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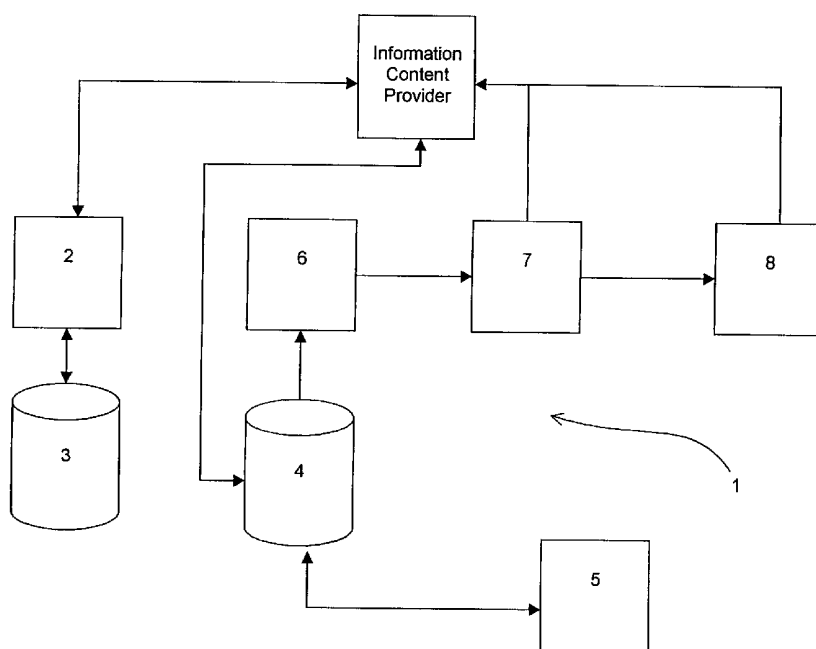
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(54) Title: IDENTIFICATION SYSTEM AND METHOD OF OPERATION THEREOF



(57) Abstract: An identification system comprises an issuing facility operable to issue a unique identification token to an information content provider wishing to utilise the identification system, and an application facility configurable to contain information content in accordance with a desired use of the issued identification content provider. The identification system includes a register of issued identification tokens, and an access channel providing public access to the configured information content as a function of the issued unique identification token.



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IDENTIFICATION SYSTEM AND METHOD OF OPERATION THEREOF

FIELD OF THE INVENTION

10 This invention relates to an identification system and, more particularly, to an identification system which provides for regulated tagging of objects. The invention extends further to a method of operation of the identification system

BACKGROUND TO THE INVENTION

15 Many identification systems are known in the world today. These different identification systems vary widely in complexity and are based on different identification keys, ranging from bar codes which are used to identify various products on the shelves of stores, to International Standard Book Numbers (ISBN), to physical tags containing active or passive transponders which are attached to physical assets to be identified, and which are automatically detectable and recognisable by electronic means.

20 A difficulty with these known prior art identification systems is that they are closed systems, which limits the use of such identification systems in different types of applications. A further difficulty of such closed prior art identification systems is that they are usually expensive to implement as they require complex equipment to be purchased and installed.

OBJECT OF THE INVENTION

25 It is an object of the invention to provide an identification system, and a method of operation thereof which will, at least partially, alleviate the abovementioned difficulties and disadvantages.

5 **SUMMARY OF THE INVENTION**

In accordance with this invention there is provided an identification system, comprising:

an issuing facility operable to issue at least one unique identification token to an information content provider wishing to utilise the identification system;

10 a register of issued unique identification tokens;

an application facility configurable to contain information content in accordance with a desired use of the issued at least one identification token by the information content provider; and

15 an access channel providing public access to the configured information content as a function of the at least one issued unique identification token.

