or, if there are problems with an existing account, such as potential fraud or an unpaid account balance, the serving portion may alert the user to remedy the problems. The serving portion may also alert attendants of the serving portion, if
15 available, so that they may also assist in remedying the problem.

If the user system has an existing and active account, the serving portion may alert the user via the user system of special deals and of additional offerings, as indicated by 312. If the user chooses to add new subscriptions or to request a special offering, the serving
20 portion updates the set of subscriptions associated with the user system identity 314. Based on the user's account, the serving portion determines which subscription issues the serving portion is currently transmitting that the user system has not yet received. The un-received subscription issues also include issues of any new subscriptions made by the user, as well as special offerings. The serving portion then sends a user system-
25 specific decryption key, keyed to the user system identity, as shown by 316, which the user system then uses to decrypt the portion of the information from the serving portion corresponding to subscription issues and special offerings to which the user has subscribed, as shown by 318. After the decryption key has been received by the user system, the serving portion queries the user system to determine if there is any user
30 system-specific information to be sent or received, such as e-mail or Internet-based newsgroup issues, as shown by 320. If user system-specific information is to be sent or received through the serving portion, the user system is allowed to utilize the serving portion as a proxy server in order to access the server that is hosting the desired user

system-specific information, as shown by 322. After the user system-specific information is received by the user system, or if no user system-specific information was accessed, the serving portion billing system operates to bill the user for their access to the system, as shown by 324. This may be performed, for example, by billing the user's credit card issue-by-issue, by billing for a subscription period, by billing individually or in packages for special offerings, and by billing for upload/download of user system-specific information on a time-basis or a volume-basis. Once the billing is completed, the session is ended, as shown by 310.

10 An illustration of an embodiment of the present invention in the context of a gasoline service station is shown in FIG. 4. In this embodiment, the user system is incorporated into an automobile 400. The server portion is incorporated into the gasoline service station service building 402. The gasoline service station service building 402, as shown, includes a link to an outside service link 404, which may serve multiple connections corresponding to the receiver and the billing system as correspond to elements 218 and 222 of FIG. 2, respectively. The outside service link 404 may also provide a link to an account database, which stores information regarding the account of a particular user, including information such as the billing status of the account, subscription-related information, and information regarding particular interests of the user for correlation with special offerings. The server, the fixed/periodical data source, and the data storage means are also housed in the gasoline service station service building 402. The transceiver of the server portion may be located in or on the gasoline service station service building 402, or may be distributed in the form of a plurality of lower-power transceivers at each of the gas pumps 406.

25 The operating frequency for the transceivers of both the server portion and the user portion is preferably selected as an unlicensed radio band such as the 59.0 to 64.0 GHz range. The configuration of the server portion transceivers is preferably tailored for the physical space in which they operate and for the particular frequency range in which they transmit and receive in order to compensate for problems such as signal attenuation and multipath, while allowing for the transfer of sufficient data to meet the demands of users who may only be present for a very limited amount of time, such as those filling up at a gasoline service station. At a gasoline service station, for example, the primary

revenue source is derived from the sale of gasoline. Therefore, it is important that the data transfer be completed during the time required to obtain gasoline. Because it is unlikely that the main profit source for a gasoline service station will shift to the provision of information, the data transfer must be such that it does not detract from the profitability of the station. The same need is present in other embodiments of the present invention where the income derived from data transfer is secondary to a revenue source which depends on the throughput of customers through a limited physical area, such as drive-in restaurants, oil change facilities, mini-marts, and car washes.

10 Other features may be added to enhance specific embodiments of the present invention. For example, the user system may store maintenance-related information such as the date and mileage of the last oil change, the date and mileage of the last fuel filter change, and the date and mileage of the last tune-up. Smart-automobile electronics may also provide the user system with current information on the automotive systems such as the wear-level of the breaks, the oil level, and the break fluid level. This information may be provided to the server portion so that it may alert the user of available services at the gasoline service station or through nearby providers and, if required, may prompt the user to set up an appointment to obtain the necessary service.

