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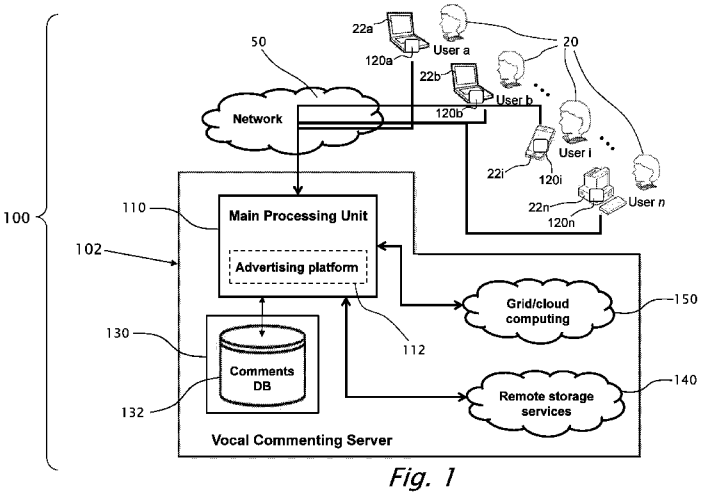

Fig. 1

(57) Abstract: Vocal commenting system and methods for recording and playing a voice message associated with a selected internet page. The system includes a voice- commenting-management module, operatively activated on a personal device of a user, the personal device having a microphone, and a vocal-commenting-services server. The server includes a processing unit, a database unit including a comments database. The vocal commenting methods include the step of posting a voice comment, using the microphone. Upon completion of the voice comment, the voice- commenting-management module sends the voice comment to the server. The vocal commenting method further includes the steps of receiving the recorded voice comment by the server, storing the recorded voice comment in a remote storage services proving unit, analyzing the recorded voice comment thereby generating metadata associated with the recorded voice comment, and storing the metadata of the comment in a comments database.

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SYSTEM AND METHODS FOR VOCAL COMMENTING ON SELECTED WEB PAGES

FIELD OF THE INVENTION

The present invention generally relates to the field of websites commenting and more particularly, to a system and methods that facilitate vocal web pages commenting.

BACKGROUND OF THE INVENTION

Many popular websites, such as news, sites have a staff of writers and editors that generate original content on a daily basis. These websites report a write articles on vast variety of subject matters. A myriad of people read these websites and many of those readers have strong opinions about the articles they read and other related subject matter.

To engage readers more thoroughly, and keep them from navigating away from the website, many sites implement a commenting system whereby a reader may leave a written comment that is displayed under the story they are commenting on. Other readers may comment in response to previous comments, or they may start their own commenting thread.

While such commenting systems may be empowering to readers, it often results in comments that are not interesting or of low quality, inappropriate or off-subject, or do not add to the content of the story in any intelligent way. Often, such commenters hide behind a false identity, which is difficult to verify.

There is therefore a need and it would be advantageous to have a commenting system and methods that is more convenient to use and more trustworthy.

SUMMARY OF THE INVENTION

The principle intentions of the present invention include providing a system and methods that facilitate vocal web pages commenting, wherein the system includes a remote server for managing the comments, and wherein the comments can be coupled to any web page. The system and methods facilitate a user to post a new

voice comment, to be associated with an internet page of interest he/she has selected, or play a voice comment associated with a selected web page, previously recorded by anyone.

According to the teachings of the present invention, there is provided a vocal commenting system for recording and playing a voice message associated with a selected internet page. The system includes a voice-commenting-management module, operatively activated on a personal device of a user, the personal device having a microphone, and a vocal-commenting-services server. The vocal-commenting-services server includes a processing unit, a database unit including a comments database and a remote storage services proving unit.

The processing unit may be a grid computing workflow management system and/or a server main-processing-unit.

The vocal commenting system may further include an advertising platform.

An aspect of the present invention is to provide vocal commenting method for recording a voice message associated with a selected internet page. The vocal commenting method includes the step of posting a voice comment, using a microphone of a personal device having an activated voice-commenting-management module. Upon completion of the voice comment, the voice-commenting-management module sends the newly recorded voice comment to a vocal-commenting-services server.

The vocal commenting method further includes the steps of receiving the newly recorded voice comment by vocal-commenting-services server, storing the newly recorded voice comment in a remote storage services proving unit, analyzing the newly recorded voice comment thereby generating metadata associated with the newly recorded voice comment, and storing the metadata of the comment in a comments database.

The posting of a voice comment may include the steps of activating the voice-commenting-management module, wherein the voice-commenting-management module activates the microphone of the personal device, terminating voice recording by deactivating the microphone, and sending the newly recorded voice comment to the vocal commenting server.

Optionally, the microphone is activated for a preconfigured time interval.

Optionally, the microphone is deactivated after a preconfigured silent time interval.

Optionally, the user enters textual data associated with the newly recorded voice comment. The textual data includes mandatory data and/or non-mandatory data.

Optionally, the user flags a selected comment, and wherein the voice-commenting-management module sends the flag to the vocal-commenting-services server that records the flag with association to the selected voice comment.

An aspect of the present invention is to provide vocal commenting method for playing a voice message associated with a selected internet page. The vocal commenting method including the steps of selecting a recorded voice comment associated with a selected internet page and playing the selected recorded voice comment.

The vocal commenting method may further include the step of recording a new voice message associated the played voice comment.

The vocal commenting method may further include the step of indexing the voice comments stored in the comments database, thereby facilitating fast fetching by a target search engine.

The indexing process is a cyclic process that is automatically activated every N minutes. The indexing process may include the steps of selecting next the voice comment, analyzing the voice comment to identify all data segments contained within the selected voice comment, structuring an indexed record of the selected voice comment, using the identified data segments, saving the indexed record in a respective indexed file in a remote storage services proving unit, and repeating these steps for all voice comments in the comments database.

