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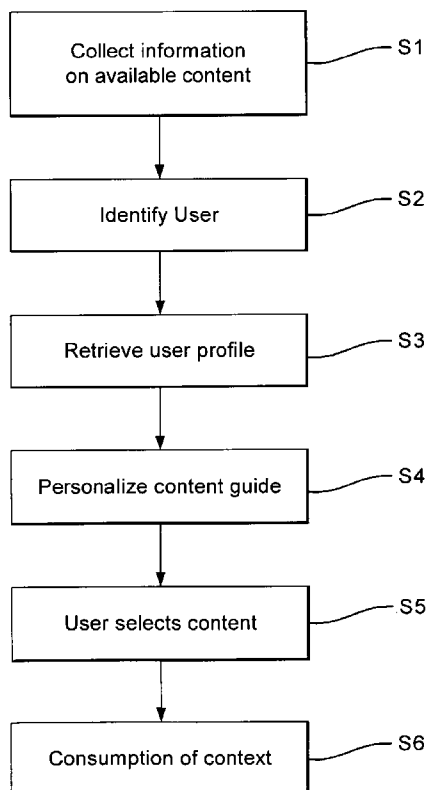
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[Continued on next page]

(54) Title: USER INTERFACE FOR MEDIA PROVISION

Fig. 3



(57) Abstract: A user equipment comprising means for receiving identification information of a user; means for determining a selection of media content based on a user profile associated with said received identification information; and means for providing at least some of said determined media content to said user.

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USER INTERFACE FOR MEDIA PROVISION

The present invention relates to a method and a system, and in particular but not exclusively to a method and a system for facilitating selection of media content to be provided to a user equipment.

Background to the Invention

There are many forms of media content which are available to a user. This media content, or simply content, may comprise audio, video, computer generated, interactive and/or textural information. The content may also include any combination of two or more of these different types of content. Currently there are many methods by which such media content may be provided to a user equipment. A user who receives content may consume the content by watching and/or listening to the content.

A first method of consuming content is via a traditional television set. Such a television set will receive a number of broadcast channels. Such a channel will be provided by a company who collects content together and provides it as a linear stream. A channel may be provided to multiple users. A user will set up their television to receive this stream and thus will be able to consume the content. The user will not be able to change the time at which specific content is received. However, since it is normally known prior to transmission what will be provided, program guides exist which enable a user to plan ahead.

There are a number of products which enable a user to time-shift the received channels. These include video recorders which record on tape and more recently DVD (digital versatile disk) and/or hard drive recorders. These enable a user to store a received channel and consume it at a later time. Thus the user schedule is not bound by the broadcaster's schedule.

Recently, television channels have been made available by a number of other methods such as cable and satellite. These methods have enabled the bandwidth of these signals to be increased. This has firstly increased the number of channels available to a user. Secondly this has increased the amount of data available for a given channel. This is used, for example, to provide multiple video streams in a given channel, for example different camera angles may be provided of the same scene. Thus the user has a degree of selectivity in how a received channel is, for example, viewed.

10 Other examples of the use of this increased bandwidth is in shopping channels and music television channels. In both cases however the music and/or purchasable items shown in the channel are chosen by the provider of the channel and not by the user.

15 Internet protocol television (IPTV) is a relatively new form of media delivery which has started to become available. In this system, a server provides a media stream to one or more connected user equipment. Such user equipment may be a traditional television set or may be a personal computer. The system may use a proprietary connection or use the internet to provide this content.

20 IPTV content is usually provided either as a live source (i.e. a source which is live such that the user has no control over the time at which specific content is provided) or as a playlist source. With a playlist source an IPTV content provider will define a specific playlist of content. A user, on connecting, will start receiving content from the selected item on the playlist.

Another source of media content is the internet. Websites are now available which allow media to be posted on that website. This media may be user generated or provided from other (e.g. commercial) sources. In some cases these websites offer media content for which a licence needs to be purchased. Such content may, for example, be protected by digital rights management.

Search engines exist on the internet which enable a user to search for specific content. These search engines are often configured to search the websites. These search engines generally require a user to have a form of textual input such as a keyboard.

5

In many of the above examples a content provider has the role of an editor for a particular channel. In other words the content provider will select what media is to be provided to the user. A user has a degree of control, for example by using a hard drive recorder to time shift the received channel. However, the ultimate
10 choice of content is with the provider. In this regard, a content provider creating a broadcast channel may choose a certain type of content for the channel which the user may associate with that channel. This provides a degree of predictability with regards to the content of the channel.

15 Electronic program guides (EPGs) have been used to present programs to a user in a list format where programs are arranged by channel and by time. This is useful for a small number of channels. However, it becomes inefficient when the number of channels and type of content increases.

20 Internet searches have provided a system for overcoming limitations of electronic program guides. Internet searches require a user to input text from for example a keyboard. This text would then be searched and matching results returned to the user. This text entry has associated with a number of problems, for example when used in association with television set, a keyboard is often not
25 available to a user and a more restricted remote control has to be used making it difficult to enter text. Moreover, a user who is, for example reclining in a sofa or potentially even lying down would be unable and/or unwilling to use a keyboard without moving. All of these restrict the use of a text based search system.

30 The extent of a current system mean that there is too much content available to a user, thus making it difficult for a user to find desired content. Moreover, a user may desire specific items of different channels which are broadcast at a variety of times. Present systems make it difficult for a user to selectively

choose between different channels. In addition the present forms of content provision are spread out over a variety of forms. Not all of these are available to each and every user equipment. For example, a mobile phone will be unable to receive a broadcast television channel.

