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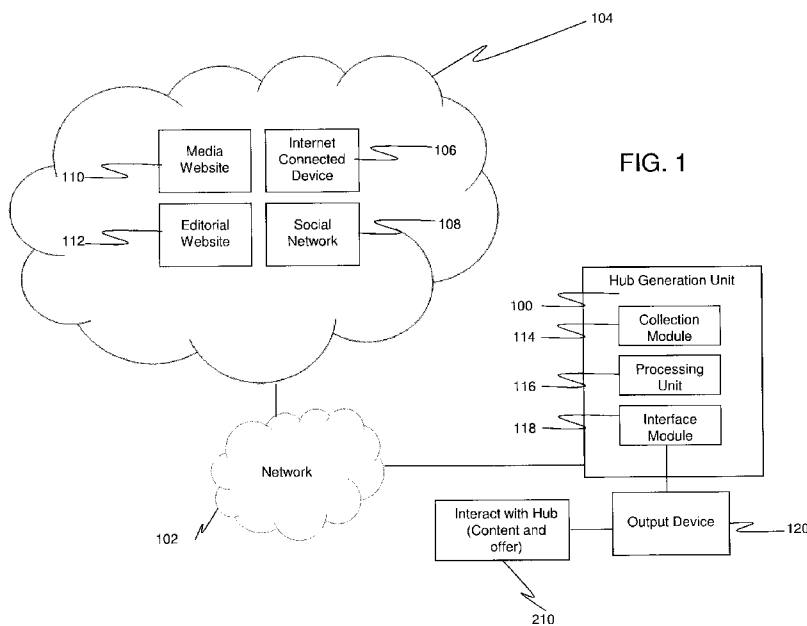
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(54) Title: SYSTEM AND METHOD FOR GENERATING A DIGITAL CONTENT INTERFACE

(57) Abstract: A system for generating a digital content hub is provided, the system comprising a processing unit operable to enable an owner to configure the curated collection of content from one or more digital channels and the display of the content in a dashboard interface in accordance with generation rules and attributes of a consumer. A method of the foregoing generation is provided.



1 SYSTEM AND METHOD FOR GENERATING A DIGITAL CONTENT INTERFACE

2 CROSS-REFERENCE

3 [0001] This application claims priority to United States Patent Application Number
4 61/668,705 filed July 6, 2012, which is incorporated by reference herein.

5 TECHNICAL FIELD

6 [0002] The following relates generally to aggregating and displaying digital content as a
7 hub.

8 BACKGROUND

9 [0003] Massive amounts of information are available via the internet. With the growth of
10 self-publishing tools, such as blogs, and social networking, individuals and businesses are
11 increasingly able to publicize their views on certain topics while consumers actively seek out
12 product and service information and share reviews on their experience.

13 [0004] On the internet, there are massive amounts of user generated content such as
14 conversations, statements and comments, whether critical, laudatory or neutral. Businesses and
15 individuals also generate content in their own interest.

16 [0005] It is becoming increasingly difficult for businesses to disseminate information to the
17 right audience while monitoring user generated content available on the internet to monitor their
18 "brand". Conversely, it is time consuming yet hit and miss for individuals to discover and receive
19 the right product and services information combined with peer reviews and ratings to make
20 informative decisions for actions such as whether to buy or consume a product or service.

21 SUMMARY

22 [0006] In one aspect, a system for generating a digital content interface is provided, the
23 system comprising a network-connected hub generation unit operable to enable: (a) definition of
24 one or more content sources accessible via the network, the hub generation unit operable to
25 obtain content from the one or more content sources; (b) definition of one or more generation
26 rules to curate the obtained content; and (c) publication of the digital content interface to display
27 the curated obtained content to a user.

28 [0007] In another aspect, a method for generating a digital content interface is provided, the
29 method comprising: (a) providing a network-connected hub generation unit; and (b) enabling an
30 owner to: (i) define one or more content sources accessible via the network, the hub generation

1 unit operable to obtain content from the one or more content sources; (ii) define one or more
2 generation rules to curate the obtained content; and (iii) publish the digital content interface to
3 display the curated obtained content to a user.

4 BRIEF DESCRIPTION OF THE DRAWINGS

5 [0008] Embodiments will now be described by way of example only with reference to the
6 appended drawings wherein:

7 [0009] Fig. 1 is a system for generating a digital content interface;

8 [0010] Fig. 2 illustrates a method of configuring a digital content interface, curating content,
9 publishing to and displaying the digital content interface, and facilitating actions within the digital
10 content interface;

11 [0011] Fig. 3 illustrates a method of collecting, processing, correlating, and analyzing
12 content; and

13 [0012] Figs. 4 to 12 illustrate various screenshots of an exemplary hub and hub
14 configuration tool.

15 DETAILED DESCRIPTION OF THE DRAWINGS

16 [0013] Embodiments will now be described with reference to the figures. It will be
17 appreciated that for simplicity and clarity of illustration, where considered appropriate, reference
18 numerals may be repeated among the figures to indicate corresponding or analogous elements.
19 In addition, numerous specific details are set forth in order to provide a thorough understanding
20 of the embodiments described herein. However, it will be understood by those of ordinary skill in
21 the art that the embodiments described herein may be practiced without these specific details.
22 In other instances, well-known methods, procedures and components have not been described
23 in detail so as not to obscure the embodiments described herein. Also, the description is not to
24 be considered as limiting the scope of the embodiments described herein.