Optionally, the vocal commenting methods may further include an advertising procedure. The advertising procedure may include the steps of sending an ad request, upon entering a URL address that facilitates recording of voice comments, fetching user related data, extracting ad categories and ad keywords, fetching the most suitable ads that comply with the categories and keywords, sending the fetched ads to the user, and playing the ads on the personal device. The user related data may include pages visited by the user and voice and/or textual comments posted or accessed by the user.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become fully understood from the detailed description given herein below and the accompanying drawings, which are given by way of illustration and example only and thus not limitative of the present invention, and wherein:

Fig. 1 is a general schematic block diagram illustration of the components of a vocal commenting system, according to an embodiment of the present invention.

Fig. 2 shows a schematic flowchart diagram of a method of posting a voice comment, according to an embodiment of the present invention.

Fig. 3 shows a schematic flowchart diagram of an example recording method being part of the method of posting a voice comment, outlined in Fig. 2.

Fig. 4 shows a schematic flowchart diagram of a cyclic method for indexing the voice comments stored in the comments database, according to an embodiment of the present invention.

Fig. 5 shows a schematic flowchart diagram of a method playing a recorded voice comment.

Fig. 6 shows a schematic flowchart diagram of a method of presenting ads to a user of a URL address that facilitates recording of voice comments.

DETAILED DESCRIPTION OF THE INVENTION

The present invention will now be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided, so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art.

An embodiment is an example or implementation of the inventions. The various appearances of "one embodiment," "an embodiment" or "some embodiments" do not necessarily all refer to the same embodiments. Although various features of the invention may be described in the context of a single embodiment, the features may also be provided separately or in any suitable combination. Conversely, although the

invention may be described herein in the context of separate embodiments for clarity, the invention may also be implemented in a single embodiment.

Reference in the specification to "one embodiment", "an embodiment", "some embodiments" or "other embodiments" means that a particular feature, structure, or characteristic described in connection with the embodiments is included in at least one embodiment, but not necessarily all embodiments, of the inventions. It is understood that the phraseology and terminology employed herein is not to be construed as limiting and are for descriptive purpose only.

Methods of the present invention may be implemented by performing or completing manually, automatically, or a combination thereof, selected steps or tasks. The order of performing some methods step may vary. The descriptions, examples, methods and materials presented in the claims and the specification are not to be construed as limiting but rather as illustrative only.

Meanings of technical and scientific terms used herein are to be commonly understood, unless otherwise defined. The present invention can be implemented for testing or practice with methods and materials equivalent or similar to those described herein.

Reference is now made to the drawings. Fig. 1 is a general schematic block diagram illustration of the components of a vocal commenting system **100**, according to an embodiment of the present invention. Vocal commenting system **100** includes a server that can be a server **102** of a provider of vocal commenting services. Server **102** includes a processing unit, wherein the processing unit of server **102** may be a grid computing workflow management system **150** and/or a main-processing-unit **110**. The present invention will be described, by way of example, with no limitations, in terms of the processing unit being main-processing-unit **110**.

Vocal-commenting-services server **102** further includes a database unit **130** and a main-processing-unit **110** and a storage system such as remote storage services proving unit **140**. Database unit **130** includes a comments-DB **132** and possibly other databases such as a users' DB.

It should be noted that the present invention will now refer to storage system as being remote storage services proving unit **140**, but the present invention is not limited in using remote storage services such as cloud services, and may use local

storage devices and or services, or a combination of local storage devices and or services and remote storage services.

Vocal commenting system **100** may be used by users **20**, each coupled with a personal device **22**, being in a communication flow with an internet network **50** and having a voice-commenting-management module **120**, activated thereon. Personal mobile device **22** is in communication flow with vocal-commenting-services server **102** over a wireless network **50**, including an internet network.

To use vocal commenting system **100**, a user $\mathbf{20_i}$ surfs the internet over network **50**, and selects a site and a page of interest. User $\mathbf{20_i}$ uses any device that facilitates connection to the internet, such as a desktop computer, a laptop computer, a tablet or a smart mobile device, having a dedicated voice-commenting-management module $\mathbf{120_i}$ running thereon, in the background. If user $\mathbf{20_i}$ desires to post a comment to be associated with the selects page of interest and activates voice-commenting-management module $\mathbf{120_i}$.

Reference is now made to Fig. 2, showing a schematic flowchart diagram of an example vocal-commenting-posting method **200** for serving a user $\mathbf{20_i}$ that desires to post a new voice comment to be associated with an internet page of interest he/she has selected, according to embodiments of the present invention. Once user $\mathbf{20_i}$ has activated dedicated voice-commenting-management module $\mathbf{120_i}$, vocal-commenting-posting method **200** proceeds as follows:

Step 210: posting a voice comment using a microphone of a personal device.

By activating voice-commenting-management module $\mathbf{120_i}$, user $\mathbf{20_i}$ indicates to that he desires to either post a new voice comment or to hear a recorded voice comment.

To post a new voice comment to be associated with an internet page of interest he/she has selected, the method proceeds with the following steps, as outlined in Fig. 3:

Step 211: activating a posting application in order to post a voice comment using a microphone of a personal device.

User **20$_i$** activates voice-commenting-management module **120$_i$** in order to post a voice comment. Voice-commenting-management module **120$_i$** activates the microphone of personal device **22$_i$**.

Step 212: activating recording mode.

Voice-commenting-management module **120$_i$** activates the microphone of personal device **22$_i$**. User **20$_i$** records his/her message, typically, within a limited time interval.

Step 214: terminating voice recording.

Voice-commenting-management module **120$_i$** deactivates the microphone of personal device **22$_i$**, either after a preconfigured time interval, or after silent time interval, or after user **20$_i$** has indicated to do so.

Step 216: entering textual comments.

User **20$_i$** enters textual data. The textual data may include mandatory data and/or non-mandatory data.

Step 218: sending voice comment to vocal commenting server.

User **20$_i$** indicates to voice-commenting-management module **120$_i$** that the new voice comment is completed. Voice-commenting-management module **120$_i$** sends the newly recorded voice comment, including the textual data, to vocal-commenting-services server **102**.

Step 220: receiving the newly recorded voice comment by vocal commenting server.