5

These lead to an unsatisfactory user experience when trying to consume media. It is an aim of embodiments of the present invention to mitigate or overcome the above mentioned problems.

10 **Statement of Invention**

According to a first aspect of the invention there is provided a user equipment comprising: means for receiving identification information of a user; means for determining a selection of media content based on a user profile associated with said received identification information; and means for providing at least some of said determined media content to said user.

15

Preferably said media content comprises one or more of: broadcast radio; broadcast video audio files; video files; internet protocol television data.

20

Preferably said user equipment is configured to receive an input from a user, said determination being further based on said input.

25

Preferably said user equipment is configured to receive an input from a user, wherein said user profile is modified based on said input.

30

Preferably said user equipment is configured to present a user with one or more questions; and receive responses to said questions, said determining being further based on said responses.

Preferably said user equipment is configured to present a user with one or more questions; and receive responses to said questions, wherein said user profile is modified based on said responses.

Preferably said user equipment is configured to further determine information on user consumption, wherein said user profile is modified based on said further determined information.

5

Preferably said determining is based on time and/or location.

Preferably said user equipment is configured receive a notification of an event and to provide alternative content based on said notification.

10

According to a second aspect of the invention there is provided a method comprising: receiving identification information of a user; determining a selection of media content based on a user profile associated with said received identification information; and providing at least some of said determined media content to said user.

15

Preferably said media content comprises one or more of: broadcast radio; broadcast video audio files; video files; internet protocol television data.

20

Preferably the method further comprises receiving an input from a user, said determining being further based on said input.

Preferably the method further comprises receiving an input from a user; and modifying said user profile based on said input.

25

Preferably the method further comprises presenting a user with one or more questions; and receiving responses to said questions, wherein said determining is further based on said responses.

30

Preferably the method further comprises presenting a user with one or more questions; receiving responses to said questions; and modifying said user profile based on said responses.

Preferably the method further comprises determining information on user consumption; and modifying said user profile based on said determined information on user consumption.

- 5 Preferably said determining is based on time and/or location.

Preferably the method further comprises receiving a notification of an event; and providing alternative content based on said notification.

- 10 According to a third aspect of the invention there is provided a computer-readable medium encoded with instructions that, when executed by a computer, perform: receiving identification information of a user; determining a selection of media content based on a user profile associated with said received identification information; and providing at least some of said determined media
15 content to said user.

Brief Description of the Drawings

- For a better understanding of the present invention reference will now be made
20 by way of example only to the accompanying drawings in which:

Figure 1 shows a communication system in which embodiments of the present invention are realised; and

Figure 2 shows a user equipment according to embodiment of the present invention.

- 25 Figure 3 shows a method embodying the invention;

Figure 4 shows a connection between user equipment according to an embodiment of the invention;

Figure 5 shows a connection between user equipment according to a further embodiment of the invention.

30

Detailed Description of Preferred Embodiments of the Invention

An embodiment of the invention will now be described with reference to Figure 1. A user equipment 2 is connected via one or more connections to one or more content providers. The connections may be wireless and/or wired connections. The connections may be direct and/or indirect.

5

A first content provider 4 transmits a first content signal 6 via a network 8 to the user equipment 2. Similarly, second and third content providers 10 and 12 provide second and third content signals 14 and 16 via a network 18 to the user equipment 2.

10

The networks and thus the connections between the content providers and the user equipment may be via one or more different ways. Examples include: wireless one-way transmission such as from a satellite or a terrestrial TV broadcast antenna; wireless two-way communications such as WIFI, GPRS (general packet radio service), UMTS (universal mobile telecommunications system); wired one-way communication such as cable television; and wired two-way communication such as an internet link. Each of the above described means are well known to the skilled person and will not be described further.

15

20 There are many types of content provider which may provide media content to the user equipment. A number of examples will be described below, however this list is exemplary and not limiting.

25

A broadcast content provider may provide one or more linear streams of data, such as channels, to one or more receivers. Examples include: terrestrial, satellite and cable television broadcasters; and internet broadcasters. The linear streams provided by such content providers are such that the receiver is unable to control the nature of the content in a given stream. The content provided in a particular channel will be selected by the content provider. However, within

30 channel, one or more distinct simultaneous data streams may exist. These enable a receiver to select between different data streams. An example of this in operation is a given channel offering multiple, selectable camera angles to the receiver. Such providers are often described as linear content providers.

These linear content providers may provide prior to and/or during the broadcasting of content, an indication of the content to be broadcast. An example is a television program guide. This may be used to control the operation of a receiver prior to broadcast (for example scheduling a particular broadcast content to be recorded).

An internet based content provider such as a website or internet database may exist to provide content to the user equipment. The user equipment may be configured to request content from these websites. Alternatively or additionally the website may be configured to push content to the user equipment. This means that the website will periodically send content to the user equipment without the user equipment explicitly requesting that particular data, although the user equipment may have previously subscribed to the website or database. Such providers are often described as on-demand content providers.

A third form of provider may exist, known as a non-linear content provider. Such providers will be similar to the linear providers in that a channel is created by the provider with content selected by the provider. However the receiver, in this case the user equipment, has a degree of control over when the channel is received. Such control may enable the receiver to pause, rewind and skip portions of the received channel. However the receiver will be limited to the content provided in the particular stream.

Content providers may additionally be distinguished by the nature of the content provided. A non limiting set of examples may include:

A broadcaster provides a receiver with content such as television films or documentaries. Such a broadcaster may require a license fee to be paid for the consumption of such content. Alternatively or additionally, this broadcaster may provide the content free of charge. In either case the content may also include advertisements.

