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(54) **CONSUMER DRIVEN METHODS FOR ASSOCIATING CONTENT INDENTIFIERS WITH RELATED WEB ADDRESSES**

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(52) **U.S. Cl.** **707/104.1**; 707/3
(58) **Field of Search** 707/1–10, 100, 707/104.1, 200, 205; 709/223–225, 219, 709/217; 705/10, 14

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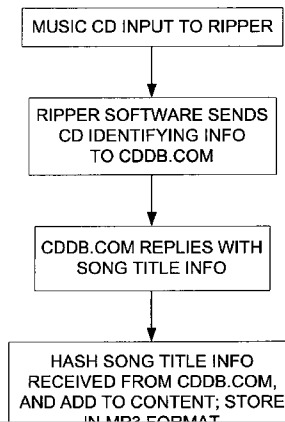
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(57) **ABSTRACT**

Media content objects, such as audio MP3 files, are associated with identifiers. The identifiers can be assigned, or can be implicit (e.g., derived from other data in the content object, as by hashing). A user of the file can utilize the identifier to query a database and thereby obtain the URL of one or more internet resources associated with that content (e.g., web sites with fan info, concert schedules, opportunities to purchase CDs, etc.). Some identifiers may not be associated with URLs in the database. A user who queries the database with such an identifier (e.g., which may be derived from an independently produced MP3) finds that there is not yet an associated URL. In this case, the user may be given the opportunity to lease this virtual address for a predetermined period, with the privilege of specifying a URL for that identifier. Subsequent users who link from this particular MP3 file thereafter are directed to the URL specified by the first user. In some arrangements, the leasing privilege is awarded through a brief auction, triggered by the first user's discovery that the address is not used. Other users who query the database with that identifier during the period of the auction are permitted to bid. When the first lease period expires, the privilege can be re-auctioned. Proceeds from such auctions can be shared, e.g., with the user who triggered the first action, or with the high bidder of a previous auction.

27 Claims, 2 Drawing Sheets

MUSIC CD INPUT TO RIPPER

RIPPER SOFTWARE SENDS CD IDENTIFYING INFO TO CDDB.COM

CDDB.COM REPLIES WITH SONG TITLE INFO

HASH SONG TITLE INFO RECEIVED FROM CDDB.COM, AND ADD TO CONTENT; STORE IN MP3 FORMAT

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U.S. Appl. No. 09/531,076, filed Mar. 18, 2000, Rhoads et al.

U.S. Appl. No. 09/563,664, filed May 2, 2000, Levy et al.