20

CLAIMS

What is claimed is:

1. A user system for receiving and decrypting a set of user-system-specific data
5 subscription segments from a serving portion where the serving portion provides a dataset including a plurality of data subscription segments with at least a portion of the plurality of data subscription segments being encrypted, and where an encryption key is provided for a portion of the encrypted data subscription segments corresponding to the user-system-specific data subscription segments, the user
10 system comprising a data connection for receiving the dataset from the serving portion, and a user system processor to accept and use the encryption key to decrypt the encrypted data subscription segments corresponding to the user-system-specific data subscription segments.
- 15 2. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the data connection is a unidirectional data connection from the serving portion to the user system.
- 20 3. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the encryption key is provided in response to a user transaction.
- 25 4. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 3, wherein the data connection is a bi-directional data connection, and wherein the data connection is configured to transfer transaction information from the user system to the serving portion in exchange for the encryption key.
- 30 5. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the data connection for receiving the dataset from the serving portion is a wireless connection.

6. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the data connection for receiving the dataset from the serving portion is a wired connection.
- 5 7. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the data connection for receiving the dataset from the serving portion comprises a data storage device physically transported to the user system.
- 10 8. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the user system further includes a printer for printing the data subscription segments corresponding to the user-system-specific data subscription segments.
- 15 9. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 1, wherein the user system further includes a user interface connected with the user system processor to allow for user interaction with the user system processor.
- 20 10. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 4, wherein the data connection for receiving the dataset from the serving portion is a wireless connection.
- 25 11. A user system for receiving and decrypting a set of user-system-specific data subscription segments as set forth in claim 10, wherein the user system further includes a user interface connected with the user system processor to allow for user interaction with the user system processor.
- 30 12. A serving portion for transmitting a dataset to at least one user system, where the dataset includes a plurality of data subscription segments with at least a portion of the plurality of data subscription segments being encrypted, and wherein at least a portion of the encrypted data subscription segments corresponds to a set of user-system-specific data subscription segments, wherein the serving portion comprises a

serving portion processor for providing an encryption key for the encrypted data subscription segments corresponding to the user-system-specific data subscription segments and a connection for transmitting the dataset to the at least one user system.

- 5 13. A serving portion for transmitting a dataset to at least one user system as set forth in claim 12, wherein the data connection is a unidirectional data connection from the serving portion to the user system.
- 10 14. A serving portion for transmitting a dataset to at least one user system as set forth in claim 12, wherein the encryption key is provided in response to a user transaction.
- 15 15. A serving portion for transmitting a dataset to at least one user system as set forth in claim 14, wherein the data connection is a bi-directional data connection, and wherein the data connection is configured to transfer transaction information from the user system to the serving portion in exchange for the encryption key.
- 20 16. A serving portion for transmitting a dataset to at least one user system as set forth in claim 12, wherein the data connection for transmitting the dataset to the user system is a wireless connection.
- 25 17. A serving portion for transmitting a dataset to at least one user system as set forth in claim 12, wherein the data connection for transmitting the dataset to the user system is a wired connection.
- 30 18. A serving portion for transmitting a dataset to at least one user system as set forth in claim 12, wherein the data connection for transmitting the dataset to the user system comprises a data storage device that is physically transferred from the serving portion to the user system by a user.
19. A serving portion for transmitting a dataset to at least one user system as set forth in claim 12, wherein a printer is used to provide the user with a paper copy of the

data subscription segments corresponding to the user-system-specific data subscription segments.

20. A serving portion for transmitting a dataset to at least one user system as set forth
5 in claim **15**, wherein the data connection for receiving the dataset from the serving portion is a wireless connection.
21. An apparatus for facilitating data subscription services comprising a serving portion and at least one user system, wherein
- 10 a. the serving portion includes a serving portion data processor for receiving data from at least one data source, for encrypting a portion of the data received from the at least one data source to generate an encrypted data portion and an unencrypted data portion, and for providing an encryption key for at least part of the encrypted data portion in response to a user
15 transaction;
- b. a data connection in communication with the data processor of the serving portion for transmitting the encrypted data portion and the unencrypted data portion between the serving portion and the at least one user system; and
- c. the at least one user system includes a processor in communication with the
20 data connection and configured to accept an encryption key to decrypt the part of the encrypted data portion corresponding to a particular encryption key to provide a decrypted data portion.
22. An apparatus for facilitating data subscription services as set forth in claim **21**,
25 wherein the user transaction is a billing transaction.
23. An apparatus for facilitating data subscription services as set forth in claim **21**, wherein the encryption key is transmitted from the serving portion to the user system via the data connection.
30
24. An apparatus for facilitating data subscription services as set forth in claim **21**, wherein data connection is a wireless data connection.