A consumer content provider provides content made and uploaded by users. An example of this is the website YouTube. Such content may be provided free of charge, alternatively or additionally a fee or similar recompense may be required.

- 5 A news provider may provide live news or current affairs. Important or "breaking" news may be identified and treated differently by a receiver. For example a receiver may give priority to breaking news media content over other content. Such facilities will be described in more detail below.
- 10 An advertising content provider may provide advertising content to the user equipment. The advertising content may be associated with revenue generation. For example a receiver may obtain credit which may be used to purchase other content. Other options for revenue generation may be possible.
- 15 In operation the user equipment may receive the content itself. Alternatively or additionally the user equipment may receive an indication of the nature of the content, such as an internet address.

The user equipment may then choose to access the content at the provided
20 address immediately or at a subsequent time. The user equipment may store any received content.

The user equipment is capable of receiving content from one or many of these content providers. The user equipment may aggregate this content.

- 25 In embodiments of the present invention, the user equipment may be unable to connect and/or to adequately consume particular content. In these cases the user equipment would be configured to restrict the content it receives from the various content providers in accordance with the user equipment's capabilities.
- 30 User equipment's capabilities may include for example the user equipment type (such as a television, mobile telephone or radio). In addition, connective capabilities, screen size and/or user interface may also affect the capabilities of the system.

Different user equipment is capable of receiving different signals. For example, a mobile telephone will be unable to receive a terrestrially broadcast television signal. Whereas a set top box or other similar television link device may be
5 unable to receive internet broadcast signal. Consequently, the user equipment would be configured to adapt to various content providers.

The user equipment will now be described in more detail with reference to Figure 2. The user equipment 2 is shown connected via a communication link 20 to a
10 user identification device 22. This link may be controlled by communication unit 24. The user identification device 22 may be capable of identifying the user via one or more methods. For example, a password or other form of personal identification may be used to identify the user. Alternatively or additionally, a fingerprint scan or other form of biometric identification may be used. Other
15 forms of identification can additionally or alternatively be used.

The user identification device may also be capable of controlling the user equipment. For example, the user identification device may be incorporated in to
20 a remote control for a television or other similar device. Alternatively or additionally, the user identification device may be incorporated within the user equipment. For example a mobile telephone would comprise both the user equipment and the user identification device.

The user identification device operates to identify the user. This identification
25 would then be transmitted to the user equipment.

The user equipment 2 may additionally contain one or more receivers 26 for receiving content from the content providers. The nature of the receivers will depend on the type of content to be received, and may include an internet link or
30 internet protocol network link; a broadcast receiver, such as a terrestrial broadcast receiver; or a proprietary network link, such as a cable link. The receiver may additionally be capable of transmitting requests to the content provider for specific content, that is to be a transceiver. In some embodiments,

requests may be transmitted on a separate system or protocol from which associated content is received. A separate transmitter may be provided

5 The user equipment may also include a processor 28 and storage unit 30 such as a memory. The processor 28 may perform operations which are stored as computer code in the storage unit 30. The storage unit 30 may store content received at the receiver/transceiver. Alternatively or additionally, the storage unit may store links, as described above, to content stored on one or more of the content providers. The storage unit will also store a user profile which will be
10 described in more detail later. The storage unit 30 may be one or a plurality of storage devices as are known in the art, examples of which include a hard disk, CD or DVD writable media, and volatile or non-volatile memory (such as RAM and flash-memory).

15 The operation of the user equipment will now be described in more detail with reference to figure 3.

The user equipment in step S1 may firstly collect information available in, for example, an electronic program guide from the broadcast content providers.
20 Similarly the user equipment may be configured to collect information from the internet content providers. In addition, the user equipment may be configured to receive on a periodic basis information from other content providers.

The user equipment, if it receives links to contents stored on content providers,
25 may periodically check the validity of these links. If this check reveals that links are not longer valid, the user equipment may delete the links. Alternatively or additionally, the user equipment may be arranged to try to update these links.

The user equipment comprises one or more user profiles which may be based
30 on one or more of the following: information provided by the user; information of content consumption or usage by a user; profile information from other users which may be compared with the currently identified user. This information may be used to continuously update the one or more user profiles.

In step S2, a user will identify themselves using the user identification device 22. This may be in response to a prompt presented to the user by the user equipment. Alternatively or additionally the user may identify themselves as part
5 of a startup process for the user equipment.

In step S3 the user equipment will use the identification of the user to retrieve an associated user profile from the storage unit 30.

10 Based on the user profile information, the user equipment, in step S4 is capable of personalising a program or content guide of all the content available to the user equipment.

In step S5 the user may then use this personalised program guide to select
15 content for consumption. In step S6 the content may be provided to the user for consumption.

The content guide may also be personalised for the user on factors such as the day of the week, the time or date. Similarly, location information, if available, may
20 be used to customise the personalized guide.

For example, at 17:00 on a week day, user equipment may provide the user with a content guide biased towards news information. Whereas at 22:00 on a Saturday evening, the content guide may be biased more towards film and/or
25 other drama content. This would reflect the user's desire to receive news upon returning from work and to watch a film late on a week-end evening.

Consequently the user equipment, having generated a profile for the identified user and having collected information on the available media and/or content may
30 build up a personalised entertainment list of content for the user.

The user equipment may keep a record of previous consumption. In particular, the user equipment may keep a record at which point the previous consumption

was stopped. This provides numerous advantages to the user. For example, a user may resume consumption of content from where the user had previously stopped. Alternatively, the user may choose to consume different content. The user equipment may include a option to resume consumption of content as part
5 of the personalised entertainment list. Alternatively or additionally, the option to resume may be offered as a separate function to the user.