Further features of the invention provide for the application facility to be a storage means for storing information provided by the information content provider, for the system to include a logging facility arranged to log instances of public access to the information content corresponding to the at least one
20 unique identification token, and for the system to include further a reporting facility operable to provide feedback to the information content provider of all instances of public access to the information content corresponding to the at least one unique identification token

Still further features of the invention provide for the access channel to be a
25 public communication channel, in particular a public switched telephone network (PSTN), for the information content to be composed of text and graphics only, alternatively for the information content to be voice only, further alternatively a combination of both, for the information content to be accessible from a mobile communications device, and for the mobile
30 communications device to be Wireless Application Protocol (WAP)-enabled.

5 Yet further features of the invention provide for the identification system to include a billing facility arranged to bill the information content provider in accordance with the use of the at least one unique identification token.

10 There is further provided for the identification token to be identified by a unique numeric, alternatively alphanumeric string, for the identification token to be encoded, for the identification token to be encoded in any one of a transponder, a smart card memory, a barcode or braille characters.

The invention extends further to a method of operation of an identification system, comprising the steps of:

15 issuing at least one unique identification token to an information content provider wishing to utilise the identification system;
updating a register of issued unique identification tokens;
configuring an application facility with information content in accordance with a desired use of the issued at least one identification token by the information
20 content provider; and
providing public access to the configured information content as a function of the at least one issued unique identification token.

There is further provided for configuring the application facility by storing in a storage facility, information content provided by the information content
25 provider, for the method to include the additional step of logging instances of public access to the stored information content corresponding to the at least one unique identification token, and for the method to also include the further step of providing feedback to the information content provider of all instances of public access to the information content corresponding to the at least one
30 unique identification token.

There is still further provided for accessing the information content corresponding to the at least one unique identification token by means of a public communication channel, and for accessing the information content

5 along the public communication channel from a mobile communications device.

There is yet further provided for the method to include a still further step of billing the information content provider in accordance with the use of the at least one unique identification token.

10 **BRIEF DESCRIPTION OF THE DRAWINGS**

A preferred embodiment of the invention is described below, by way of example only, and with reference to the accompanying drawings, in which:

FIG.1 is a functional block diagram of an identification system according to the invention.

15 **DETAILED DESCRIPTION OF THE INVENTION**

Referring to Figure 1, an identification system is indicated generally by reference numeral (1).

The identification system (1) includes an issuing facility (2) operable to issue one or more unique identification tokens to an information content provider wishing to utilise the identification system, a register (3) of issued unique
20 identification tokens, and an application facility (4) configurable at the instance of the information content provider in accordance with a desired use of the issued unique identification tokens. The system (1) includes further a communication channel (5) providing public access to the application facility,
25 in the form of a Public Switched Telephone Network, which can be either a fixed network or a mobile network. Public access to the information content supplied by the content provider is keyed according to the identification tokens.

5 The system (1) also includes a logging facility (6) suitable for logging and recording any instances of public access to the information content in the application facility (4) corresponding to the issued unique identification token. The system also incorporates a reporting facility (7) operable to provide feedback to the information content provider, at regular intervals, of all
10 instances of public access to the information content corresponding to the issued unique identification token.

The system also includes a billing facility (8) arranged to bill the information content provider in accordance with the use of the issued unique identification token

15 In this embodiment, an identification token comprises a unique numeric character string of any desired length.

The use of the invention is advantageously described with reference to different applications of the identification system which, it is to be clearly understood, are intended to be illustrative examples, and not limiting to the
20 scope of the invention in any way.

In the first application, the information content provider is an advertiser of goods or services. The advertiser acquires a unique identification token from the issuing facility (2) and the register (3) of issued unique identification tokens is updated to reflect the fact that the particular issued identification
25 token is active. The information content provider provides suitable information content for configuration of the application facility (4). The information content is keyed in the application facility (4) as corresponding to the particular issued unique identification token. The information content provider provides the information content in accordance with the desired use
30 thereof and may, for example, consist of a set of interactive text allowing a member of the public to obtain further information about the supplier's goods and services, and to order such goods or services "on-line" as is common in other on-line systems.