25. An apparatus for facilitating data subscription services as set forth in claim 21, wherein data connection is a wired data connection.
26. An apparatus for facilitating data subscription services as set forth in claim 21,
5 wherein data connection is a data storage device that is physically transferred from the serving portion to the user system by a user.
27. An apparatus for facilitating data subscription services as set forth in claim 23, wherein the user transaction takes place via the data connection.
- 10 28. An apparatus for facilitating data subscription services as set forth in claim 27, wherein the user system further includes a user interface connected with the user system processor to allow for user interaction with the user system processor.
- 15 29. A method for facilitating the provision of data subscription services to a user system from a serving portion where the serving portion provides a dataset including a plurality of data subscription segments with at least a portion of the data subscription segments being encrypted, and where an encryption key is provided for a portion of the encrypted data subscription segments corresponding to the user-
20 system-specific data subscription segments, the method comprising the steps of:
- a. receiving and storing the dataset in the user system;
 - b. receiving the encryption key in the user system; and
 - c. decrypting the portion of the encrypted data subscription segments corresponding to the user-system-specific data subscription segments.
- 25 30. A method for transmitting a dataset to at least one user system, where the dataset includes a plurality of data subscription segments with at least a portion of the plurality of data subscription segments being encrypted, and wherein at least a portion of the encrypted data subscription segments corresponds to a set of user-
30 system-specific data subscription segments, the method comprising the steps of:
- a. transmitting the dataset;

- b. receiving a request for a decryption key for the portion of the encrypted data subscription segments corresponding to a set of user-system-specific data subscription segments; and
 - c. generating a decryption key for the portion of the encrypted data subscription segments corresponding to the set of user-system-specific data subscription segments for which the decryption key was requested in step (b).
- 5