Main processing unit **110** receives the newly recorded voice from voice-commenting-management module **120$_i$** and store the voice comment in remote storage services proving unit **140**.

Step 230: analyzing the newly recorded voice comment.

Main processing unit **110** analyzing the newly recorded voice comment and storing the metadata of the comment in Comments DB **132**.

(end of vocal-commenting-posting method **200**)

Preferably, to facilitate fast fetching of a stored voice comment to enable fast play upon a request of a user **20$_i$**, each of the voice comments stored in comments DB

132 are indexed by main processing unit **110** and stored in remote storage services proving unit **140**. Preferably, the indexed file is stored in a preconfigured format that is supported by a target search engine such as Google, Bing, Yahoo and the like.

Typically, the indexing process is a cyclic process that is automatically activated every *N* minutes. Reference is now also made to Fig. 4, showing a schematic flowchart diagram of a cyclic method **300** for indexing the voice comments stored in comments DB **132**, according to an embodiment of the present invention. Method **300** proceeds as flows:

Step 310: selecting next voice comment.

Main processing unit **110** selects the next voice comment from comments DB **132**.

Step 320: receiving comment's data.

Main processing unit **110** fetches the selected next voice comment, and analyzes the voice comment to identify all data segments contained within the fetched voice comment.

Step 330: structuring the voice comment to one or more indexed comment.

Main processing unit **110** builds the indexed record of the voice comment, using the identified data segments.

Step 340: save the indexed record of the voice comment in the remote storage services.

Main processing unit **110** saves the indexed record of the voice comment in a respective indexed file in remote storage services proving unit **140**.

Step 345: check if there are more voice comments in the comments DB.

Main processing unit **110** checks if there are more voice comments in comments DB **132**.

If there are more voice comments in comments DB **132**, go to step **310**.

Step 350: save respective index files with the remote storage services.

Since there are no more voice comments in comments DB **132**, save respective index files, formed/updated in the indexing process, with in remote storage services proving unit **140**.

(end of indexing method **300**)

Reference is now made to Fig. 5, showing a schematic flowchart diagram of a method **400** of playing a recorded voice comment. Method **400** proceeds as flows:

Step 410: selecting a voice comment.

User $\mathbf{20_i}$ selects a voice comment in a selected internet page of a selected internet site.

Step 420: activating playing application in order to play a selected voice comment using a speaker of a personal device.

User $\mathbf{20_i}$ activates voice-commenting-management module $\mathbf{120_i}$ in order to play a selected voice comment in a selected internet page. Voice-commenting-management module $\mathbf{120_i}$ activates the one or more speakers of personal device $\mathbf{22_i}$.

Step 430: sending the play request by voice-commenting-management module $\mathbf{120_i}$ to vocal commenting server.

Voice-commenting-management module $\mathbf{120_i}$ sends the play request to vocal-commenting-services server **102**.

Step 440: fetching the selected voice comment from the storage service.

Main processing unit **110** fetches the requested voice message as stored in the respective indexed file in remote storage services proving unit **140**.

Step 450: receiving the fetched voice comment from vocal commenting server.

Voice-commenting-management module $\mathbf{120_i}$ receives the fetched voice comment from vocal-commenting-services server **102**.

Step 460: playing the voice message via the speakers of the personal device.

Voice-commenting-management module $\mathbf{120_i}$ plays the received voice comment to user $\mathbf{20_i}$, though the activated one or more speakers of personal device $\mathbf{22_i}$.

(end of vocal comment playing method **400**)

In variations of the present invention, there is provided a method of flagging a selected voice comment by the user. A user $\mathbf{20_i}$ flags the selected comment and voice-commenting-management module $\mathbf{120_i}$ send the flag to vocal-commenting-services server **102**, which records the flag with association to the selected voice comment.

In variations of the present invention, there is provided a method of capturing a user activity, initiated by voice-commenting-management module **120$_i$**. The collected activity data is sent by voice-commenting-management module **120$_i$** to vocal-commenting-services server **102**, which records the statistical data. It should be noted that the collected activity data me be collected by any analytic tools, including tools provided by a third party.

In variations of the present invention, vocal commenting system **100** may also collect information from one or more voice comments posted by the same user or read by the same user. The information collected may also include data extracted from a voice recording comment, the title of the comment, the commenter name, the content of the textual message associated with the voice comment and the user ID. Information may also be collected from the system, such as the creation date, the assigned category of the comment (sport, art, politics etc.), country, language, content title keywords, gender, mood (i.e., laugh, yell etc.), recommended voice filters, personal voice recognition, voice match between people and voice patterns analysis (i.e., mood recognition).

In variations of the present invention, vocal commenting system **100** may also include an advertising platform **112** that generates ads derived from data related to posted voice comments. Advertising platform **112** may be integrated with main processing unit **110**, or embodied as an ads service or as a separated server coupled to operate with main processing unit **110**.

Reference is now made to Fig. 6, showing a schematic flowchart diagram of a method **500** of presenting ads to a user of a URL address that facilitates recording of voice comments. Method **500** proceeds as flows:

Step 510: sending an ad request.

Upon entering a URL address that facilitates recording of voice comments, by user **20$_i$**, voice-commenting-management module **120$_i$** sends and ad request to vocal commenting system **100**.

Step 520: fetching user related data.

Advertising platform **112** fetches characteristics data associated with user $\mathbf{20_i}$, from database unit **130**. For example, pages visited by user $\mathbf{20_i}$, voice and/or textual comment data, etc.

Step 530: extracting ad categories and ad keywords.

Advertising platform **112** extracts ad categories and ad keywords from the fetched characteristics data associated with user $\mathbf{20_i}$.

Step 540: fetching the most suitable ads that complies with the categories/keywords.

Advertising platform **112** fetches the most suitable ads that comply with the extracted categories and keywords.

Step 550: sending the fetched ads to the user.

Vocal-commenting-services server **102** sends the fetched ads to personal device $\mathbf{22_i}$ of user $\mathbf{20_i}$.

Step 560: playing the ads on the personal device.

Voice-commenting-management module $\mathbf{120_i}$ plays one or more of the received ads on personal device $\mathbf{22_i}$ of user $\mathbf{20_i}$.