5 In this application the unique identification token may be used in
conjunction with a printed advertisement promoting the information content
provider's goods or services. A person perusing the advertisement will be
invited to obtain further details by accessing the application facility (4) by
means of the PSTN (5) and submitting in the unique identification token
10 contained in the printed advertisement. Upon doing so, the person is led
through the interactive steps in the manner outlined above.

Details of all accesses by members of the public to the application facility (4)
on the basis of this particular unique identification token are logged by the
logging facility (6) and reported to the information content provider at regular
15 reporting intervals by the reporting facility (7). This feedback allows the
information content provider to monitor the success, or otherwise of his
advertising or promotional campaign and to adapt it to enhance its
effectiveness, or to terminate it altogether if desired results are not being
achieved.

20 The information content provider is billed by the billing facility (8) in
accordance with the number of accesses made by members of the public to
the application facility on the basis of the particular unique issued
identification token.

The information content provider may, of course acquire any number of
25 unique identification tokens and utilise them with different advertisements
relating to different goods or services as desired.

The second application relates to the provision of a lost key return service.
The provider of such a service acquires any number, say 100, of unique
identification tokens from the issuing facility (2) and the register (3) is
30 updated to reflect an active state of these identification tokens. The service
provider then marks each one of 100 key rings with one of the unique
identification tokens. The information content supplied in this application is
the same in respect of all 100 unique identification tokens, namely a voice

- 5 message inviting a caller to contact a telephone number of the service provider.

A member of the public finding a set of lost keys having such a marked keyring can access the application facility (4) and submit the unique identification token reflected on the keyring. Upon doing so, the member of
10 the public will hear the voice message inviting him to call the service provider and report the finding of the keys. The service provider who will have maintained his own register of subscribers and their corresponding allocated unique identification tokens, will be able to identify the owner of the lost keys and arrange for their return, thus maintaining the anonymity of the
15 subscribers from the finder of the keys.

In this particular application of the identification system (1), the number of accesses to the application facility (4) by members of the public is expected to be low, as loss of keys happens infrequently. Thus the billing facility (8) may be required to bill the information content provider on the basis of both a
20 periodic subscription and the number of times the application facility is accessed by members of the public.

Numerous modifications are possible to this invention without departing from the scope of the invention. In particular, the identification token may take many forms. In particular, the identification token may be an alphanumeric,
25 as opposed to an numeric character string. Further, the identification token may be stored in an encoded form in any one of a transponder, a smart card memory, a barcode or braille characters. In addition, different communication channels (5), such as the Internet, may be used to access the application facility (4), other than the fixed or mobile PSTN.
30 Alternatively, a closed communication channel (5), such as a low-earth orbit satellite communication network may be used to access the application facility (4), instead of the fixed or mobile PSTN.

5 Further, the information content provider may distribute an issued unique identification token via well known transmission paths such as TV broadcasting to a domestic TV set-top-box (STB) or the like. Then by using well known bi-directional communication linking such as infra-red or Bluetooth standards, the STB may interact with the application facility (4) via
10 a mobile communications device such as a mobile phone. Such interaction may include submission of the unique identification token to the application facility (4).

Still further, public access to the application facility (4) may be by means of keyboard input or by means of voice recognition technology, which is well-
15 known in the art.

Yet further, the content provided by the information content provider may be structured in different layers, but the content provider may wish to have only one primary identification token to access the content. In such an application, the identification tokens may be issued as a multilevel hierarchy
20 of linked primary and secondary tokens. An example of an application of such a multilevel token hierarchy is the on-line publication of examination results. A user is able to access a database of examination results on the basis of a single primary identification token, while a secondary token is required to access the particular user's own examination results. It will be
25 appreciated by those skilled in the art that the use of menu selection in this application is impractical.