25 [0014] It will also be appreciated that any module, component, server, computer, terminal or
26 device exemplified herein that executes instructions may include or otherwise have access to
27 computer readable media such as storage media, computer storage media, or data storage
28 devices (removable and/or non-removable) such as, for example, magnetic disks, optical disks,
29 or tape. Computer storage media may include volatile and non-volatile, removable and non-
30 removable media implemented in any method or technology for storage of information, such as
31 computer readable instructions, data structures, program modules, or other data. Examples of

1 computer storage media include RAM, ROM, EEPROM, flash memory or other memory
2 technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes,
3 magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium
4 which can be used to store the desired information and which can be accessed by an
5 application, module, or both. Any such computer storage media may be part of the device or
6 accessible or connectable thereto. Any application or module herein described may be
7 implemented using computer readable/executable instructions that may be stored or otherwise
8 held by such computer readable media.

9 [0015] A system and method for generating a digital content interface are provided. In
10 particular, an individual or business (hereinafter, an "owner") configures the generation of a
11 dashboard representation of content available from a plurality of digital channels, enabling the
12 owner to curate content it deems relevant. The dashboard can be made available to the public
13 (hereinafter, the "consumer"), for example as a webpage. In this way, the dashboard can act as
14 a dynamic, self-updating web presence for its owner, where relevant content is automatically
15 pulled in from the various channels and published to the dashboard in accordance with
16 generation rules configured by the owner. In embodiments, the dashboard can be configured to
17 appear as a tiled interface of content items collected from across the web, where each content
18 item relates to the context of the dashboard (be it a brand, a user, a topic, etc.) as configured by
19 the owner. The content tiles can be made to identify the respective content and the web user
20 that created the content. Thus, the dashboard is a snapshot of the real-time or near real-time
21 status of the context as represented by multiple content items across the web, including but not
22 limited to social network-based content.

23 [0016] For example, a brand owner can curate content relevant to the brand and publish
24 curated content in the dashboard to present it to the consumer. The owner can configure the
25 dashboard to display content complying with configured criteria in a particular order. The
26 dashboard can be made interactive, such as by enabling the consumer to access offers based
27 on content displayed on the dashboard. The dashboard is referred to hereinafter as the "hub".

28 [0017] Generally, an owner may configure a hub to relate to a particular topic. The topic
29 may be a brand, a plurality of brands, products, services, concepts, persons, locations,
30 interests, or events, etc. The topic may be provided by the owner or could be a preconfigured
31 topic, for example a static topic associated with a user account. The hub enables the consumer
32 to visualize content related to the topic and the context of such content.

1 [0018] Consumers visit the hub to obtain information of interest to them. For example, a fan
2 of a particular brand wishes to remain current with products being launched under that brand
3 from all possible channels in which information about the brand is disseminated or conversed
4 upon by others. Correspondingly, the hub enables promotions and offers to be provided to the
5 consumer. The promotions and offers are provided based on the hub as well as the consumer.
6 Consumers can interact with the hub to consume, create, review, comment, like and share the
7 content available on the hub. Promotions and offers can be provided to the consumers and
8 accepted via a commerce activity, such as signup, subscribe or purchase.

9 [0019] Referring to Fig. 1, a system comprising a hub generation unit 100 is provided. The
10 owner of the hub may curate content to be published in the hub by configuring content sources
11 (channels) using, for example, a web console, such as the one shown in Fig. 13, a bookmarking
12 tool installed on a client computer, a mobile device, email or other messaging medium, to detect
13 and obtain the content sources from the internet. The hub generation unit 100 is linked via a
14 network 102, such as the internet, to the cloud 104. The hub generation unit is further linked to a
15 database 120 for storing content.

16 [0020] The cloud 104 generally comprises a large amount of content (information), such as
17 all or a majority of publicly available and/or private information on internet connected devices
18 106. The cloud may, for example, comprise a plurality of social networks 108, a plurality of
19 media websites 110 and a plurality of editorial websites 112 (including, for example, news
20 websites and blogs). Content comprises continuous feed and live streaming of transactional
21 data, blog posts, reviews, web pages, web sites, articles, discussion forums including rich
22 media, such as images, video, audio, social network status updates and posts, and social
23 interactions including views, shares, comments, and likes.

24 [0021] The hub generation unit 100 comprises a collection module 114, a processing unit
25 116 and an interface module 118. The collection module 114 is operable to obtain, curate and
26 author content from the network 102. The owner configures the processing unit to generate a
27 hub as desired. The processing unit configures the collection module accordingly. The
28 processing unit generates a hub which may be presented to a consumer by the interface
29 module. The interface module is further operable to obtain feedback from the consumer.

30 [0022] As the collection module 114 collects content, it may classify the content based on its
31 characteristics. Such characteristics may comprise originating channel, type of content, date,
32 time, language, location, user and user profile (wherein user refers to the user that contributed

1 the content), topic, topic category, fact vs opinion vs personal conversation, sentiment, mood
2 (e.g., calm, alert, affirmative, gentle, happy, angry, etc.) and intent (e.g., endorse, complaint,
3 inquiry, question, advice, buy or choose or sell, compare, advocate, like, dislike, want, need,
4 etc.).

5 [0023] The processing unit 116 processes the collected content to generate the hub in
6 accordance with generation rules established by the owner. The hub may be presented as a
7 plurality of tiles each corresponding to a content item or channel. The interface module 118
8 provides the hub to the owner or the consumer using an output device 120, such as a computer
9 monitor, tablet screen or mobile device screen, for example. In block 210 shown in Fig. 2, a user
10 can select a tile on the hub to access the respective content and offers that match the
11 consumer's interest and social actions behaviour/activity.