The user equipment is able to intelligently provide this resumption service. For example, if the user had stopped watching the news (which is of a time critical
10 nature) on a previous day, then it is less likely that the user would desire to continue watching the previous day's news. Consequently, the user equipment may present the user with the current day's news or, alternatively or additionally, further content.

15 Alternatively, or additionally, if the user resumes consuming contents with only a short break between the previous consumption, the user equipment may display a strong bias towards resuming the previous content.

In some embodiments of the present invention the user equipment will filter
20 broadcast channels for suitable content which is being broadcast at that time. Alternatively, or additionally, the user equipment may locate desired content on various connected content stores, for example websites and other databases. The user may wish to search for content using text entry. This may be done through a character selection process. Alternatively or additionally this may be
25 done with predictive text. Previous searches and selections may be presented first to allow quick navigation.

The user equipment may additionally be able to record, for example, on a hard drive or tape, broadcast content so that it may be later consumed by the user.
30 This recording may be done based on the user profile.

The recording function may also be used to record a broadcast signal which the user is consuming in real time. For example, should the user pause a live

broadcast content, the user equipment will store the content broadcast in the time period between the user stopping consumption and resuming consumption. This enables the user to continue resuming consumption from where it was stopped.

5

The user equipment may have the ability to detect the number of people in view and thus filter the content, such as adult content, which is made available. Alternatively or additionally, the available content may be time filtered.

10 Embodiments of the invention will now be described with reference to Figures 4 and 5. In Figure 4, user equipment 2 is connected to a further user equipment 32 via a communication link 34. The user equipment 2 having defined and stored a user profile is able to transmit this user profile to the user equipment 32. Consequently, should a user identify him or herself with user equipment 2 that
15 user's profile will be available on the second user equipment 32. Furthermore, the user equipment 2 may transfer more detailed information, for example detailing where the user had finished consuming content previously, to the user equipment 32. This advantageously enables a user to continue to watch content from where he or she had previously stopped, even though a different user
20 equipment is being used.

In the embodiments shown in Figure 4 user equipment 32 is connected to the content provider 4 whereas user equipment 2 is connected to both content provider 4 and 10. In this case, the user profile transferred to user equipment 32
25 would adapt to reflect that the user equipment 32 is only connected to the one content provider. This may lead, for example, to a partially viewed content, not being available on user equipment 32. Consequently, the user will not be offered the option of continuing to consume the content from the point at which it was left.

30

Alternatively, or additionally, the user equipment 2 may transfer content to user equipment 32. This may enable the user equipment 32 to continue to consume content from where it was left off without itself having a connection to the content

provider. This may require the user equipment 32 to have its own store, for example a hard drive or flash drive.

5 An example of such a situation will arise where the user equipment 2 represents a home user device, for example a set top box or personal computer which is capable of receiving broadcast television signals. The user equipment 32 may correspond to, for example, a mobile telephone or mobile media centre such as an MP3 player. The user may be watching a television program on user equipment 2 which is then stopped halfway through. The remaining of this
10 television program may subsequently be uploaded to the user equipment 32 enabling the user to continue to consume this content. This is despite the fact that the user equipment 32 is not able to broadcast the television signal.

15 In some embodiments of the present invention, the user equipment 32 may be able to recognise that content which was previously provided via content provider 10 to the user equipment 2 is available from content provider 4. In this case, the user equipment 32 would be able to connect to the content provided by the content provider 4 and offer that content to the user.

20 An alternative to the embodiment of Figure 4 is shown in Figure 5. In this embodiment, a server 38 is located between the user equipment 2 and user equipment 32. The user equipment 2 and 32 connect to this server 38 via connections 40 and 42 respectively. This server may be, for example, an internet server. This embodiment advantageously enables a user equipment to
25 transmit or receive a user profile to or from a further user equipment without the user equipment being directly connected. This connection may be, for example, via the internet.

30 The embodiments shown in Figures 4 and 5 where the user profile is transferred to a further user equipment may advantageously offer the further user equipment 32 to update the user profile. This updated user profile may then be transferred back to user equipment 2 or, alternatively or additionally, to a further user

equipment which is not shown. A user therefore, on identifying themselves with any user equipment will be able to continue to use the same profile.

5 In some embodiments of the present invention a user profile associated with the first user may be transferred in part or in whole to a further user or a group of users. This enables users to recommend programs to other users. Alternatively, or additionally, other users may request recommendations from a first user. Such recommendations may consist of only a single program or series of programs, to a full type or genre of entertainment or media.

10

In use, the user equipment, instead of presenting the user with a filtered list of channels or a search box may be presented with a series of questions. One question may be, for example, whether the user wishes to continue with previously consumed content. This, as previously discussed, may be affected by
15 the time at which the previous content was consumed.

20

The user may ask further questions, for example, questions on the user's current desires or feelings. For example, a basic list of subjects such as fiction or news may enable the user equipment to provide the user with appropriate content.

25 The answers given by the user to the particular questions may be used to update the user profile. Alternatively or additionally the answers may only affect the operation of the user equipment at that particular time.

30 The user interface may also have an option for providing content which will otherwise not be presented to the user based on the user profile. To access this content, the user may select an option, in response to which the user equipment, will randomly or otherwise select content and present it to the user. This enables the user to explore new avenues of content. In such provision, the user equipment may present the user with only shortened sections of content. This enables the user to quickly decide whether or not particular content is desirable.

While the invention has been particularly shown and described with reference to preferred embodiments, it will be understood to those skilled in the art that various changes in the form and detail may be made without departing from the scope of invention as defined by the appended claims.

