

Blogs
 Social Networks
 Career Networking Service
 Microblogs
 Some specific social media services include:
 Facebook (a social network) (Menlo Park, Calif.)
 LinkedIn (a career networking service) (Mountain View, Calif.)
 Twitter (a microblog) (San Francisco, Calif.)

A content matching system may comprise a real-time software system that scans the contents of a web page, mobile application, or other application, extract tokens or keywords from the scan of content, and matches with external data sources based upon those tokens. A token may be a keyword, text string, image, sound, or any other identifiably data or media element.

Examples of content matching systems are advertising display systems that can insert an advertisement from a previously created advertising database, selecting the advertisement for insertion based on the tokens identified from the content. In this way the advertisement selected is contextually relevant to the content on the page. ADSENSE (Google, Mountain View, Calif.) is one example of a content matching system used for contextual advertising insertion.

Thus according to an embodiment, the Annotated Index may be used to insert within a social media service, contextually relevant digital media. FIG. 9 shows a simplified view of an embodiment of a social media application 910 and a content matching system 950.

An operator 904 submits digital content 512 and associated material 510 to an annotation and indexing system 520 to create an annotated index 546. A content matching system 950 inter-operates with the annotated index 546 and a social media application 910.

The content matching system 950 extracts tokens such as keywords from the social media application as described above. After the social media content matching system 950 extract tokens 952 from the social media application 910, it then compares extracted tokens to data in the annotated index 954.

When data elements are found in the annotated index corresponding to tokens extracted from the social media application, a clip is then selected 956, as previously discussed in reference to the Retrieval and Display Engine 204.

In an embodiment, the Annotated Index 546 may be used to insert within a web page, contextually relevant digital media. FIG. 9 shows a social media application 910 and a content matching system 950 according to an embodiment. An operator 904 submits digital content 512 and associated material 510 to an annotation and indexing system 520 to create an annotated index 546. A content matching system 950 inter-operates with the annotated index 546 and a web page 920. The content matching system 950 extracts tokens such as keywords from the web page as described above.

After the content matching system 950 extract tokens 952 from the web page 920, it then compares extracted tokens to data in the annotated index 954. When data elements are found in the annotated index correspond to tokens extracted from the web page, a clip is then selected 956, as previously discussed in reference to the Retrieval and Display Engine 204.

In an embodiment the Annotated Index 546 may be used to insert within a digital content delivery system 930 that is not necessarily a web page contextually relevant digital media, as described above.

Microblogs are another form of social media. Microblogs allow users to exchange very short messages in the form text

strings, images and web addresses. These short messages are sometimes referred to as "microposts". The micropost is transmitted via a syndication platform to recipients on the service who have chosen to subscribe to the messages from the contributing user. Twitter (San Francisco, Calif.) is a microblogging service.

Microblogs allow users to send and receive microposts. They also allow users to search for past microposts. Microposts frequently include text strings, referred to as a hashtags, comprising a sequence of characters with no spaces preceded by the # (hash) character.

Hashtags are used to label or tag subject matter in the micropost to facilitate its retrieval by users who wish to search for a specific topic contained in past microposts. For example, a user could search a microblogging service for all previous microposts containing the hashtag #ELECTION. The search result could include previous microposts that are self identified as pertaining to the subject of ELECTION.

Micropost archives are a source of data representing interpersonal discourse. Microblogs such as Twitter license to third parties, micropost live microblog data feeds and archives.

In some embodiments a micropost archive as obtained or licensed from a microblog service, may be used an element of the associated material 510 and input to an Indexing and Annotation Engine 520. Microposts may then be cross referenced 514 to the production script 532 and aligned to the digital content 512 through the process of script indexing 534.

The Annotated Index 546 in some embodiments may include contextually relevant microposts aligned with the other associated material 510 and to the content itself 512. According to some embodiments in which micropost data is included in the associated material 510, a content server 850 may be employed to deliver to mobile applications 866 and web applications 868 not only clips of the digital content 512 but also micro posts that have been aligned to these clips. In some such embodiments the recipients of the digital media would be able to receive discussions pertaining to it.

Embodiments may be employed in conjunction with location-based information services, and/or with Global Positioning Systems (GPS) data. Location-based information services are computer-based services having the ability to determine the location of a device, and provide information to that device based upon its location. For example, a location-based information service may provide a listing of the businesses nearest to the location of the device.

Location-based information services may be based upon the Global Positioning System (GPS), a satellite-based navigation system providing location and time information to devices equipped with a GPS receiver. Mobile phones, tablets, and many other portable devices commonly have GPS receivers.

In an embodiment the Annotated Index 546 may be used to deliver to a mobile device, contextually relevant digital media based upon the location of the device. This may be done using a content matching system that selects content elements based upon GPS coordinates.