(end of vocal comment playing method **500**)

Although the present invention has been described with reference to the preferred embodiment and examples thereof, it will be understood that the invention is not limited to the details thereof. Various substitutions and modifications have been suggested in the foregoing description, and others will occur to those of ordinary skill in the art. Therefore, all such substitutions and modifications are intended to be embraced within the scope of the invention as defined in the following claims.

WHAT IS CLAIMED IS:

1. A vocal commenting system for recording and playing a voice message associated with a selected internet page, the method comprising:

a) a voice-commenting-management module, operatively activated on a personal device of a user, the personal device having a microphone;

b) a vocal-commenting-services server comprising:

i) a processing unit;

ii) a database unit including a comments database; and

iii) a remote storage services proving unit.

2. The vocal commenting system as in claim 1, wherein said processing unit is a grid computing workflow management system and/or a server main-processing-unit.

3. The vocal commenting system as in claim 1 further comprising an advertising platform.

4. A vocal commenting method for recording a voice message associated with a selected internet page, the method comprising the steps of:

a) posting a voice comment using a microphone of a personal device, having an activated voice-commenting-management module, wherein upon completion of said voice comment, sending said newly recorded voice comment to a vocal-commenting-services server by said voice-commenting-management module;

b) receiving said newly recorded voice comment by vocal-commenting-services server;

c) storing said newly recorded voice comment in a remote storage services proving unit;

d) analyzing said newly recorded voice comment thereby generating metadata associated with said newly recorded voice comment; and

e) storing said metadata of the comment in a comments database.

5. The vocal commenting method as in claim 4, wherein said posting of a voice comment comprises the steps of:

a) activating said voice-commenting-management module, wherein said voice-commenting-management module activates said microphone of said personal device;
b) terminating voice recording by deactivating said microphone; and
c) sending said newly recorded voice comment to said vocal commenting server.

6. The vocal commenting method as in claim 5, wherein said microphone is activated for a preconfigured time interval.

7. The vocal commenting method as in claim 5, wherein said microphone is deactivated after a preconfigured silent time interval.

8. The vocal commenting method as in claim 5, wherein the user enters textual data associated with said newly recorded voice comment.

9. The vocal commenting method as in claim 8, wherein said textual data includes mandatory data and/or non-mandatory data.

10. The vocal commenting method as in claim 5, wherein the user flags a selected comment, and wherein said voice-commenting-management module send the flag to said vocal-commenting-services server that records the flag with association to said selected voice comment.

11. A vocal commenting method for playing a voice message associated with a selected internet page, the method comprising the steps of:
a) selecting a recorded voice comment associated with a selected internet page; and
b) playing said selected recorded voice comment.

12. The vocal commenting method as in claim 11 further including the step of recording a voice message associated said played voice comment.

13. The vocal commenting method as in claim 11 further including the step of indexing said voice comments stored in said comments database, thereby facilitating fast fetching by a target search engine.

14. The vocal commenting method as in claim 13, wherein said indexing process is a cyclic process that is automatically activated every *N* minutes, said indexing process comprises the steps of:

a) selecting next said voice comment;
b) analyzing said voice comment to identify all data segments contained within said selected voice comment;
c) structuring an indexed record of said selected voice comment, using the identified data segments;
d) saving said indexed record in a respective indexed file in a remote storage services proving unit; and
e) repeat for all voice comments in said comments database.

15. The vocal commenting method as in claims 4 or 11 further including the steps of:

a) sending an ad request, upon entering a URL address that facilitates recording of voice comments;
b) fetching user related data;
c) extracting ad categories and ad keywords;
d) fetching the most suitable ads that comply with the categories and keywords;
e) sending the fetched ads to the user; and
f) playing the ads on the personal device.

16. The vocal commenting method as in claim 15, wherein said user related data comprises pages visited by the user and voice and/or textual comments posted or accessed by the user.

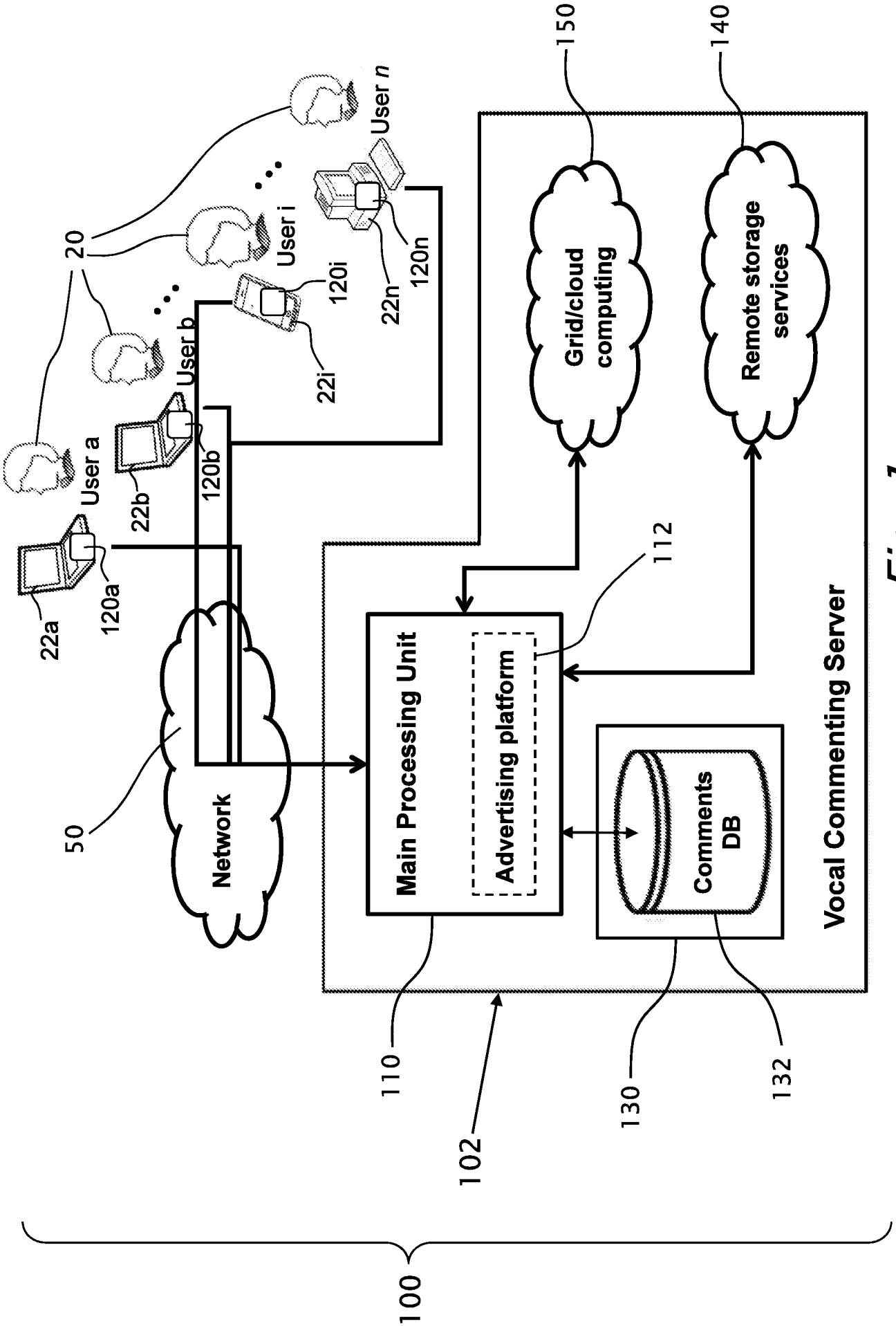
100
Vocal Commenting Server
Main Processing Unit
Advertising platform
112
Comments DB
110
102
130
132
Network
50
Grid/cloud computing
150
Remote storage services
140
20
User a
User b
User i
User n
22a
120a
22b
120b
22i
120i
22n
120n