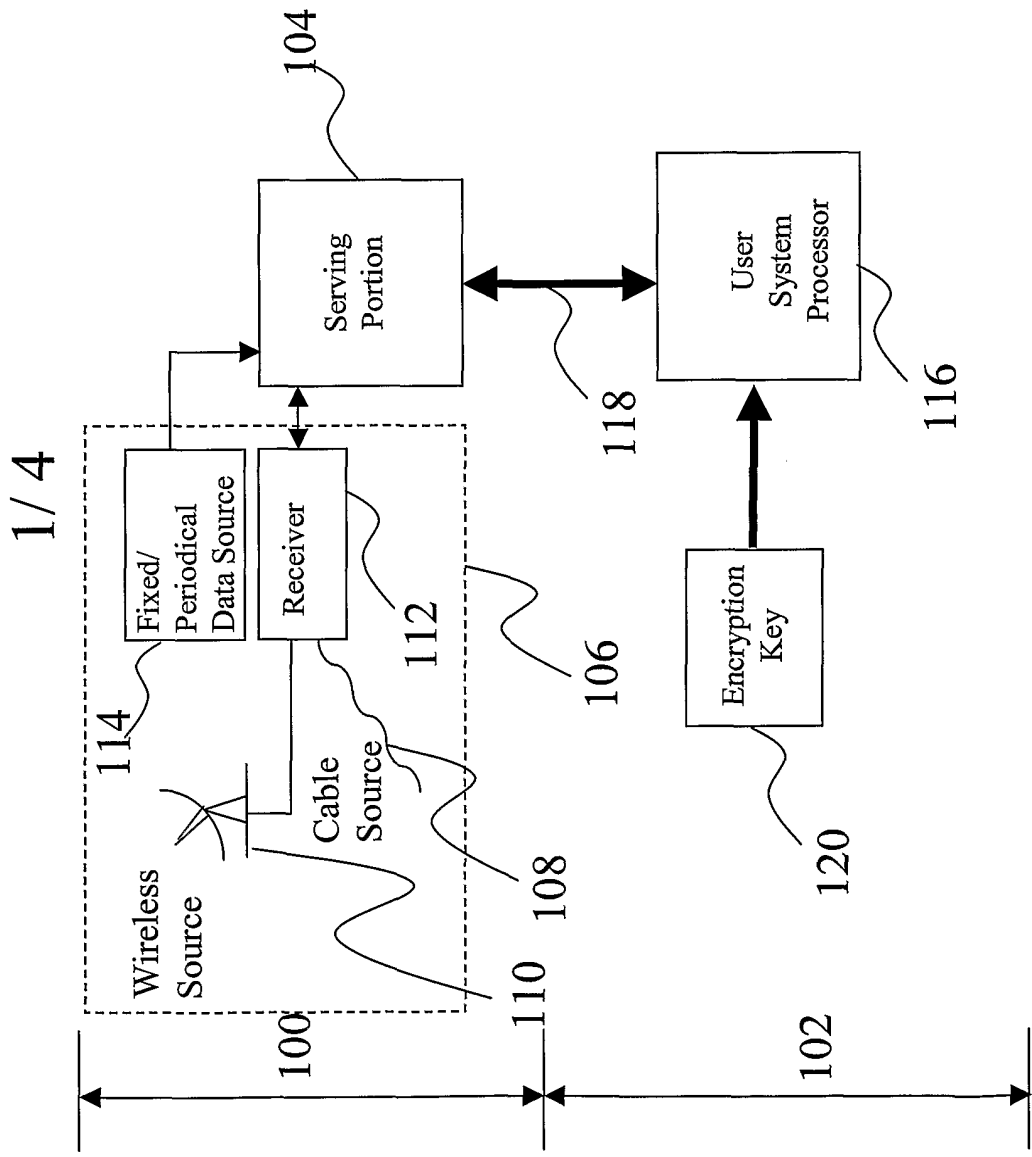