CLAIMS:

1. A user equipment comprising:
 - means for receiving identification information of a user;
 - 5 means for determining a selection of media content based on a user profile associated with said received identification information; and
 - means for providing at least some of said determined media content to said user.
- 10 2. The user equipment of claim 1, wherein said media content comprises one or more of:
 - broadcast radio;
 - broadcast video
 - audio files;
 - 15 video files;
 - internet protocol television data.
3. The user equipment of any preceding claim, wherein said user equipment is configured to receive an input from a user, said determination being further
20 based on said input.
4. The user equipment of any preceding claim, wherein said user equipment is configured to receive an input from a user, wherein said user profile is modified based on said input.
25
5. The user equipment of any preceding claim wherein said user equipment is configured to present a user with one or more questions; and receive responses to said questions, said determining being further based on said responses.
30
6. The user equipment of any preceding claim wherein said user equipment is configured to present a user with one or more questions; and receive

responses to said questions, wherein said user profile is modified based on said responses.

7. The user equipment of any preceding claim wherein said user equipment
5 is configured to further determine information on user consumption, wherein said user profile is modified based on said further determined information.

8. The user equipment of any preceding claim wherein said determining is based on time and/or location.

10

9. The user equipment of any preceding claim wherein said user equipment is configured receive a notification of an event and to provide alternative content based on said notification.

15

10. A method comprising:
receiving identification information of a user;
determining a selection of media content based on a user profile associated with said received identification information; and
providing at least some of said determined media content to said user.

20

11. The method of claim 10, wherein said media content comprises one or more of:

broadcast radio;

broadcast video

25

audio files;

video files;

internet protocol television data.

30

12. The method of claim 10 or claim 11, further comprising receiving an input from a user, said determining being further based on said input.

13. The method of any of claims 10 to 12, further comprising:
receiving an input from a user; and

modifying said user profile based on said input.

14. The method of any of claims 10 to 13, comprising:
presenting a user with one or more questions; and
5 receiving responses to said questions, wherein said determining is further based on said responses.
15. The method of any of claims 10 to 14, comprising:
presenting a user with one or more questions;
10 receiving responses to said questions; and
modifying said user profile based on said responses.
16. The method of any of claims 10 to 15, comprising
determining information on user consumption; and
15 modifying said user profile based on said determined information on user consumption.
17. The method of any of claim 10 to 16 wherein said determining is based on
time and/or location.
20
18. The method of any of claim 10 to 17 comprising:
receiving a notification of an event; and
providing alternative content based on said notification.
- 25 19. A computer-readable medium encoded with instructions that, when executed by a computer, perform:
receiving identification information of a user;
determining a selection of media content based on a user profile
associated with said received identification information; and
30 providing at least some of said determined media content to said user.