12 [0024] Referring now to Fig. 2, the configuration and display of a hub is described. Initially,
13 the owner may configure a title and URL for accessing the hub, as shown in Fig. 10. The look
14 and feel of the hub may be selected from a set of preconfigured themes or can be fully
15 customized by the owner, as shown in Fig. 11.

16 [0025] In blocks 200 and 201, the owner defines one or more content sources (channels)
17 from which to retrieve content to be presented in the hub. The owner may be provided with
18 multiple methods to curate the content, either by configuring the hub content sources in a
19 centralized location such as the hub dashboard configuration console, as shown in Fig. 12, or a
20 bookmarking tool installed on the owner's browser to detect and obtain the content sources.

21 [0026] Typically the content sources deliver real-time continuous feeds. Such content
22 sources may include: home feeds and timeline updates from the social media networks, on
23 which the business or person is represented by a user profile, wherein well-known examples
24 include Facebook™, Twitter™, Instagram™, SlideShare™, FourSquare™, Pinterest™,
25 Tumblr™, Youtube™, LinkedIn™; search engines, including those that track occurrences of
26 keywords, names, user handles, hashtags, or other identifiers and symbols on the internet,
27 including websites comprising social media such as weblogs, discussion forums, video sharing
28 sites, and comments on other documents and direct feeds of data, commonly represented using
29 formats such as RSS.

30 [0027] The owner may configure the hub to publish content that complies with one or more
31 criteria for the defined content sources. Such criteria may comprise, for example, a particular
32 sentiment, a pre-defined threshold of recency, virality and/or velocity, filters to suppress

1 competitor's content, or inappropriate language, and deployment of the spam control to control
2 unnecessary noise common in some channels such as Twitter. For example, the owner may
3 wish for only positive sentiment content to be displayed in the hub. Further criteria may
4 comprise suppression of sexually-oriented content or unsolicited advertising messages (spam).
5 Virality may refer to the sum of all social media comments, likes, shares, views, etc. for the
6 content unit within its respective recency unit. Velocity indicates the speed at which a specific
7 piece of the content such as a video or a article reaches its virality.

8 [0028] The criteria may be configured to apply to a particular consumer, or a set of
9 consumers based on demographics and/or a set of consumers based on their browsing history.
10 For example, inappropriate content criteria may apply if the viewer of the hub is not determined
11 to be over the age of 18 years. Other criteria can be applied based on the social media
12 networks, the topics discussed in the content, product information, offers and advertising
13 messages or any aspect of the profile of consumer. Criteria may further be used for providing
14 offers to the consumer.

15 [0029] In block 202, the owner further configures an update parameter for the hub. The
16 update parameter may be set to refresh the hub in real-time as new content is streamed in, at a
17 predetermined interval, or in response to interaction by the consumer.

18 [0030] Where the update parameter is set to real-time, refreshing of the hub may further be
19 conditional on the relative location of the "new" content based on content type and its recency
20 unit, where the newest content is typically given the highest prominence by being displayed at
21 the top of the hub.

22 [0031] The processing unit also determines recency of the content unit. Recency is a
23 function of time and may vary depending on the type of content the data point represents.
24 Certain content on the network may be understood to have a particular threshold amount of
25 relevance for only a short time while other content may be understood to have a particular
26 threshold amount of relevant for a longer time. For example, a social media update typically has
27 a short lifetime relevance while a news article or a video typically has a longer lifetime
28 relevance.

29 [0032] Recency is determined based on the amount of time content has existed on the
30 network and the type of content. Content may be considered either of a sufficient recency to be
31 relevant or insufficient recency, in which case it is irrelevant. Content of sufficient recency is
32 more recent than a particular threshold. Such a recency may be referred to as falling within a

1 “recency unit” for that type of content. In one example, any social media update is considered of
2 sufficient recency if it was disseminated within one hour and, in this example, the recency unit is
3 one hour. An example of a week old video may be displayed on the top of the hub or visually
4 indicated as recent due to its recency unit as one month where a week old tweet is not
5 considered as recent since its recency is one day. The aforementioned units are examples only.

6 [0033] Once the new content is retrieved, it will be ordered and ranked, and delivered to the
7 display. The display order can also be affected by factors such as virality and velocity, and
8 content can be filtered by these factors. A text search of user-defined keywords can also be
9 applied to display content items matching the provided keywords.

10 [0034] In block 203, the database is updated with new and updated content. In block 204,
11 based on the profile of the consumer and criteria such as geographic location, spoken
12 language, and behaviour observed during past interactions with the hub, as well as
13 characteristics of the hardware and software used to access the hub, the display presented to
14 the consumer will be adjusted to include items determined to be of greatest interest to that
15 consumer, specifically the promotions and offers. Generally, the content presented to a
16 particular consumer will be customized for that consumer. A human intent analysis may be
17 applied to detect the level of interest and emotion the consumer has for the topic of the hub.
18 This can be determined based on past browsing history and prior interaction with the hub.

19 [0035] Furthermore, Naïve Bayesian machine learning may be applied to bring together
20 distorted conversations that are common in social networks. An adaptive intent analysis may be
21 used to evolve the machine learning.