There is further provided for the identification tokens to be used to restrict access to the information content. This can be achieved by issuing an identification token to only a limited number of users, or by allowing access to
30 the information content only at specific times. Additionally, the identification token could be associated with a personal identification code (PIN) to legislate access to certain portion of the information content. For example, a manufacturer may issue an identification token to the public to allow access to information about their range of products. However, only appointed

- 5 dealers are issued with an additional PIN code that allows access to the associated price list.

The invention therefore provides an effective, inexpensive and open identification system (1) in which a common system architecture is employed to host a plurality of different identification applications thereon.

CLAIMS

1. An identification system, comprising:
an issuing facility operable to issue at least one unique identification
token to an information content provider wishing to utilise the
identification system;
a register of issued unique identification tokens;
an application facility configurable to contain information content in
accordance with a desired use of the issued at least one
identification token by the information content provider; and
an access channel providing public access to the configured
information content as a function of the at least one issued unique
identification token.
2. An identification system as claimed in claim 1 in which the
application facility to be a storage means for storing information
provided by the information content provider
3. An identification system as claimed in either one of claims 1 or 2
which includes a logging facility arranged to log instances of public
access to the information content corresponding to the at least one
unique identification token
4. An identification system as claimed in claim 3 which includes a
reporting facility operable to provide feedback to the information
content provider of all instances of public access to the information
content corresponding to the at least one unique identification token
5. An identification system as claimed in any one of the preceding
claims in which the access channel to be a public communication
channel

- 5 6. An identification system as claimed in claim 5 in which the public communication channel is a public switched telephone network (PSTN)
- 10 7. An identification system as claimed in any one of the preceding claims in which for the information content to be composed of text and graphics only
- 15 8. An identification system as claimed in any one of claims 1 to 6 in which the information content to be voice only
9. An identification system as claimed in any one of claims 1 to 6 in which the information content is a combination of text, graphics and voice.
- 20 10 An identification system as claimed in any one of the preceding claims in which the information content to be accessible from a mobile communications device
11. An identification system as claimed in claim 10 in which the mobile communications device to be Wireless Application Protocol (WAP)-enabled.
- 25 12 An identification system as claimed in any one of the preceding claims which includes a billing facility arranged to bill the information content provider in accordance with the use of the at least one unique identification token.
- 13 An identification system as claimed in any one of the preceding claims in which the identification token to be identified by a unique numeric string.

- 5 14. An identification system as claimed in any one of claims 1 to 12 in which the identification token is identified by a unique alphanumeric string.
- 15 An identification system as claimed in any one of the preceding claims in which the identification token to be encoded.
- 10 16 An identification system as claimed in claim 15 in which the identification token to be encoded in any one of a transponder, a smart card memory, a barcode or braille characters.
- 17 A method of operation of an identification system, comprising the steps of:
- 15 issuing at least one unique identification token to an information content provider wishing to utilise the identification system; updating a register of issued unique identification tokens; configuring an application facility with information content in accordance with a desired use of the issued at least one
- 20 identification token by the information content provider; and providing public access to the configured information content as a function of the at least one issued unique identification token.
- 18 A method as claimed in claim 17 in which the application facility is configured by storing in a storage facility, information content
- 25 provided by the information content provider
19. A method as claimed in either one of claims 17 or 18 which includes the additional step of logging instances of public access to the stored information content corresponding to the at least one unique identification token

- 5 20. A method as claimed in claim 19 which includes the further
step of providing feedback to the information content provider of all
instances of public access to the information content corresponding
to the at least one unique identification token.
- 10 21. A method as claimed in any one of claims 17 to 20 in which the
information content corresponding to the at least one unique
identification token is accessed by means of a public
communication channel
- 15 22. A method as claimed in claim 21 in which the information content
along the public communication channel from a mobile
communications device.
23. A method as claimed in any one of claims 17 to 22 which includes
step of billing the information content provider in accordance with
the use the at least one unique identification token.