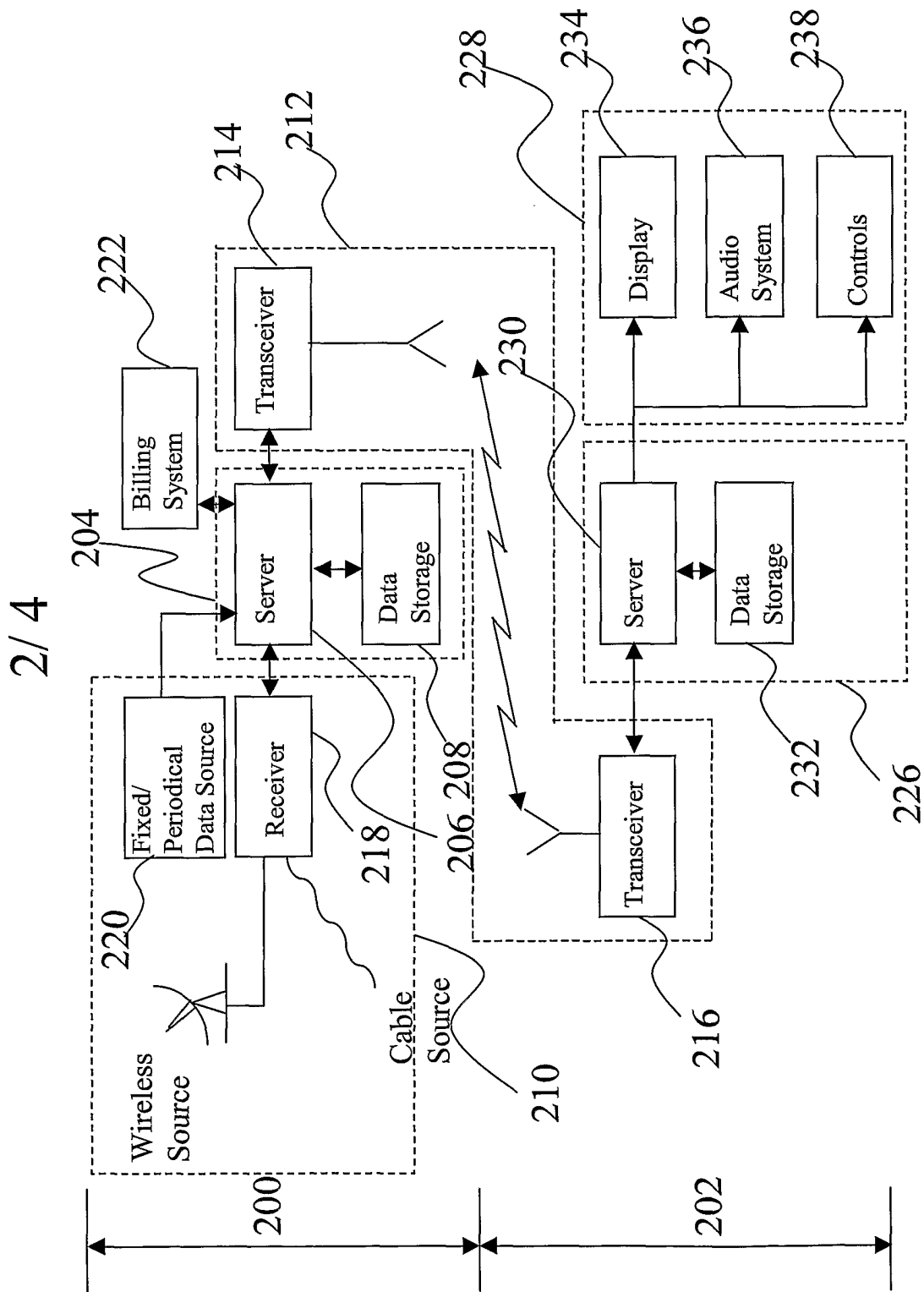