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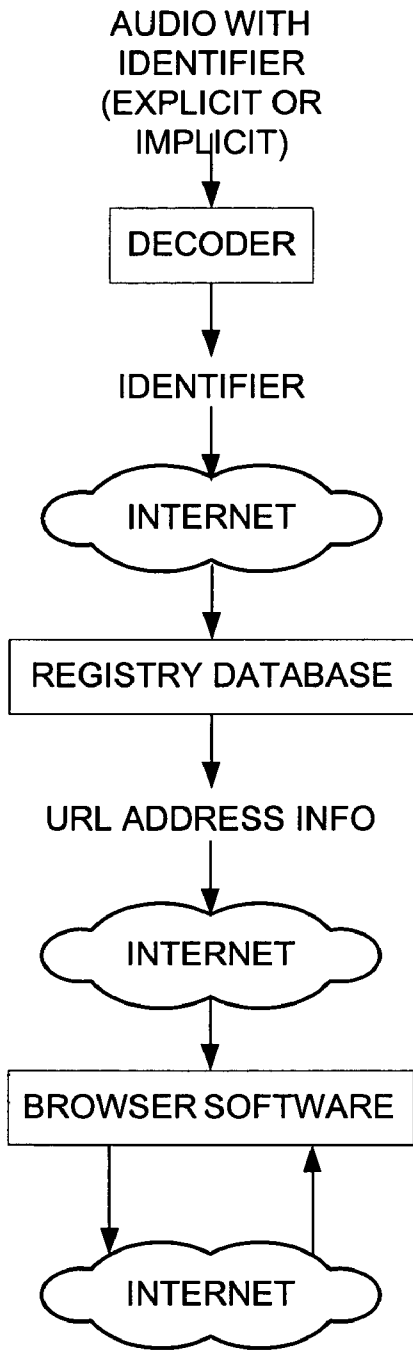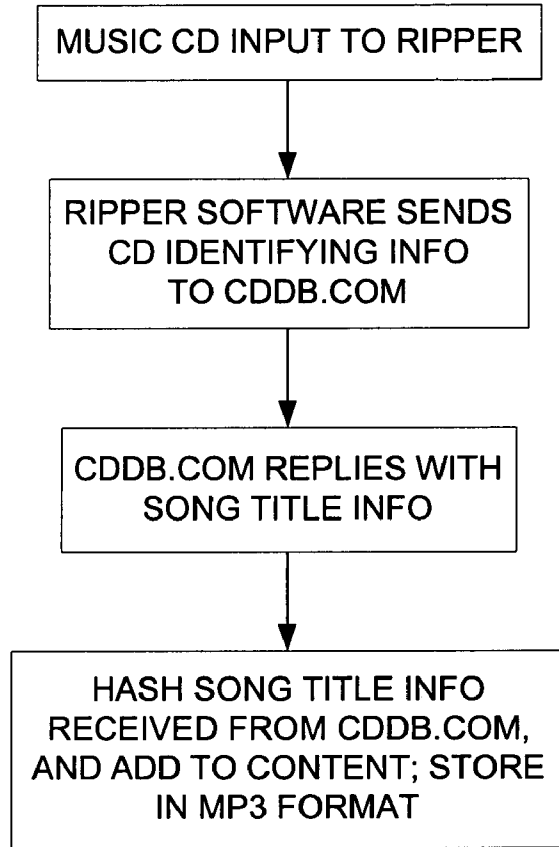U.S. Appl. No. 60/134,782, filed May 19, 1999, Rhoads.

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AUDIO WITH
IDENTIFIER
(EXPLICIT OR
IMPLICIT)

↓

DECODER

↓

IDENTIFIER

↓

INTERNET

↓

REGISTRY DATABASE

↓

URL ADDRESS INFO

↓

INTERNET

↓

BROWSER SOFTWARE

↓ ↑

INTERNET

FIG. 1

MUSIC CD INPUT TO RIPPER

↓

RIPPER SOFTWARE SENDS
CD IDENTIFYING INFO
TO CDDB.COM

↓

CDDB.COM REPLIES WITH
SONG TITLE INFO

↓

HASH SONG TITLE INFO
RECEIVED FROM CDDB.COM,
AND ADD TO CONTENT; STORE
IN MP3 FORMAT

FIG. 2

034	www.sonymusic.com/catalog/05634.html
112	www.sonymusic.com/catalog/00014.html
198	www.supertracks.com/index/artists/taylor.htm
376	www.emusic.com/0555353x.pdf
597	www.cdw.com/music/featured_CDs/index.html
612	www.sonymusic.com/catalog/00231.html
850	www.polygram.com/franklin/adf_234.htm
921	www.loudeye.com/rap/1999/46755646.html

FIG. 3

034	www.sonymusic.com/catalog/05634.html
112	www.sonymusic.com/catalog/00014.html
198	www.supertracks.com/index/artists/taylor.htm
376	www.emusic.com/0555353x.pdf
597	www.cdw.com/music/featured_CDs/index.html
612	www.sonymusic.com/catalog/00231.html
850	www.polygram.com/franklin/adf_234.htm
883	www.userdefined.com/00004.html
921	www.loudeye.com/rap/1999/46755646.html

FIG. 4

CONSUMER DRIVEN METHODS FOR ASSOCIATING CONTENT INDENTIFIERS WITH RELATED WEB ADDRESSES

RELATED APPLICATION DATA

The subject matter of the present application is related to that disclosed in copending application Ser. No. 09/476,686, filed Dec. 30, 1999; 09/531,076, filed Mar. 18, 2000; Ser. No. 09/563,664, filed May 2, 2000; and 09/574,726, filed May 18, 2000. The disclosures of these applications are incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to leasing of virtual addresses, as may be associated with music or other media content.

BACKGROUND AND SUMMARY OF THE INVENTION

For expository convenience, the present disclosure is illustrated with reference to audio content. However, it should be recognized that the principles described below are applicable in any media context, including still imagery, video, product packaging, etc.