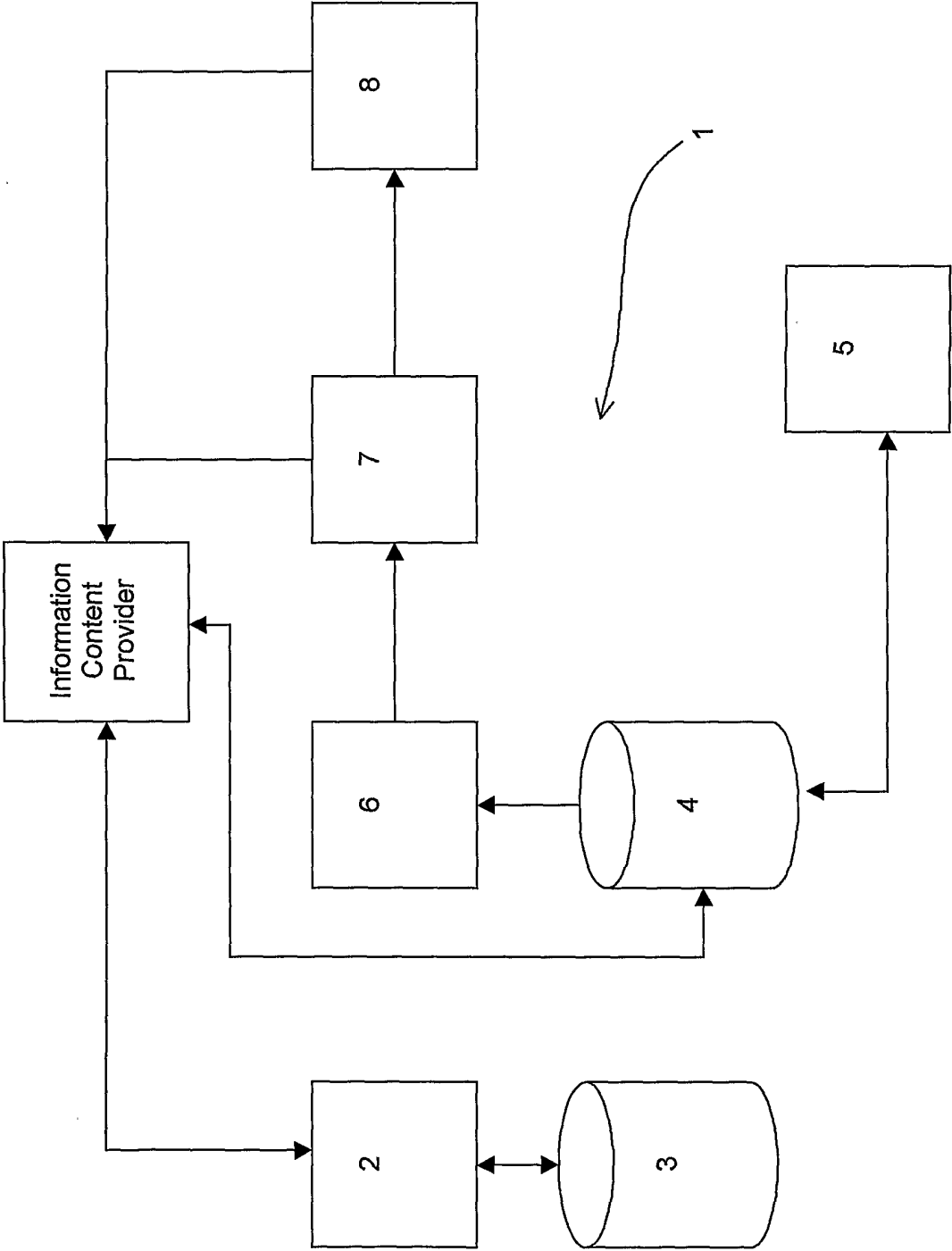


Figure 1