FIG. 1



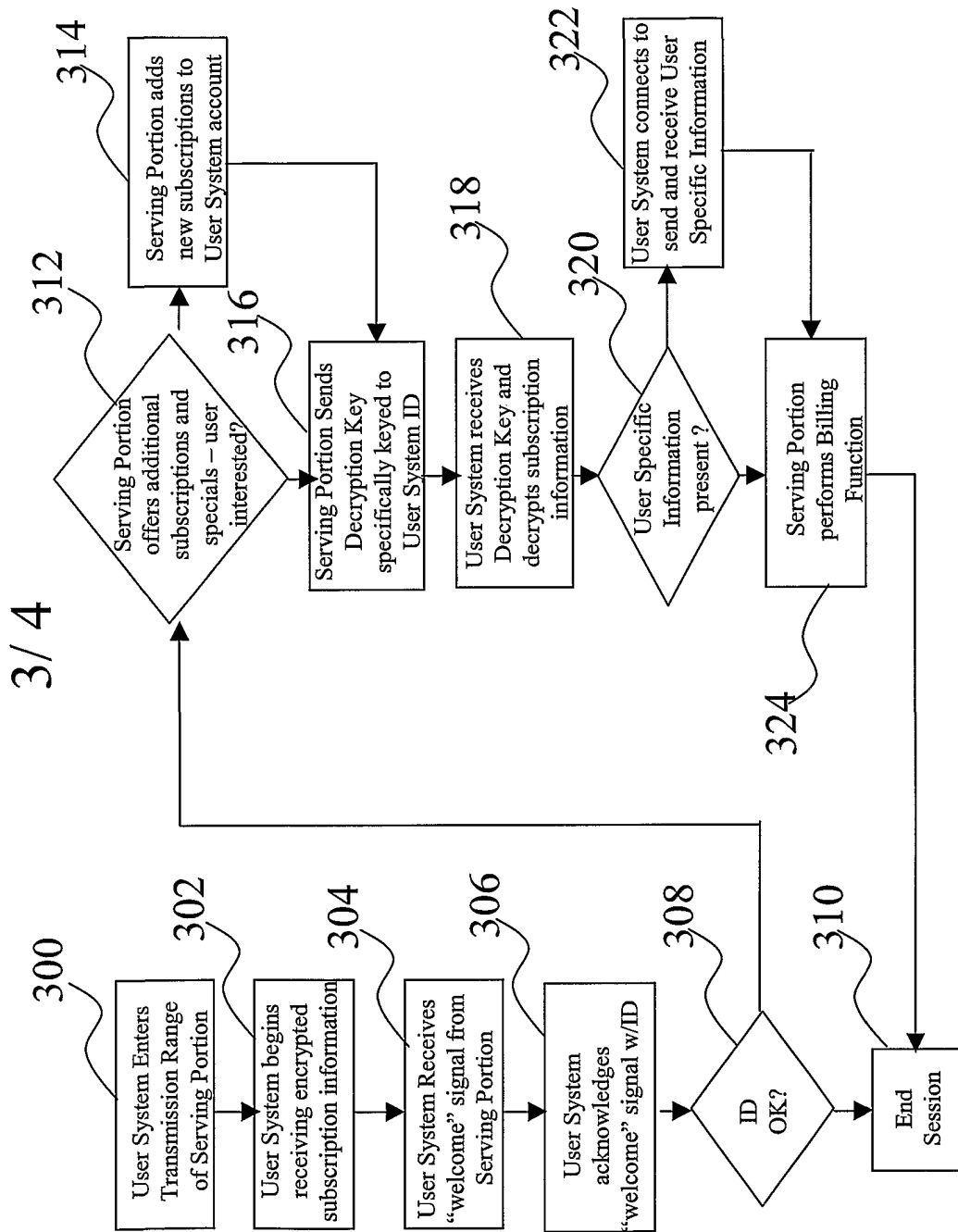


FIG. 3

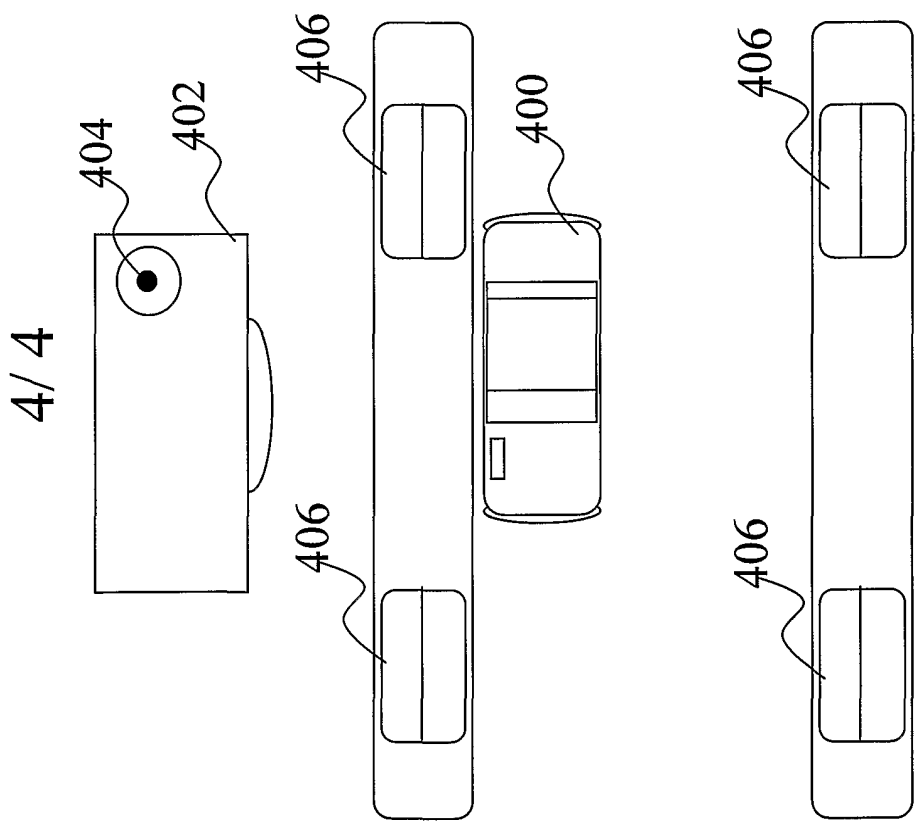


FIG. 4