22 [0036] In block 205 and 206, the interface module performs user profiling and determines a
23 device footprint. The hub may provide the consumer with promotions and offers, related to the
24 topic, to be displayed to the consumer based on a behaviour profile. The behaviour profile may
25 comprise the following criteria: browsing (most likely to browse the hub), reading (most likely to
26 read the hub), engaging (most likely to comment on or share items), collecting (most likely to
27 store content), or a reference to such content, for later re-use) and intention to buy (most likely
28 to select or interact with presented offers).

29 [0037] Content relevant to the consumer’s geographic location, timing, and demographic
30 information, as well as, promotions and offers, can be presented to the consumer as dynamic
31 personalization.

1 [0038] In block 207, the hub is published and updated. Multiple views of the social hub are
2 available to the consumer, including: live hub, wherein each piece of content is represented as a
3 discrete object or “tile”, showing all content from all channels, and content is updated
4 automatically or at the consumer’s request; live hub, wherein each channel is represented as a
5 discrete tile, the most recent content is shown for each real-time feed sorted by channel, and
6 content is updated automatically or at the consumer’s request; and consumer hub dashboard,
7 wherein content that has been previously stored by the consumer is displayed in a personalized
8 view.

9 [0039] In block 209, the user of the hub can personalize the content display and display
10 style. There may be two personalized views: (1) content organized into visual folders (boards),
11 each of which may be selected in order to trigger the display of a secondary view, which in turn
12 displays relevant pieces of content as tiles, and (2) all content in one view in which each piece
13 of content is displayed as a separate tile. Content is added to the dashboard by the consumer
14 from the live hub. The content can be organized and presented based on the consumer’s
15 preferences.

16 [0040] Updated content may continue to be collected, even when consumers are not
17 actively using or viewing the hub. In block 208, notifications, such as electronic mail messages,
18 may be sent to a consumer who wishes to receive notifications that updated content is
19 available. Consumers can personalize the usage of content, and can also change preferences
20 pertaining to the display. Consumers can interact with each other to store and share content of
21 mutual interest to multiple consumers.

22 [0041] A bookmarking tool may be used to allow the owner or consumers to add new pieces
23 of content to the hub. For example, as the owner or consumer is browsing the web and comes
24 across relevant content, the content can be bookmarked, signalling to the hub generation unit
25 that the content should be obtained for curation.

26 [0042] Typically, in the hub the newest content is given the highest prominence by being
27 displayed at the top of the hub. A social view may also be provided where content with the
28 greatest degree of social interaction, as defined by one or more criteria such as
29 recommendations (“likes”), popularity, the number of page views, and comments will be given
30 the highest prominence in the social hub.

31 [0043] In block 210, a user can select a tile on the hub to access the respective content. An
32 example of accessed content from a tile is shown in Fig. 5. The user can share, like, and

1 comment on content, as shown in Fig. 6. Sharing can be via any messaging medium, including
2 email or social network, as shown in Fig. 7. A closeup view of a plurality of tiles is shown in Fig.
3 8, while bookmarking, sharing, liking and commenting upon a tile is shown in Fig. 9.

4 [0044] In block 211, the hub presents commerce items as offers or promotions to the
5 consumer. The consumer's browsing behaviour can be correlated to current social actions and
6 intent on the hub to present relevant commercial offers. For example, the user-agent message
7 in the http header is used to identify the consumer by language and location. The browsing
8 history can track individual content tile viewed, shared, clicked, comments and liked. Further,
9 heuristic algorithms can depict the consumer's social graph with their peers based on the
10 distance of relationships in the same community or across multiple communities, and determine
11 their collective interests and opinions. Specific commercial offers can be delivered to the
12 consumer relevant to the each content piece while combining the individual behavior and
13 collective interests from the communities. The offers can be prioritized with the offer type such
14 as promotions, coupons, discounts, products and services, values and margins. The actions to
15 the offers are also presented for the consumer to act upon.

16 [0045] To present the offers, an owner can proscribe a catalog of commerce items, with the
17 ability to pre-configure offer parameters by target content and target audience, combined with
18 location, volume and demographic and geographic attributes. The method comprises auto-
19 creation of a catalog from existing social web properties and social networks, proliferation of the
20 social catalog across social networks, ranking of catalog items by geographic and demographic
21 attributes according to a set of heuristic algorithms and social history data including social
22 actions.

23 [0046] The processing unit presents the contextually tailored candidate offer or offers in a
24 stream of social media content that is behaviourally curated based on user activity, preferences
25 and social history. The method of presentation comprises receiving portions of candidate offers
26 as the offers are being constructed based on offer descriptors.

27 [0047] The processing unit effects a transaction purchase of the offer, for example in a
28 single click by the user from a user input device, by pre-linking the offer to the social activity
29 stream and providing token-based social transaction locking that auto-secures contracted
30 pricing. Presentation and transaction control comprises pre-authorized pricing, time-based
31 discount levels, volume and referral incentives and social group buying attributes.

1 [0048] Referring now to Fig. 3, a method of collecting content is shown. In block 300, the
2 collection module establishes a communication protocol comprising a queuing mechanism to
3 collect content from the internet. Each content source can be managed in terms of the
4 communications protocol, API of the transaction type, data message, transaction limit and
5 bandwidth consumption. The communication protocol establishes an agent scheduler to spawn
6 and schedule agents and dispatch the content collection requests. Content may be cached
7 during transit to optimize scheduling.

