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[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR PROVIDING VARIOUS TYPES OF ADVERTS

```
<Term termID="8">
  <Name xml:lang="en">Commercial Advert</Name>
  <Definition xml:lang="en">
    Relation: A product or service featured in the current A/V content is being
    advertised elsewhere. The CRID identifies the A/V content of the advert
    Example: The user is watching a film containing a desirable product. If the user
    indicates interest in that product an advert is captured providing further information.
  </Definition>
</Term>
<Term termID="8.1">
  <Name xml:lang="en">Normal Advert</Name>
</Term>
<Term termID="8.2">
  <Name xml:lang="en">Telescoped Advert</Name>
</Term>
<Term termID="8.3">
  <Name xml:lang="en">Speedbump</Name>
</Term>
```

(57) Abstract: Provided is a method for providing advertisements (ads) in diverse forms based on the type of an ad in a personalized broadcasting environment, and a system thereof, The method includes the steps of : a) analyzing metadata including a descriptor for defining relationship between an ad and a broadcasting program; b) determining the type of the ad among a normal ad type, a telescoped ad type, and a speedbump ad type based on relationship description used for the descriptor; and c) providing the ad based on the determined ad type. The technology of the present invention makes a user watch ads in diverse forms by adopting a "HowRelated" descriptor which defines the relationship between a broadcasting program and an ad and includes several types of relationship description to thereby inform a user of the location and the type of the ad.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

METHOD AND SYSTEM FOR PROVIDING VARIOUS TYPES OF ADVERTS

DescriptionTechnical Field

5 The present invention relates to a method and system for providing advertisements (ads or adverts); and, more particularly, to a method and system for providing advertisements in diverse forms according to the kind of advertisements in a personalized broadcasting environment.

Background Art

10 As broadcasting is digitalized, broadcasting environments are rapidly changed from conventional uni-directional broadcasting reception to multi-channel reception and even into such a complex form as accommodation of diverse reception terminals by connecting a broadcasting network with a communication network. An increasing number of broadcasting viewers want to get out
15 of inactively receiving and watching broadcasting programs through limited channels and to participate in broadcasting services or demand to receive and watch desired programs at desired time.

20 The trend shows that the broadcasting environments are evolving into more complicated and personalized forms. Personalized broadcasting makes the viewers consume desired contents at desired time with diverse terminals based on their preferences in desired formats conveniently and efficiently in the diverse and new broadcasting
25 environments.

30 The personalized broadcasting is to provide broadcasting contents suitably to a usage environment including user preference, terminal performance, network characteristics, and natural environment such as time,
35 place and the feeling of a user.

The standards for the personalized broadcasting are divided into Phase 1, which is a TV Anytime 1 (TVA-1), and Phase 2, which is a TVA-2, based on an assumed system environment and a major function to be provided. The TVA-1 provides such application services as search, selection, acquisition and consumption of audio/video (AV) contents with a personal digital recoder (PDR) in an environment where a main broadcasting program is transmitted through a uni-directional broadcasting channel and additional metadata are available through a bi-directional network.

The TVA-2 extends the consumption environment of the TVA-1 which assumes a unit-directional broadcasting channel and a bi-directional network. It supports contents sharing between diverse terminals in a home network environment and provides a targeting service for providing contents that fits to diverse user environments. The TVA-2 also accommodates not only the AV of the TVA-1 but also diverse forms of contents.

Predetermined broadcasting advertisements (ads or adverts) such as TV commercials are reproduced repeatedly according to a contract with a broadcasting company while a predetermined program is broadcasted. The broadcasted ads are shown in other broadcasting channels, too, repeatedly. In an environment with sufficient storage capacity, it is possible to store a predetermined number of ads in a personal storage and reproduce the ads from the personal storage upon a signal transmitted through a broadcasting program. Of course, it is possible to reproduce the ads after receiving them from a communication network. When the environment is built up, it is possible to provide user-specified ads.

To provide the user-specified ads, the following information is in need. First, the location for an ad to be inserted into the broadcasting program should be specified. If necessary, the ad time, which means the

length of the ad to be inserted into the specified location, may be specified.

When there is information defining ads available for a predetermined broadcasting program, the information needs to be linked with the broadcasting program.

The relationship between the broadcasting program and a predetermined ad can be defined by using a descriptor "HowRelated" of the TVA-1. The "HowRelated" descriptor may also define the relationship between a broadcasting program with another broadcasting program, the relationship between a broadcasting program with an ad, and the relationship between a broadcasting program with a related website.

Fig. 1 shows a classification scheme for linking ads according to a prior art. This is described in the TVA-1 S003v13 Part A.