FIG. 10 shows a mobile device 1020 and a GPS content matching system 1050. An operator 904 submits digital content 512 and associated material 510, to an annotation and indexing system 520 to create an annotated index 546. The associated material 510 includes GPS coordinates 1010 for locations included in, referred by, or otherwise associated with, the digital content 512.

In an embodiment, a GPS content matching system 1050 obtains location information 1052 from the mobile device 1020 in the form of GPS coordinates. The GPS coordinates of

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the device location may then be compared to determine proximity to the GPS data from the annotated index annotated index **546**. Based upon a comparison of values of the device location and GPS data **1010** from the annotated index **546**, the GPS content matching system selects clips **1056** of relevant content.

In an embodiment, a GPS content matching system **1050** may be used with a mobile device to display clips of digital content **512** that are associated with the location of the device.

It is understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and scope of the appended claims.

What is claimed is:

1. A method comprising:

receiving digital media data including codes as a first input; defining segments of the digital media data;

generating a first index of the segments;

receiving associated data relating to the digital media data as a second input;

aligning elements of the associated data to relevant codes of the digital media data to generate a second index of the digital media data including a set of annotations of the digital media data associated with the codes to which they apply;

combining the first index, the second index including the set of annotations, and the codes to which they are associated, to produce an annotated index, wherein the annotated index includes a term of a permissions license granted by a third-party rights holder to a publishing organization for an element of the digital media data originating from the third-party rights holder and incorporated during a product development process; and storing the annotated index in a computer-readable storage medium for access by the publishing organization in executing the product development process.

2. The method of claim **1** wherein the defining of segments is further based upon an optical text transcript of the digital media data, and the second index including the annotations.

3. The method of claim **2** wherein the digital media data comprises a digital media container file.

4. The method of claim **3** wherein the digital media data is configured to represent graphical and/or text content.

5. The method of claim **1** wherein the aligning of elements of the associated data is based on a comparison of the associated data with a speech transcript of the digital media data.

6. The method of claim **1** wherein the aligning of elements of the associated data is based on a comparison of the associated data with an optical text transcript of the digital media data.

7. The method of claim **1** wherein the aligning of elements of the associated data is based on a comparison of the associated data with data embedded in a container file of the digital media data.

8. The method of claim **1** further comprising tagging the second index according to a standard set of terms to create a second set of annotations, wherein the combining includes the second set of annotations of the second index.

9. The method of claim **1** further comprising:

receiving from an operator an instruction identifying a portion of the digital media data and an intended recipient for the portion;

processing the annotated index according the instruction to produce a portion of the annotated index corresponding to the identified portion of the digital media data; and

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transmitting the portion of the digital media data and the portion of the annotated index to the recipient.

10. The method of claim **9** wherein the portion of the digital media data and the portion of the annotated index are transmitted to the recipient according to a delivery format previously specified for the recipient.

11. The method of claim **10** further comprising:

storing on a content server, the annotated index, the digital media data, and the associated materials;

receiving from an operator a fourth input specifying a desired delivery format; and

converting data of the annotated index, the digital media data, and/or the associated materials, to the delivery format.

12. The method of claim **11** further comprising:

identifying misalignment between data embedded in the digital media container file and data in the associated material; and

revising the associated material through comparison of data in the associated material and embedded data extracted from the digital media container file.

13. The method of claim **1** further comprising, prior to the aligning, cross-referencing components of the associated data to establish relationships between portions of the associated data, wherein the relationships are included in the second index.

14. The method of claim **1** wherein the code comprises time codes.

15. The method of claim **14** wherein the digital media data includes audio data.

16. The method of claim **1** wherein the annotated index includes a set of textual data derived from an optical text transcript of the digital media data, textual data embedded in the digital media container file, and textual data from associated data relating to the digital media.

17. The method of claim **1** wherein the digital media data comprises interactive content and the associated data relates to the interactive content.

18. The method of claim **17** wherein the codes describe points in a simulated three dimensional space.

19. The method of claim **1** wherein the annotated index includes a GPS coordinate data for geographic locations referenced by or associated with the digital media data.

20. The method of claim **19** further comprising:

causing a GPS content matching system to interoperate with the annotated index and a mobile device;

causing the GPS content matching system to request and receive from the mobile device, current GPS coordinates corresponding to a location of the mobile device;

causing the GPS content matching system to compare the current GPS coordinates to the GPS coordinate data; and causing the GPS content matching system to select a clip when the GPS coordinate data are proximate to the current GPS coordinates.

21. The method of claim **1** further comprising:

causing a content matching system to interoperate with the annotated index and a social media application;

causing the content matching system to extract data from the social media application;

causing the content matching system to compare the extracted data to data elements of the annotated index; and

causing the content matching system to select a clip when data elements in the annotated index correspond to the extracted data.

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