8 [0049] In block 301, the collection module 114 may utilize a plurality of collection agents to
9 crawl the internet to collect content. Each collection agent may be specific to a type of channel
10 (e.g., social media), a particular channel (e.g., a particular social network) or particular content
11 type in a channel (e.g., Twitter™ search vs Twitter™ home feed vs Twitter™ mention, etc.).
12 Collection agents may be configured to collect content associated with the particular topic or
13 topics specified by the owner as pertaining to the hub. For example, a collection agent may be
14 configured with a particular search string related to the topic.

15 [0050] Collection agents may be deployed continuously or upon command, and deployment
16 may be based in part upon available resources and load management. The collection module
17 may spawn agents dynamically to distribute and cover the workload and can be distributed in
18 the cloud to interface with all channels. Collection agents may comprise an intelligence unit to
19 throttle content requests and responses based on the channel, target transaction type, time
20 range and consumer. The distribution of agents with dynamically allocated requests combined
21 with the throttle setting may be auto adjusted based on past transaction throughput, latency and
22 real-time response from the data sources.

23 [0051] In block 302, content obtained from social networks is inspected and separated into
24 a user profile and a message. Optionally, content obtained from channels other than social
25 networks may be similarly separated provided that a user profile is available (for example, a
26 news article may identify an author that can be matched to a user profile on a social network).
27 The content is transformed into a normalized content format. For example, the normalized
28 content format may comprise: a user profile comprising user handle, user name, address, profile
29 picture; and a message comprising user handle, message, date and time of posting.

30 [0052] In blocks 303 and 304, the collected content and corresponding normalized content
31 is stored on the database. The collected content and/or corresponding normalized content may
32 be compressed prior to storage.

1 [0053] In block 305, the normalized content may be processed and indexed. Processing
2 comprises determining whether the content is unique and, if it is not, associating it with other
3 similar normalized content. For example, two news articles may have the same author and a
4 high degree of similarity of content, but different titles. Notwithstanding the different titles, the
5 articles are effectively the same and can be treated as the same. Content may be compared to
6 determine a similarity profile. If the similarity profile meets or exceeds a predetermined
7 threshold, the content may be treated as the same.

8 [0054] The normalized content is separated into structured and unstructured sections and
9 indexed accordingly. Unstructured data is indexed with a free text search capability. The
10 indexing may be stored on the database.

11 [0055] In block 306 and 307, if the user profile for the content has not previously been
12 identified by the collection module from previously collected content, the user profile data is sent
13 to a queue. The queue enables the compilation of pending user profiles to be processed. The
14 queue may be a first in and first out (FIFO) queue.

15 [0056] For a user profile, each demographic attribute may be analyzed and stored.
16 Demographic attributes may comprise: name, age, gender, address (street address, town or
17 city, province or region, country), location with geo mapping, language, income, education,
18 interest, industry; named entities such as name and location can be identified and extracted.
19 Business information can also be identified and parsed. Demographic information may be
20 obtained from social networks or other sources.

21 [0057] Profiles containing only handles and lacking key demographic attributes are
22 considered partial. Profiles that only match by handles (email, name) but can be supplemented
23 by a profile picture from another profile (for the same user but from a different social network, for
24 example) or same or approximate geo location may also be considered as matched. Profile data
25 that matches by handles (email, name) and supplemental elements will be used to augment the
26 profile data and stored. Upon accumulating a sufficient amount of demographic attributes, the
27 partial profile will be marked as a full user profile.

28 [0058] In block 308, the user profile with individual structured data elements are stored and
29 indexed. In block 309, each user profile is classified into categories based on the following
30 attributes: membership status (examples: new, growing, existing) based on timeline. In addition,
31 identification of type (examples: consumer, business: private, public, government); industry (for

1 businesses); and interest (for consumers) may be provided by topic categorization, such as by
2 using text tagging and corresponding taxonomies.

3 [0059] In block 310, the user profile is analyzed for its relationship with others to construct a
4 user graph. User graphs enable social profiling, which comprises matching a user profile of one
5 social network with a user profile of another social network, and may include matching
6 demographic data and profile images.

7 [0060] In block 311, the message content is identified and parsed for its uniqueness through
8 a similarity profile which may be supplemented with Statistically Improbable Phrases (SIP). The
9 collection module 114 is operable to generate a similarity profile for a plurality of content, such
10 that it can determine whether two or more different content units are essentially similar and can
11 be treated as the same if the similarity profile is above a particular threshold. In an example, a
12 press release is often duplicated across the internet in news feeds, blogs with slight changes of
13 title; or tweets and re-tweets and replies to tweets; each of which may be suitable for treating as
14 the same. This is to ensure the messages that are same but syndicated across different
15 channels are identified and the message content is assigned with a unique id but referenced
16 across these channels.

17 [0061] Similarity may be based on a plurality of conditions. A set of matching rules can be
18 applied to title, message and author's name or handle for the content. Each portion of the
19 content may be considered similar if it is an exact match for all or portion, or one is a subset of
20 the title of the other. A probability score for matching can be generated based on the amount of
21 similarity and length of the content portion.

22 [0062] A supplemental rule can be used to identify "excluding words". If certain words and
23 phrases are present in the content, then the content is not considered the same (e.g., in Twitter,
24 the presence of "RT" or "RE" along with a content match less than 80% indicates the content is
25 not a duplicate). The match probability and percentage match is determined to identify if the
26 original content is duplicated, and if the duplication has been enriched further. If the enrichment
27 is significant, such as reaching 30% of the content for example, then it may be considered a
28 new piece of content with a reference to an existing content. Enriched content may be used to
29 either validate or detract the original user's point of view, or express emotion and opinion to that
30 original content.