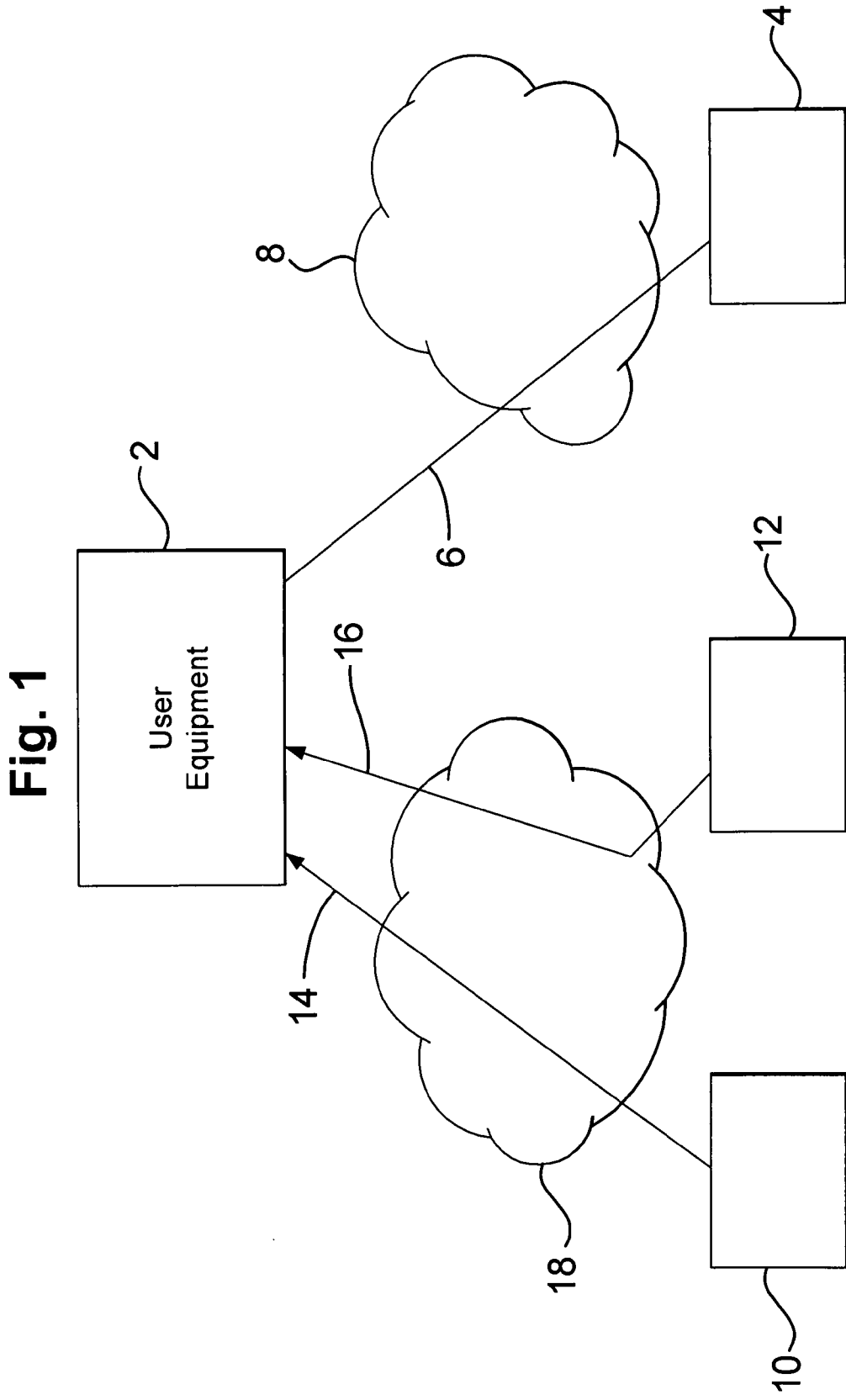


Fig. 1

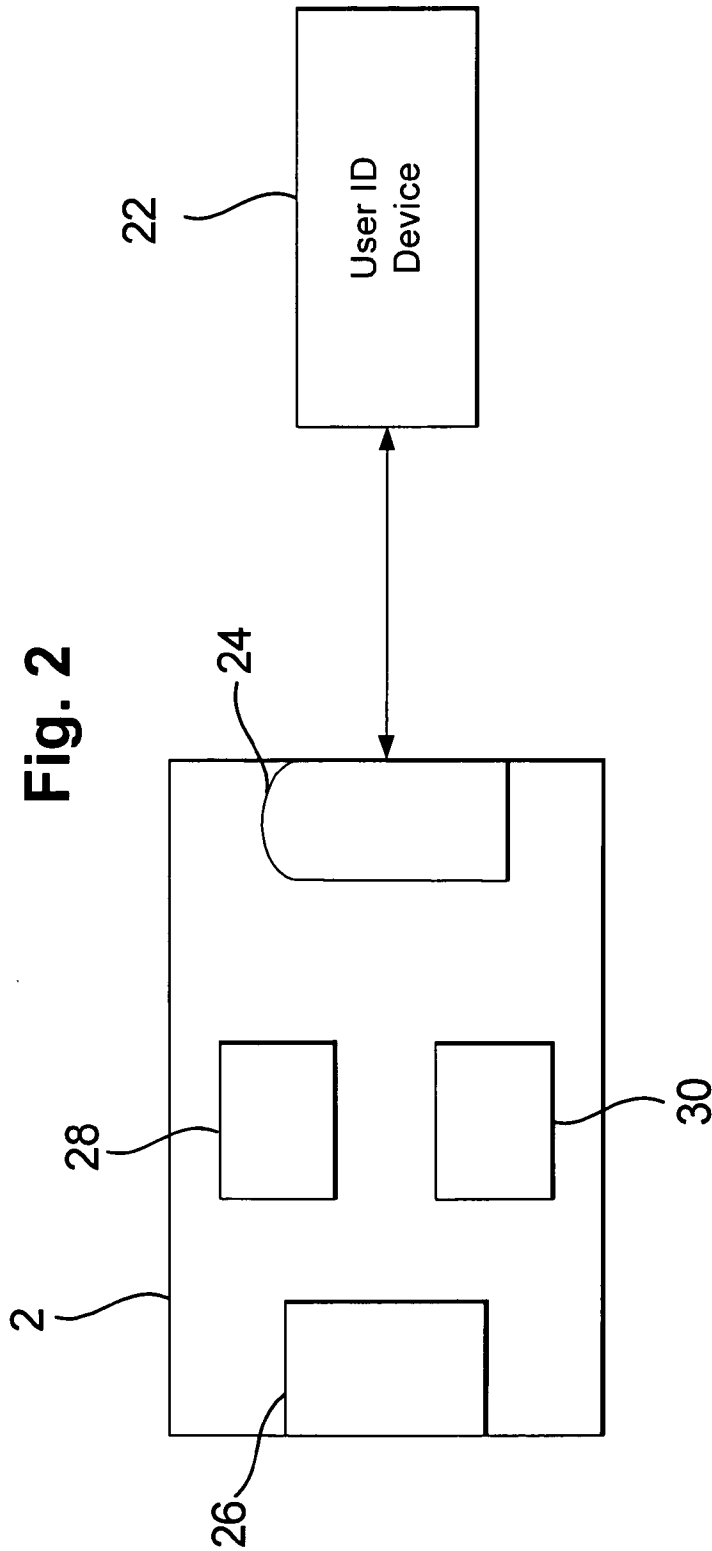


Fig. 3

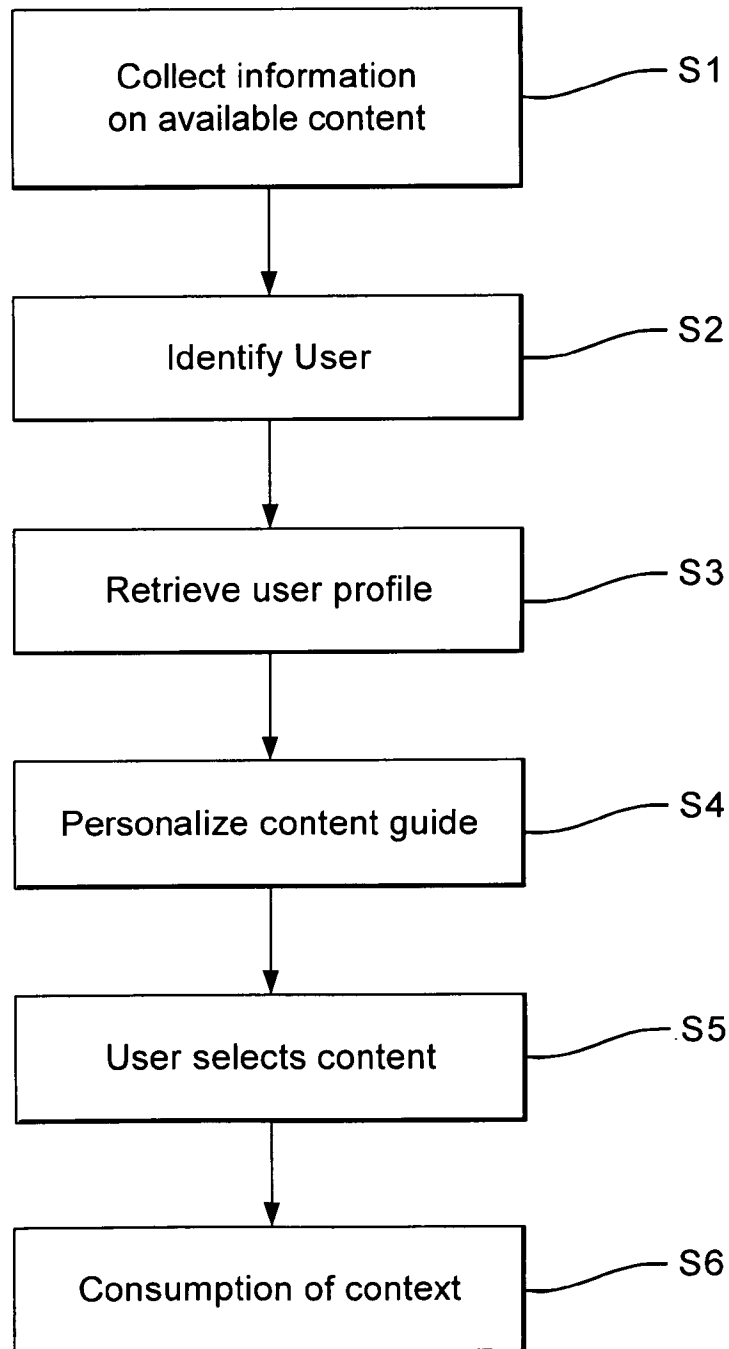


Fig. 4

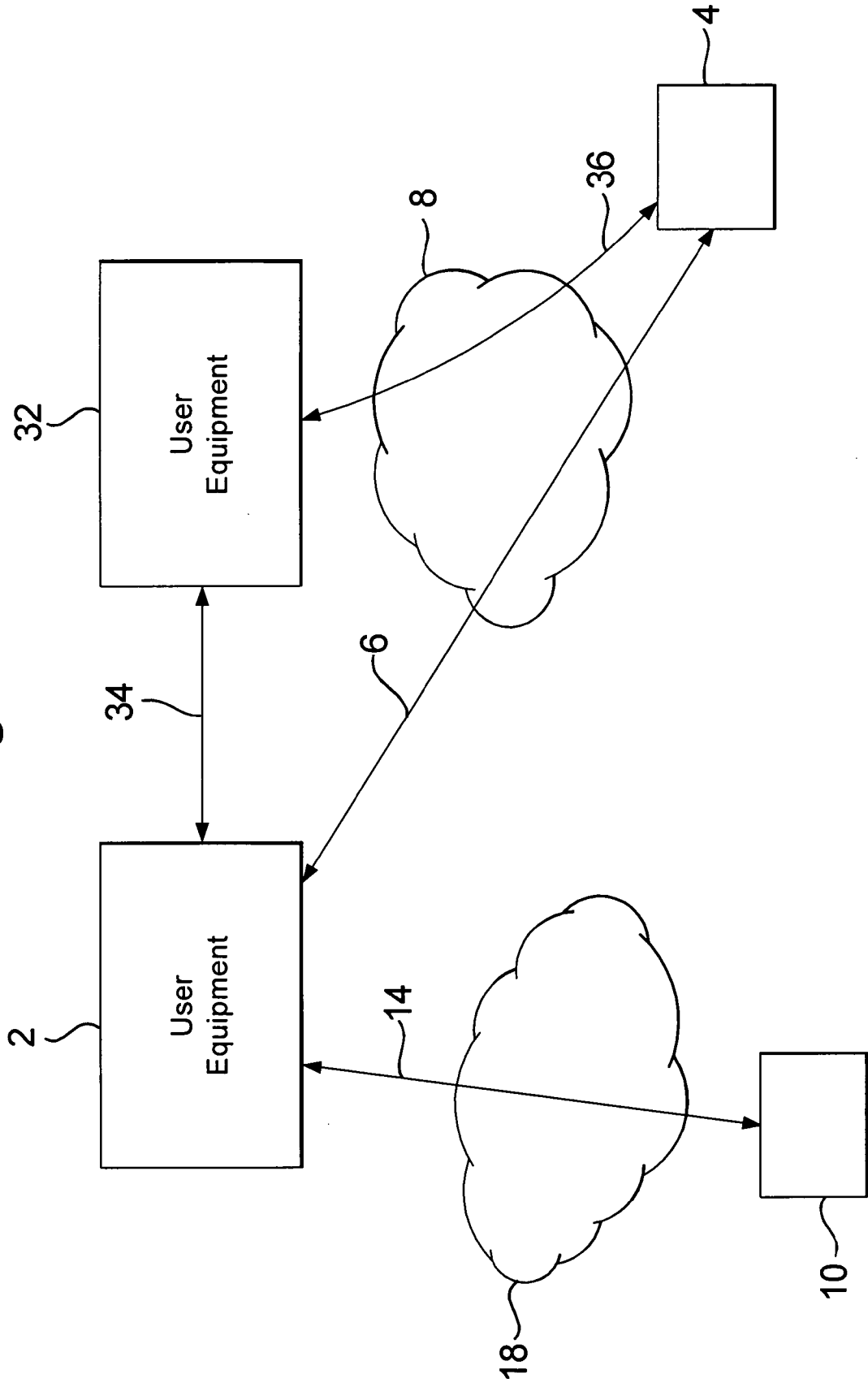
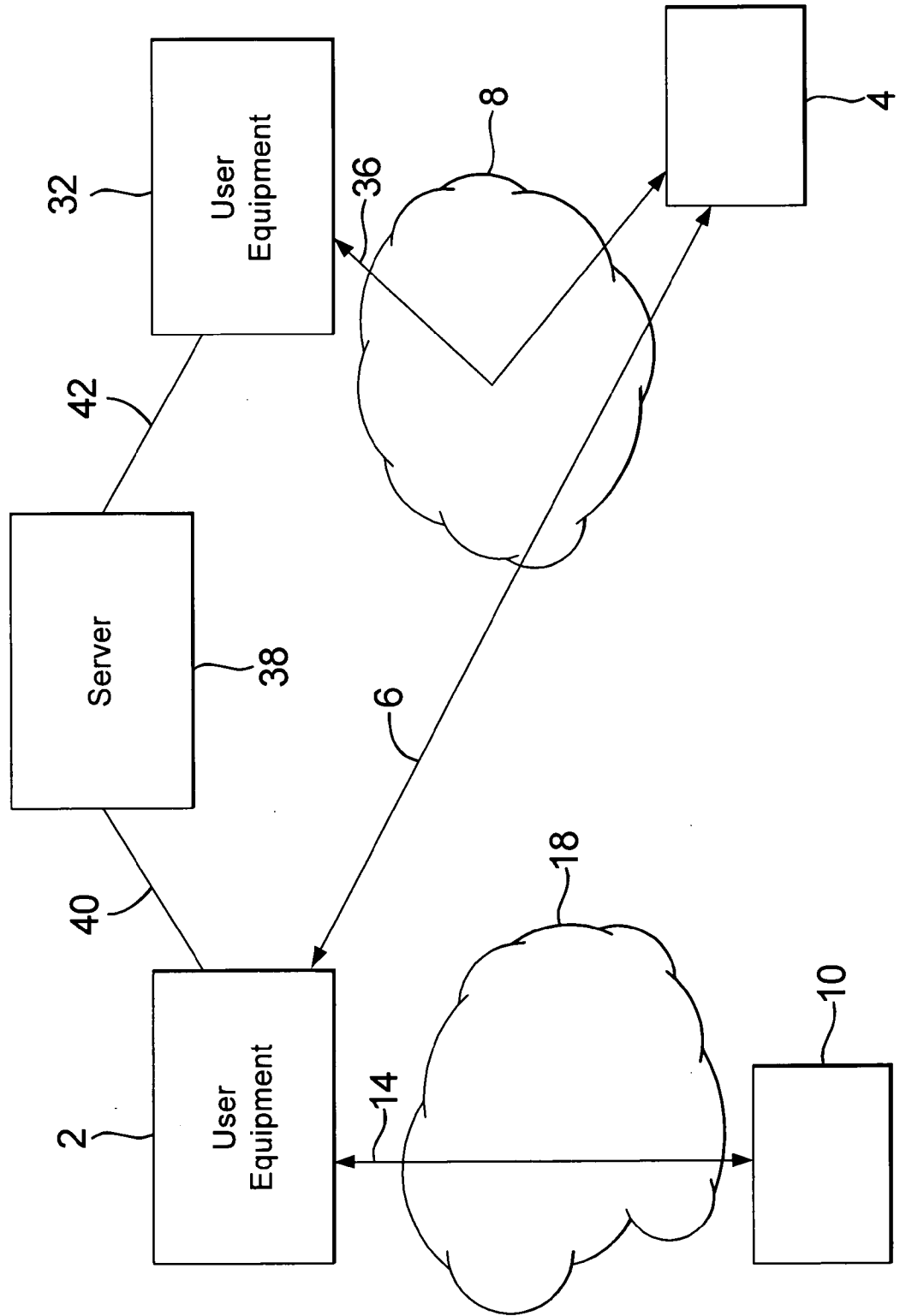


Fig. 5



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2008/066478

A. CLASSIFICATION OF SUBJECT MATTER INV. H04N5/445				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) H04N				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	JEONGYEON LIM ET AL: "Automatic user preference learning for personalized electronic program guide applications" JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY, WILEY & SONS, NEW YORK, NY, US, vol. 58, no. 9, July 2007 (2007-07), pages 1346-1356, XP002493175 ISSN: 1532-2882 [retrieved on 2007-05-21] page 1346, left-hand column, line 1 - page 1349, left-hand column, line 5 page 1354, left-hand column, line 5 - line 8 <div style="text-align: center;"> ----- -/-- </div>	1-19		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.				
<input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; border: none; vertical-align: top;"> *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family </td> </tr> </table>			*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family			
Date of the actual completion of the international search <div style="text-align: center;">22 April 2009</div>	Date of mailing of the international search report <div style="text-align: center;">29/04/2009</div>			
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer <div style="text-align: center;">Winkler, Gregor</div>			

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2008/066478

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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