Fig. 1

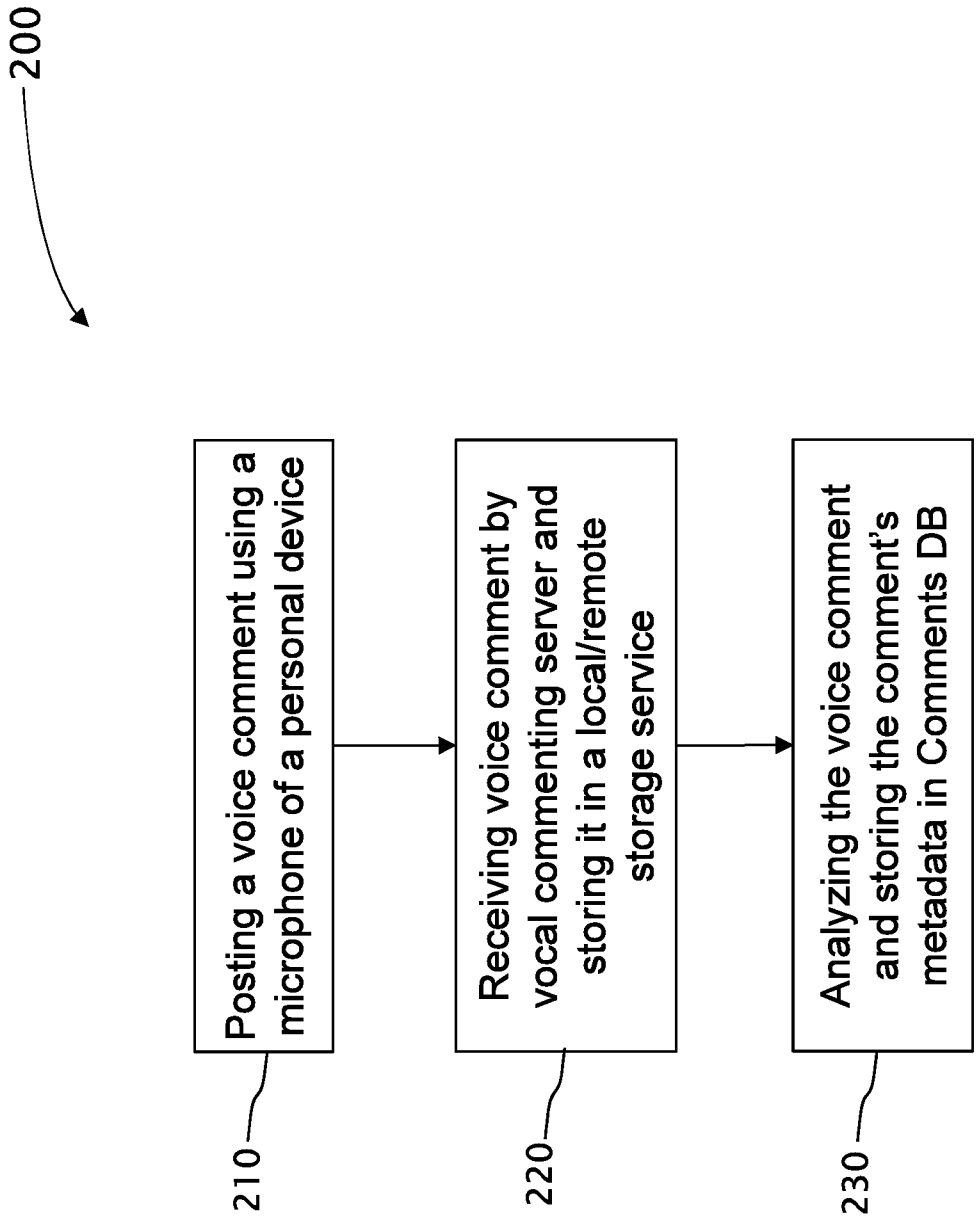
200
Posting a voice comment using a microphone of a personal device
Receiving voice comment by vocal commenting server and storing it in a local/remote storage service
Analyzing the voice comment and storing the comment's metadata in Comments DB
210
220
230