1 [0063] For articles and blogs, SIP may be applied to ensure the match of these words. Bi-
2 gram and tri-gram words can increase the accuracy of a match for articles and blogs. Bi-gram
3 may provide increased accuracy for brief content, such as social media posts.

4 [0064] A further rule to extend the matching is an inclusion of referenced objects, such as
5 the same URLs, hashtag, and user handles with the same adjacent words, and co-occurrence
6 of certain words, phrases and referenced objects. Named entity recognition can also be used to
7 identify names and locations to increase the accuracy of the duplicate content and thus increase
8 the detection of unique content.

9 [0065] In block 312, the individual data elements of the message (author, published date
10 and time) are stored and indexed. Unstructured data elements including title and message body
11 are also stored and indexed for free text search. In block 313, each new message is classified
12 into topic and topic categories using a text tagging and category taxonomy. Named entity
13 recognition may be applied to identify and extract names, locations and time references to
14 provide keywords for semantic analysis.

15 [0066] The sentiment and mood of the messages may be recognized using a Bayesian
16 classifier combined with the psychometric instrument for Profile of Mood States (POMS™). The
17 mood state and corresponding scale may be adjusted for the social web in terms of vocabulary
18 and common usage of adjectives and their synonyms. For example one of 5 POMS is
19 depression-dejection that can be expressed using an emoticon ☹ in the social web. A Bayesian
20 classifier with a spam dictionary may further be applied to the message to filter out robotic
21 messages (spam), considered as noise and to filter out inappropriate content if so desired.

22 [0067] In block 314, related messages are classified as such. Examples of relation
23 classifications comprise: shared, re-tweeted, replied, referenced and commented. A message
24 thread in a conversational style may be constructed by reviewing the relationship type, author
25 and timeline. Authors of these messages can be classified into the instigator, amplifier and
26 validator based on the time series and tone of message in the identified thread.

27 [0068] Referring now to Figs. 4 to 13, an exemplary interface for configuring, generating and
28 displaying a hub is shown. Fig. 4 shows a configured, displayed hub that may be presented to a
29 user. The hub 400 comprises a plurality of tiles 402, each of which relates to a content item. A
30 close up of two tiles is shown in Fig. 7.

31 [0069] Referring again to Fig. 4, a topic identifier, such as brand logo 404, may be displayed
32 on the hub along with a search function 406 to search for content in the hub, a refresh function

1 to refresh the hub 408, a share function 410 to share the hub, and a get hub 412 function to
2 obtain a new hub. Generally, each tile 402 may comprise a representative image 414 selected
3 from the content item (which may be selected automatically, for example the first image
4 appearing in the content item), a user profile 416 for the individual having created or shared the
5 content for the content item, a time status 418 for when the content item was shared, one or
6 more tags 420 relating to the content item (which may be extracted from the content item), and
7 a sharing command 422 enabling the user to which the hub is displayed to share the content
8 item through social channels, email, or other messaging medium. Some of the content items
9 may comprise rich media 424, such as audio or video, in which case the representative image
10 426 may be the rich media which can be played by the user.

11 [0070] A user may select any of the tiles to access the respective content item. An example
12 of a selected content item is shown in Fig. 5 as an external website hosting a news article. The
13 website may be displayed as an embedded pane within the hub interface.

14 [0071] Referring now to Fig. 6, the user may wish to share the hub with another user. The
15 user may select the share function 410 to launch a sharing panel 602 which enables the user to
16 specify a target user to which an invitation to access the hub may be sent or a URL to which to
17 share the hub.

18 [0072] Figs. 8 to 12 show interfaces for configuring the hub. In Fig. 8, an owner is presented
19 with a configuration screen 800 enabling the owner to provide a hub title, description and URL
20 for accessing the hub (where it is to be hosted on a third party site, for example). In Fig. 9, the
21 owner is presented with a style screen 900 enabling the owner to upload a logo 902, such as
22 brand logo, background image 904 and cover image 906 for the hub. The uploaded images may
23 be displayed to the user prior to finalizing configuration of the hub, as shown in Fig. 10. In Fig.
24 11, the owner may configure channels from which the hub is to collect content. A select sources
25 screen 1100 may be displayed to the owner to configure the channels, which may be selected
26 from among available channels, including third party social networks 1102. For each such
27 channel, the owner may configure a particular sub-channel, such as a particular user account
28 1104 for the channel. Additionally, as shown in Fig. 12, the owner may install the hub as an
29 application on a third party social network, effectively replacing the owner's profile page on the
30 third party social network with the hub. An installation screen 1200 may be presented to the
31 owner for this purpose.

1 [0073] Although the above has been described with reference to certain specific example
2 embodiments, various modifications thereof will be apparent to those skilled in the art without
3 departing from the scope of the claims appended hereto.