In the cited patent applications, the present assignee disclosed a variety of technologies by which audio content can be associated with corresponding internet resources. In some such approaches, the audio content is steganographically encoded (e.g., by digital watermarking) to convey an identifier. When a computer encounters such an encoded audio object, it discerns the encoded identifier, forwards the identifier to a remote database (a "Registry database"), and receives in response—from a database record indexed by the identifier—the address of one or more internet resources related to that audio (e.g., fan sites, concert schedules, e-commerce opportunities, etc.) The computer can then link to such a resource and present same to a user, e.g., using an internet browser program. Such an arrangement is shown in FIG. **1**.

There are many variations on this model. For example, instead of steganographically encoding the identifier in the content, the identifier can be added into header or other data with which the content is conventionally packaged.

The identifier can be assigned to the content. Or the identifier can be derived, in some manner, from the content.

In the former, assigned identifier case, an entity such as a music publisher (e.g., Sony) or a music distributor (e.g., emusic.com), selects a number for encoding into the content. The number may be selected from a limited range of numbers (e.g., a range of numbers allocated to that publisher by the proprietor of the Registry database), but the number itself is not inherently related to the content with which it is associated.

In the latter case, the identifier is derived from the content, or from other information associated with the content.

One way to derive an identifier is to employ selected bits of the content, itself, as the identifier. For example, in MP3 audio, where the signal is encoded into frames, the Nth bit of the first 128 frames of a musical work can be assembled together into a 128 bit identifier. Or data present in MP3 headers can be used. In another approach, some or all of the

these cases, the identifier is implicit in the audio itself. That is, no data needs to be added (e.g., in a header, or by steganographic encoding).

When deriving the identifier from associated information, one can use the table of contents (TOC) of the CD or file allocation table of the DVD. The ID can be embedded within the MP3 file, if it is being ripped from the CD or DVD at the time or ID creation. The method of embedding can be embedded via header, footer or frame bits, or via a water-mark.

Some techniques for deriving an identifier may rely on external resources. For example, when "ripping" a song from a commercial music CD into MP3 form, many ripper software programs refer to an on-line disc recognition database, found at www.cddb.com, to obtain the title and length of the song. This "table of contents" information can be used to form the identifier, e.g., by selecting predeter-mined bits, hashing, etc. In this case, the identifier must generally be added to the audio (i.e., it is explicit, as was the case of the assigned identifiers). Such an arrangement is shown in FIG. **2**.

The artisan will recognize that there are an essentially infinite number of algorithms by which such derived iden-tifiers can be generated. (It will be noted that derived identifiers may not be unique. That is, two unrelated audio files may—coincidentally—correspond to the same identi-fier. But by making the identifier sufficiently long (e.g., 128 bits), such occurrences can be made arbitrarily unlikely.)

When an identifier is assigned to content, the entity doing the assigning (e.g., a record label such as Sony, or a music distributor such as Emusic) can ensure that the Registry database has a record corresponding to that identifier. The database record contains, e.g., one or more URL(s) leading to information relating to the audio content.

A different situation arises when the identifier is derived from content. No master authority ensures that the Registry database has a record corresponding to that identifier. Thus, if a college student rips music from a privately-produced CD into an MP3 file, the identifier derived from that music may not point to an active database record in the Registry database. This can also occur with CDs from major or minor labels that don't register all their identifiers. For example, the Kinks' CDs may not be registered by the label owning rights to their albums because of their fall in popularity. However, a general consumer/business person could register the CD's identifier to sell Kinks' paraphernalia. The con-sumer/business person does not need to make the same amount of revenue as the record label to make the registra-tion process and maintenance worth his/her time.

If the MP3 file so-produced becomes popular, and is widely spread (e.g., through means such as Napster, Gnu-tella, etc.) a large potential audience may develop for internet resources related to that MP3. The issue then arises: who manages the Registry database address represented by the corresponding identifier?

The present invention addresses this and related issues.

In accordance with one aspect of the present invention, a user who encounters an unused Registry database record is given an option to manage it, or to participate financially in its exploitation.

For example, in one embodiment, when the Registry database first receives a query corresponding to an un-used identifier, the person initiating the query is given an oppor-tunity to lease that identifier for a predetermined period,

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