If the relationship defined in the "HowRelated" is simply described as "Commercial Advert," it is possible to check where the ad related to the broadcasting program is defined but it is not possible to know what kind of an ad it is and how the ad can be reproduced.

Disclosure

Technical Problem

It is, therefore, an object of the present invention to provide a method for accessing to and providing advertisements (ads or adverts) to users in diverse forms according to the kind of an ad when the relationship between a broadcasting program and an ad is described in a personalized broadcasting environment, and a system thereof.

Technical Solution

In accordance with one aspect of the present invention, there is provided a method for providing advertisements

(ads or adverts), which includes the steps of: a)
analyzing metadata including a descriptor for defining
relationship between an ad and a broadcasting program; b)
determining the type of the ad among a normal ad type, a
5 telescoped ad type, and a speedbump ad type based on
relationship description used for the descriptor; and c)
providing the ad based on the determined ad type.

When the determined ad type is a telescoped ad type
or a speedbump ad type, the presence of the telescoped ad
10 or the speedbump ad may be notified to a user. When the
user selects the telescoped ad in the middle of watching
the broadcasting program, ad information related to a
segment of the broadcasting program is provided to the user.
When the user selects the telescoped ad in the middle of
15 watching a normal ad, an ad with more detailed information
than the normal ad is provided to the user. When the user
selects the speedbump ad in the middle of watching the
broadcasting program, brief ad information related to the
segment of the broadcasting program is provided to the user.
20 When the user selects the speedbump ad in the middle of
watching a normal ad, an ad with more brief information
than the normal ad is provided to the user. When the
determined ad type is a normal ad, the normal ad is
provided without notifying the user of the presence of the
25 ad.

In accordance with another aspect of the present
invention, there is provided a system for providing
advertisements (ads or adverts), which includes: a metadata
analyzing unit for analyzing metadata including a
30 descriptor for defining relationship between an ad and a
broadcasting program; an ad type determining unit for
determining the type of the ad among a normal ad type, a
telescoped ad type, and a speedbump ad type based on
relationship description used for the descriptor; and an ad
35 providing unit for providing the ad based on the determined

ad type.

Advantageous Effects

5 The technology of the present invention informs a user terminal of the location of type of an advertisement (ad or adverts) by adopting a descriptor "HowRelated" for defining the relationship between a broadcasting program and an ad so that the user can watch the ad in diverse
10 forms.

Description of Drawings

15 The above and other objects and features of the present invention will become apparent from the following description of the preferred embodiments given in conjunction with the accompanying drawings, in which:

20 Fig. 1 shows a classification scheme for linking an advertisement with a broadcasting program according to a prior art;

 Fig. 2 describes a classification scheme related to an expanded ad in accordance with an embodiment of the present invention; and

25 Fig. 3 presents an exemplary description for reproducing an ad by using "HowRelated" in accordance with an embodiment of the present invention.

Best Mode for the Invention

30 Other objects and aspects of the invention will become apparent from the following description of the embodiments with reference to the accompanying drawings, which is set forth hereinafter. Also, when it is considered that detailed descriptor on a prior art may blur the point of
35 the present invention, the description will not be provided

herein. Preferred embodiments of the present invention will be described in detail with the accompanying drawings hereinafter.

Fig. 2 describes a classification scheme related to an expanded ad in accordance with an embodiment of the present invention.

A descriptor "HowRelated" defines the relationship between an advertisement (ad or advert) and a broadcasting program and it includes three entries "Normal Advert," "Telescoped Advert" and "Speedbump."

First, when the relationship description is "Normal Advert," it means that there is an ad related to the broadcasting program, i.e., an AV content, that is, it means that there is an interstitial content.

When an ad is inserted in the middle of a reproducing program, an ad linked in the relationship of "Normal Advert" can be inserted typically. In other words, the "Normal Advert" is used to link an ad to a predetermined segment of a broadcasting program.

The ad is reproduced when the reproduction of the program stops. After the reproduction of the ad finishes, the program resumes reproduction at the time point that the program stopped or at a time point a bit ahead of the time point that the program stopped.

When there is a "Normal Advert" ad, the broadcasting program stops and the ad begins to be reproduced without notifying the user of the presence of the ad.

If the relationship description used for the "HowRelated" is the "Telescoped Advert," the related ad is linked with a segment of the broadcasting program and a user watches the related ad by selecting it in the middle of watching the segment. Also, it is possible to link a normal ad with another ad with detailed information and make the user get more detailed information by selecting the ad with detailed information in the middle of watching

the normal ad.

The "Telescoped Advert" exists in a predetermined segment of a broadcasting program or an ad. When the user selects a "Telescoped Advert" ad, an ad related to the segment of the broadcasting program or a detailed-version of the ad is shown.