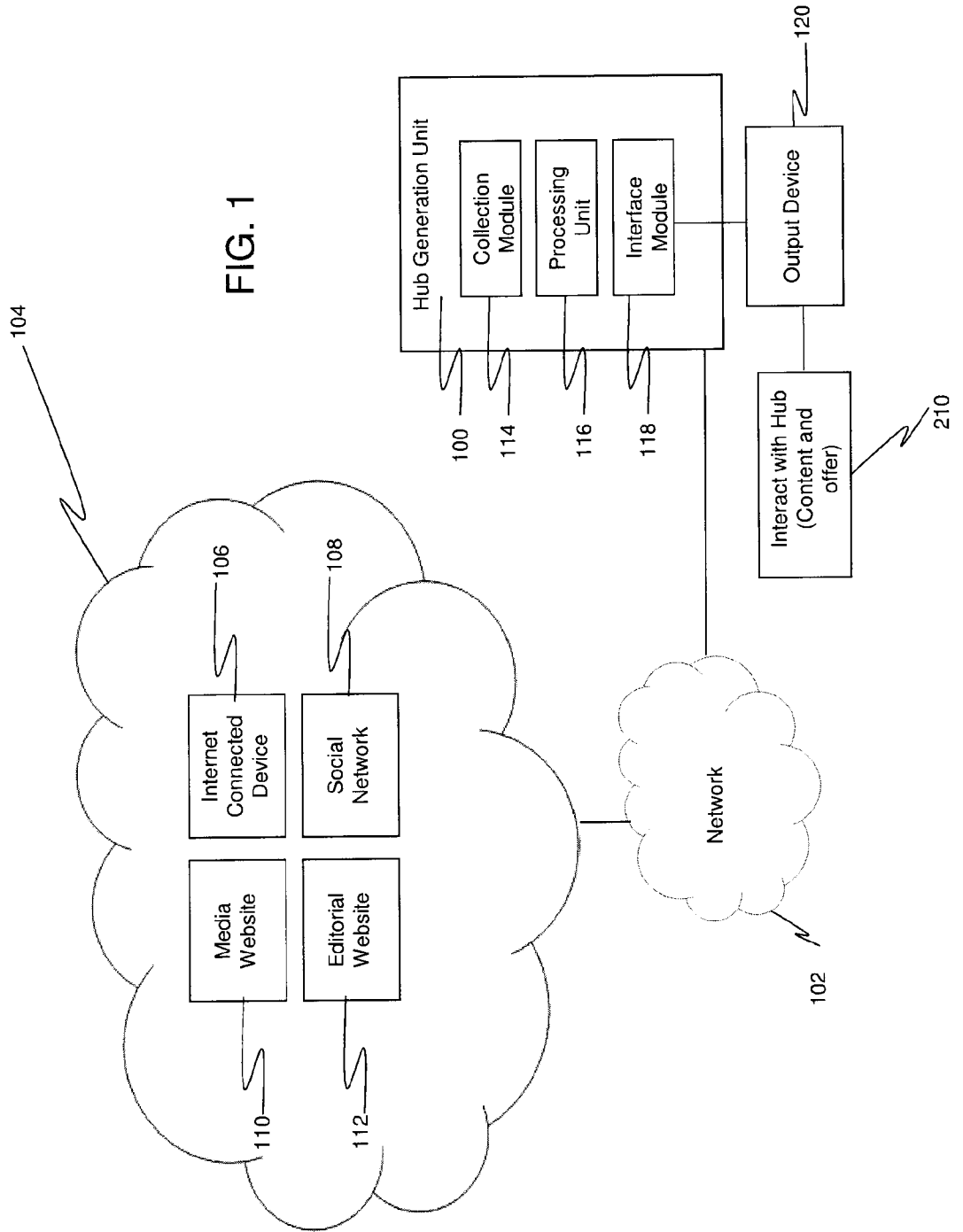
CLAIMS

We claim:

1. A system for generating a digital content interface comprising a network-connected hub generation unit operable to enable:
 - (a) definition of one or more content sources accessible via the network, the hub generation unit operable to obtain content from the one or more content sources;
 - (b) definition of one or more generation rules to curate the obtained content; and
 - (c) publication of the digital content interface to display the curated obtained content to a user.
2. The system of claim 1, wherein the hub generation unit publishes the digital content interface as a dashboard of tiles, each tile representing an item of obtained content.
3. The system of claim 1, wherein the hub generation unit can be configured by the user to automatically obtain updated content from at least some of the content sources to automate the updating of the digital content interface.
4. The system of claim 3, wherein the updated content are obtained continuously and in real time.
5. The system of claim 1, wherein the content comprises transactional data, blog posts, reviews, web pages, web sites, articles, discussion forums, images, video, audio, social network status updates and posts, and social interactions.
6. The system of claim 1, wherein the hub generation unit is operable to classify the obtained content based on characteristics comprising at least one of channel, type of content, date, time, language, location, user, user profile, topic, topic category, fact, opinion, personal conversation, sentiment, mood and intent.
7. The system of claim 1, wherein the obtained content is filtered by uniqueness during curation to reduce duplication in the published digital content interface.
8. The system of claim 1, wherein the generation rules comprise criteria selected from one or more of sentiment, recency, virality, velocity, filters, and spam controls.
9. The system of claim 1, wherein the digital content interface presents offers and promotions to the user.