Fig. 2

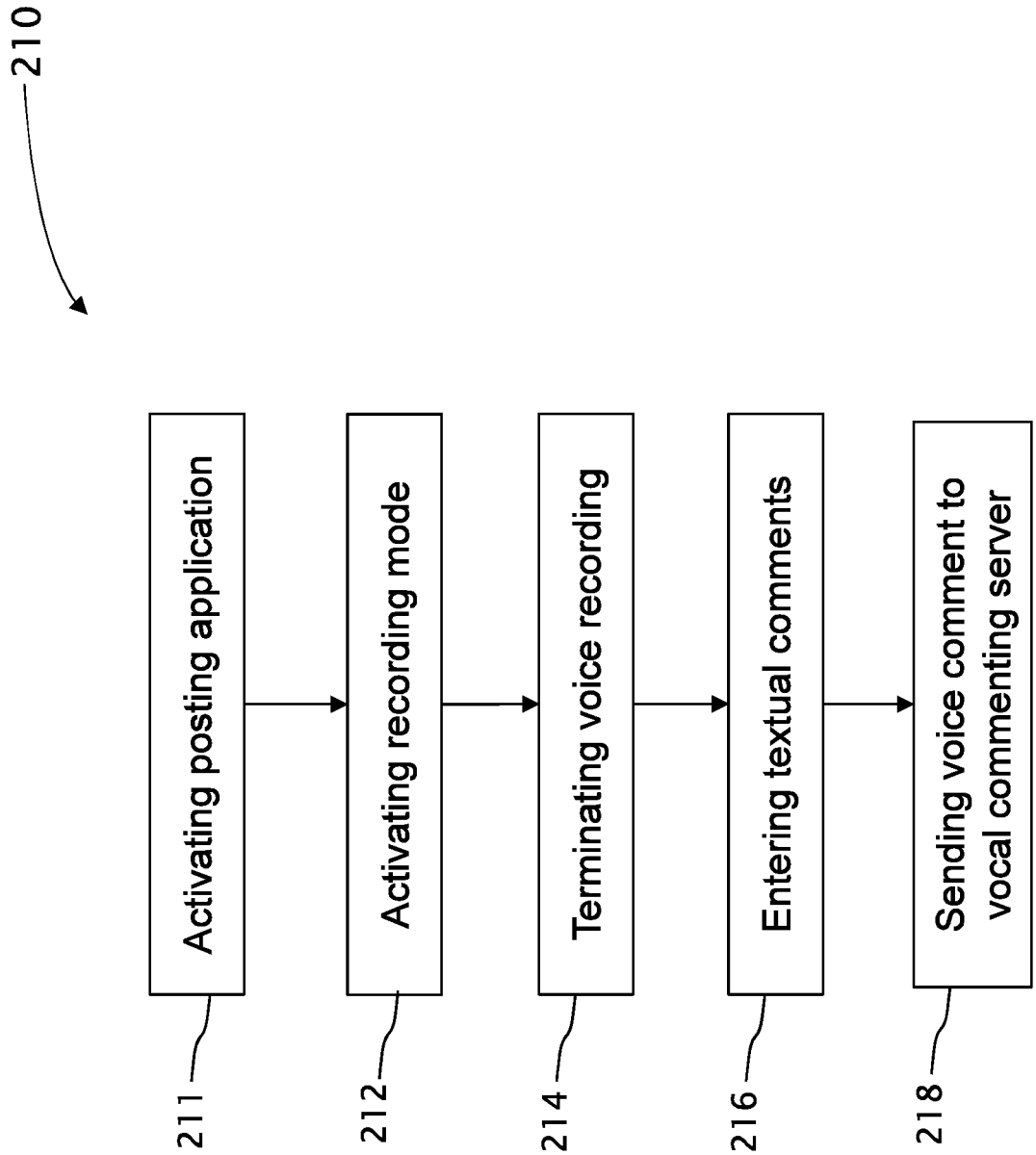
210
Activating posting application
Activating recording mode
Terminating voice recording
Entering textual comments
Sending voice comment to vocal commenting server
211
212
214
216
218