In short, the "Telescoped Advert" links a segment of a broadcasting program with a related ad and lets a user select and watch the related ad in the middle of watching the segment. Also, it is possible to link a normal ad with a detailed ad so that the user can select and watch the detailed ad in the middle of watching the normal ad.

When a predetermined segment includes the "Telescoped Advert" ad, the user terminal should notify the user of the presence of the "Telescoped Advert."

When the relationship description used for the "HowRelated" descriptor is "Speedbump," a normal ad is linked with a brief ad, and the user can select the brief ad in the middle of watching the normal ad. When the user selects a "Speedbump" ad, the brief ad of the normal ad is shown.

The "Speedbump" provides a brief ad with simpler information than the normal ad, when the user selects the speedbump ad in the middle of watching the broadcasting program or the normal ad.

Thus, when a segment includes a "Speedbump" ad, the user terminal should notify the user of the presence of the "Speedbump" ad.

Fig. 3 presents an exemplary description for reproducing an ad by using the types of "HowRelated" descriptor in accordance with an embodiment of the present invention.

A "Telescoped Advert" type of an ad exists in 1,000 frames of a broadcasting program defined as *crid://ybc.com/myprogram1* from the 30,000th frame. The ad

is defined as *crid://ybc.com/advert1*.

Also, a "Speedbump" type of an ad exists in 2,000 frames from the 60,000th frame, and the ad is defined as *crid://ybc.com/advert2*.

5 Therefore, the user terminal reproduces the broadcasting program defined as *crid://ybc.com/myprogram1* and then notifies the user of the presence of the "Telescoped Advert" ad in 1,000 frames from the 30,000th frame. When the user selects the speedbump ad, the user
10 terminal reproduces the *crid://ybc.com/advert1* content and then goes to the 31,000th frame to continue to reproduce the broadcasting program.

 Also, the user terminal notifies the user of the presence of the "Speedbump" ad in 2,000 frames from the
15 60,000th frame in the middle of reproduction of the same broadcasting program. When the user selects the speedbump ad, the user terminal reproduces the *crid://ybc.com/advert2* content and then goes to the 62,000th frame to continue to reproduce the broadcasting program.

20 The method of the present invention can be realized as a program and stored in a computer-readable recording medium.

 While the present invention has been described with respect to certain preferred embodiments, it will be
25 apparent to those skilled in the art that various changes and modifications may be made without departing from the scope of the invention as defined in the following claims.

Industrial Applicability

30

 The technology of the present invention can be applied to personalized digital broadcasting of the TV Anytime (TVA).

What is claimed is:

1. A method for providing advertisements (ads or adverts), comprising the steps of:

5 a) analyzing metadata including a descriptor for defining relationship between an ad and a broadcasting program;

b) determining the type of the ad among a normal ad type, a telescoped ad type, and a speedbump ad type based
10 on relationship description used for the descriptor; and

c) providing the ad based on the determined ad type.

2. The method as recited in claim 1, wherein when the determined ad type is a telescoped ad type or a
15 speedbump ad type, the presence of the telescoped ad or the speedbump ad is notified to a user.

3. The method as recited in claim 2, wherein when the user selects the telescoped ad in the middle of
20 watching the broadcasting program, ad information related to a segment of the broadcasting program is provided to the user.

4. The method as recited in claim 2, wherein when
25 the user selects the telescoped ad in the middle of watching a normal ad, an ad with more detailed information than the normal ad is provided to the user.

5. The method as recited in claim 2, wherein when
30 the user selects the speedbump ad in the middle of watching the broadcasting program, brief ad information related to the segment of the broadcasting program is provided to the user.

35 6. The method as recited in claim 2, wherein when

the user selects the speedbump ad in the middle of watching a normal ad, an ad with more brief information than the normal ad is provided to the user.

5 7. The method as recited in claim 1, wherein when the determined ad type is a normal ad, the normal ad is provided without notifying the user of the presence of the ad.

10 8. A system for providing advertisements (ads or adverts), comprising:

 a metadata analyzing unit for analyzing metadata including a descriptor for defining relationship between an ad and a broadcasting program;

15 an ad type determining unit for determining the type of the ad among a normal ad type, a telescoped ad type, and a speedbump ad type based on relationship description used for the descriptor; and

 an ad providing unit for providing the ad based on
20 the determined ad type.

 9. The system as recited in claim 8, wherein when the determined ad type is a telescoped ad type or a speedbump ad type, the ad providing unit notifies a user of
25 the presence of the telescoped ad or the speedbump ad.

 10. The system as recited in claim 9, wherein when the user selects the telescoped ad in the middle of watching the broadcasting program, the ad providing unit
30 provides ad information related to a segment of the broadcasting program.

 11. The system as recited in claim 9, wherein when the user selects the telescoped ad in the middle of
35 watching a normal ad, the ad providing unit provides an ad

with more detailed information than the normal ad to the user.

12. The system as recited in claim 9, wherein when
5 the user selects the speedbump ad in the middle of watching the broadcasting program, the ad providing unit provides brief ad information related to the segment of the broadcasting program to the user.

10 13. The system as recited in claim 9, wherein when the user selects the speedbump ad in the middle of watching a normal ad, the ad providing unit provides an ad with more brief information than the normal ad to the user.

15 14. The system as recited in claim 8, wherein when the determined ad type is a normal ad, the ad providing unit provides the normal ad without notifying the user of the presence of the ad.

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FIG. 1

```
<Term termID="8">
```

```
  <Name xml:lang="en">Commercial Advert</Name>
```

```
  <Definition xml:lang="en">
```

Relation: A product or service featured in the current A/V content is being advertised elsewhere. The CRID identifies the A/V content of that advert

Example: The user is watching a film containing a desirable product. If the user indicates interest in that product an advert is captured providing further information.

```
  </Definition>
```

```
</Term>
```

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FIG. 2

```
<Term termID="8">
  <Name xml:lang="en">Commercial Advert</Name>
  <Definition xml:lang="en">
    Relation: A product or service featured in the current A/V content is being
    advertised elsewhere. The CRID identifies the A/V content of the advert
    Example: The user is watching a film containing a desirable product. If the user
    indicates interest in that product an advert is captured providing further information.
  </Definition>
</Term>
<Term termID="8.1">
  <Name xml:lang="en">Normal Advert</Name>
</Term>
<Term termID="8.2">
  <Name xml:lang="en">Telescoped Advert</Name>
</Term>
<Term termID="8.3">
  <Name xml:lang="en">Speedbump</Name>
</Term>
```

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FIG. 3

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<?xml version="1.0" encoding="UTF-8"?>
<TVAMain xmlns="urn:tva:metadata:2005" xml:tva2="urn:tva:metadata:Phase2:2005"
xmlns:mpeg21="urn:mpeg:mpeg21:2003:01-DIA-NS"
xmlns:mpeg7="urn:mpeg:mpeg7:schema:2001"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:tva:metadata:Phase2:2005 tva2_20050212.xsd">
  <ProgramDescription>
    <SegmentInformationTable>
      <SegmentList>
        <SegmentInformation segmentId="segment01">
          <ProgramRef crid="crid://ybc.com/myprogram1"/>
          <Description>
            <RelatedMaterial>
              <HowRelated href="urn:tva:metadata:cs:HowRelatedCS2004">
                <Name>Telescoped Advert</Name>
              </HowRelated>
              <MediaLocator>crid://ybc.com/advert1</MediaLocator>
            </RelatedMaterial>
          </Description>
          <SegmentLocator>
            <MediaRelIncrTimePoint>30000</MediaRelIncrTimePoint>
            <MediaIncrDuration>1000</MediaIncrDuration>
          </SegmentLocator>
        </SegmentInformation>
        <SegmentInformation segmentId="segment02">
          <ProgramRef crid="crid://ybc.com/myprogram1"/>
          <Description>
            <RelatedMaterial>
              <HowRelated href="urn:tva:metadata:cs:HowRelatedCS2004">
                <Name>Speedbump</Name>
              </HowRelated>
              <MediaLocator>crid://ybc.com/advert2</MediaLocator>
            </RelatedMaterial>
          </Description>
          <SegmentLocator>
            <MediaRelIncrTimePoint>60000</MediaRelIncrTimePoint>
            <MediaRelIncrTimePoint>60000</MediaRelIncrTimePoint>
          </SegmentLocator>
        </SegmentInformation>
      </ProgramDescription>
    </TVAMain>

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2005/001428

A. CLASSIFICATION OF SUBJECT MATTER**IPC7 G06F 17/00**

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)

IPC7 G06F 17/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean patents and applications for inventions since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
KIPOnet DB ; TV* & broadcasting* & select* & advertisement*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 2002-80434 A (PHILIPS N.V.) 23 OCT. 2002 SEE THE WHOLE DOCUMENTS	1-14
Y	KR 2003-97843 A (SONY INC.) 31 DEC. 2003 SEE THE WHOLE DOCUMENTS	1-14
A	WO 2000-67474 A (THOMPSON SOCIETE ANONIM.) 9 NOV. 2000 SEE THE WHOLE DOCUMENTS	1-14
A	WO 2001-52544 A (SAMSUNG ELEC. INC.) 19 JUL. 2001 SEE THE WHOLE DOCUMENTS	1-14

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)	"&" document member of the same patent family
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"P" document published prior to the international filing date but later than the priority date claimed	

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