Fig. 3

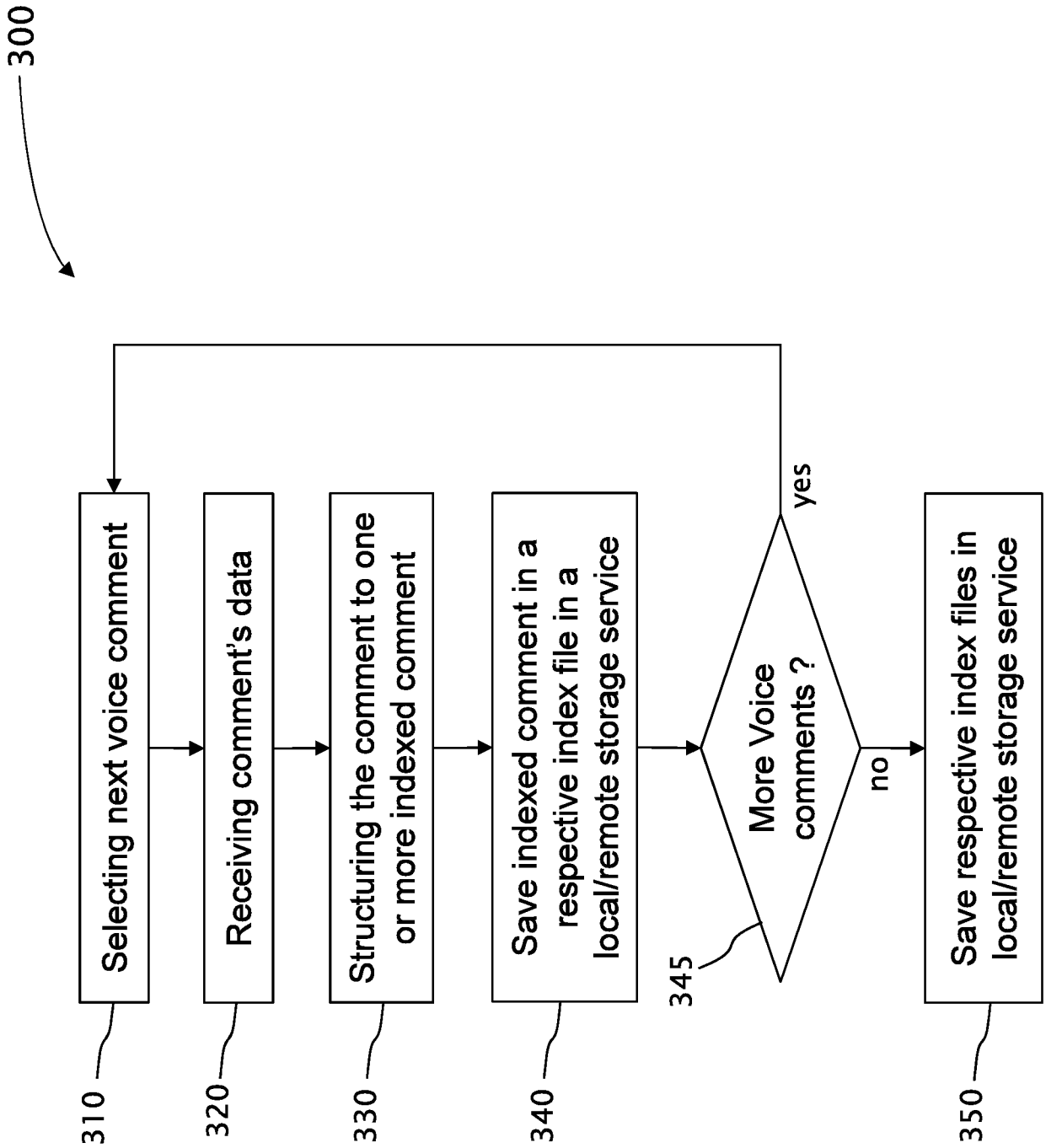
300
Selecting next voice comment
Receiving comment's data
Structuring the comment to one or more indexed comment
Save indexed comment in a respective index file in a local/remote storage service
More Voice comments ?
yes
no
Save respective index files in local/remote storage service
310
320
330
340
345
350

Fig. 4

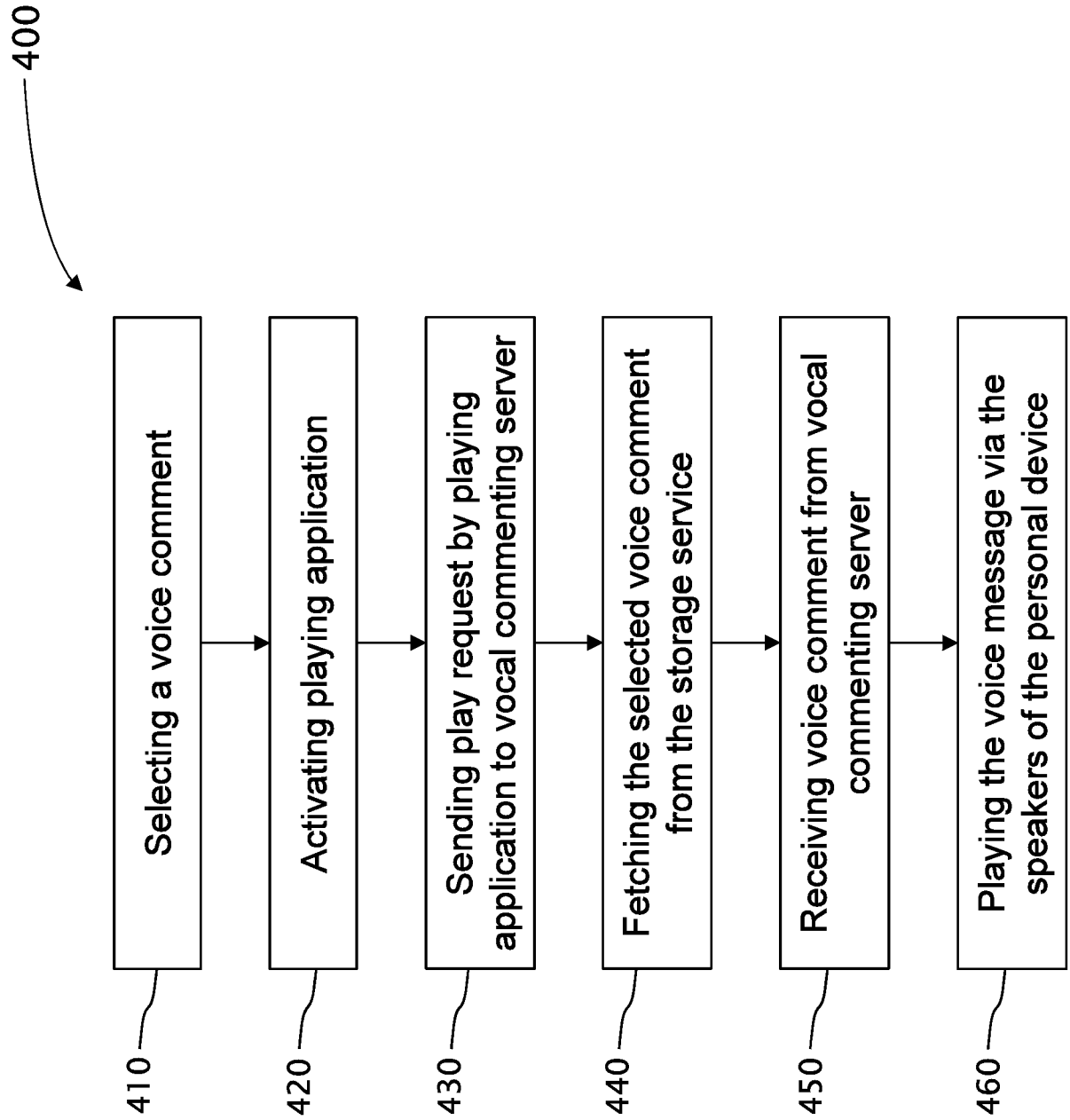
400
Selecting a voice comment
Activating playing application
Sending play request by playing application to vocal commenting server
Fetching the selected voice comment from the storage service
Receiving voice comment from vocal commenting server
Playing the voice message via the speakers of the personal device
410
420
430
440
450
460

Fig. 5

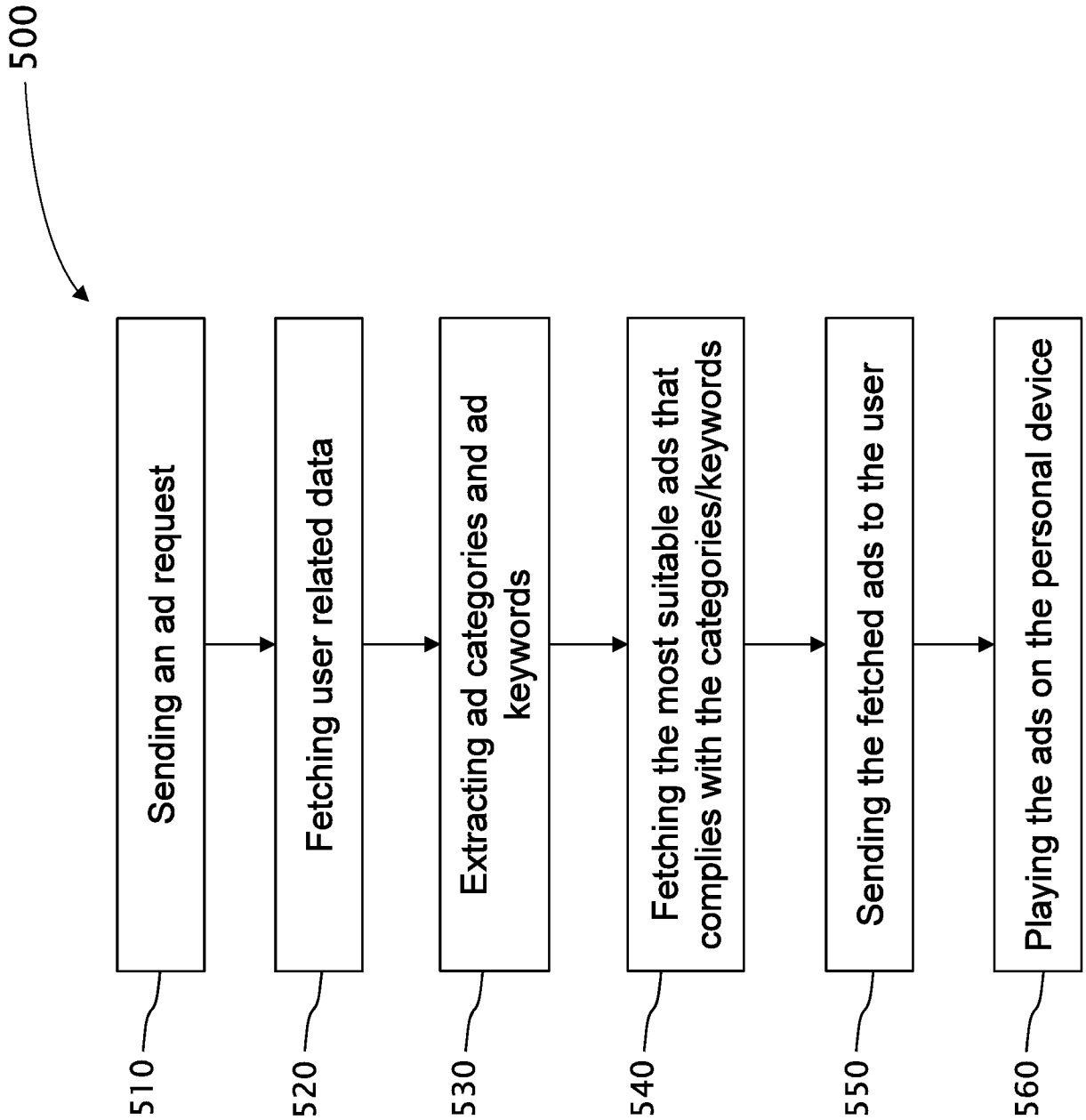
500
Sending an ad request
Fetching user related data
Extracting ad categories and ad keywords
Fetching the most suitable ads that complies with the categories/keywords
Sending the fetched ads to the user
Playing the ads on the personal device
510
520
530
540
550
560

Fig. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL2014/051123

A. CLASSIFICATION OF SUBJECT MATTER
IPC (2015.01) G06F 17/00, G10L 15/26

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)
IPC (2015.01) G06F 17/00, G10L 15/26

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 practicable, search terms used)
Databases consulted: PATENTSCOPE
Search terms used: bulletin voice comment metadata

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009043814 A1 Faris et al. 12 Feb 2009 (2009/02/12) abstract,¶¶6,7,25,29,38,41,46,53,56,57	1-4,8-16
X	US 2011055282 A1 Hoving 03 Mar 2011 (2011/03/03) figs.1-4 abstract, ¶¶0023,0024,0025,0027,0029	1-16
X	US 6026148 A Dworkin et al. 15 Feb 2000 (2000/02/15) abstrct	1
A	The entire document	2-16
A	CN 101667188 A XUEYING LIU 10 Mar 2010 (2010/03/10) The entire document	1-16

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
11 Mar 2015	16 Mar 2015

Name and mailing address of the ISA:	Authorized officer
Israel Patent Office Technology Park, Bldg.5, Malcha, Jerusalem, 9695101, Israel Facsimile No. 972-2-5651616	MAUDA Nissim Telephone No. 972-2-5651733

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL2014/051123

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 8165997 B1 Podgorny et al. 24 Apr 2012 (2012/04/24) The entire document	4
A	US 2012102091 A1 Rao 26 Apr 2012 (2012/04/26) The entire document	1-16
A	US 2013275857 A1 Norwood et al. 17 Oct 2013 (2013/10/17) abstract, ¶9	1-16

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
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