10. The system of claim 9, wherein the hub generation unit enables the user to select an offer or promotion to initiate a transaction.
11. A method for generating a digital content interface comprising:
 - (a) providing a network-connected hub generation unit; and
 - (b) enabling an owner to:
 - (i) define one or more content sources accessible via the network, the hub generation unit operable to obtain content from the one or more content sources;
 - (ii) define one or more generation rules to curate the obtained content; and
 - (iii) publish the digital content interface to display the curated obtained content to a user.
12. The method of claim 11, wherein the hub generation unit publishes the digital content interface as a dashboard of tiles, each tile representing an item of obtained content.
13. The method of claim 11, wherein the hub generation unit can be configured by the user to automatically obtain updated content from at least some of the content sources to automate the updating of the digital content interface.
14. The method of claim 13, wherein the updated content are obtained continuously and in real time.
15. The method of claim 11, wherein the content comprises transactional data, blog posts, reviews, web pages, web sites, articles, discussion forums, images, video, audio, social network status updates and posts, and social interactions.
16. The method of claim 11, wherein the hub generation unit is operable to classify the obtained content based on characteristics comprising at least one of channel, type of content, date, time, language, location, user, user profile, topic, topic category, fact, opinion, personal conversation, sentiment, mood and intent.
17. The method of claim 11, wherein the obtained content is filtered by uniqueness during curation to reduce duplication in the published digital content interface.
18. The method of claim 11, wherein the generation rules comprise criteria selected from one or more of sentiment, recency, virality, velocity, filters, and spam controls.

19. The method of claim 11, wherein the digital content interface presents offers and promotions to the user.
20. The method of claim 9, wherein the hub generation unit enables the user to select an offer or promotion to initiate a transaction.



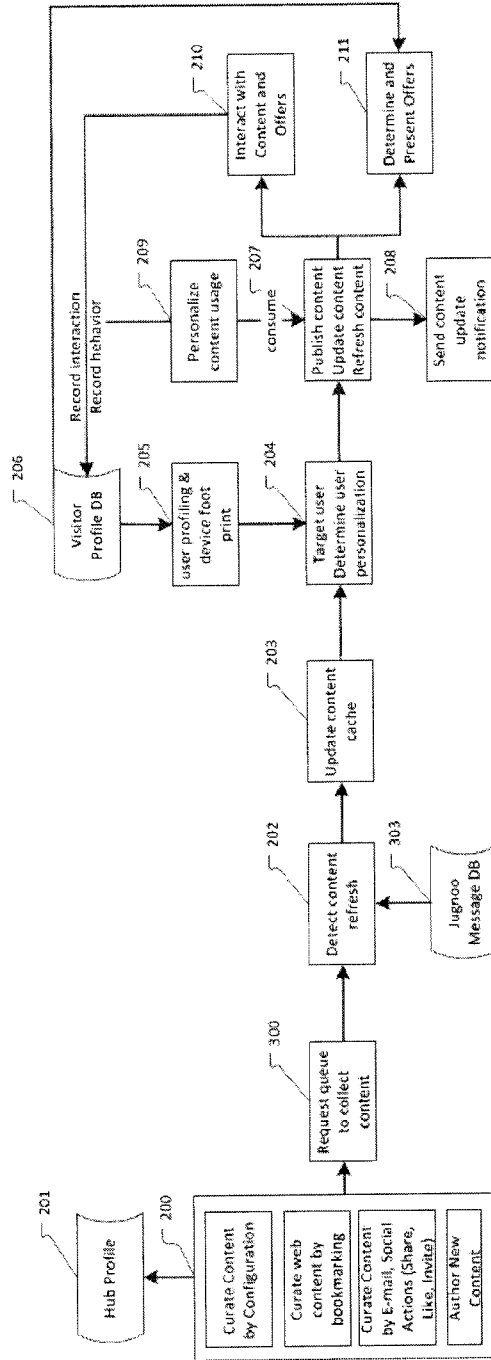


FIG. 2

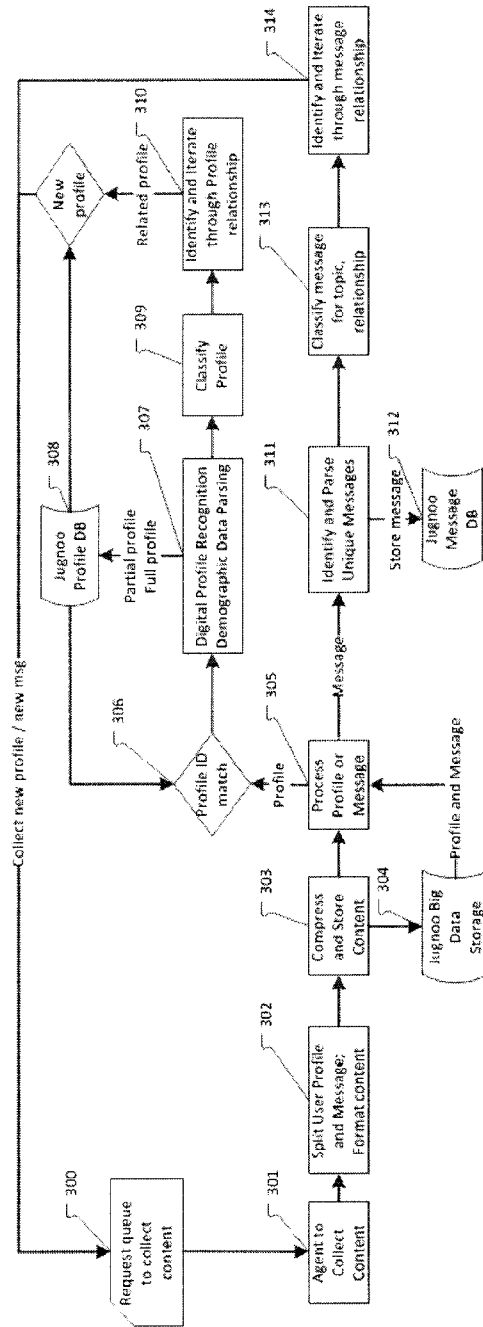


FIG. 3

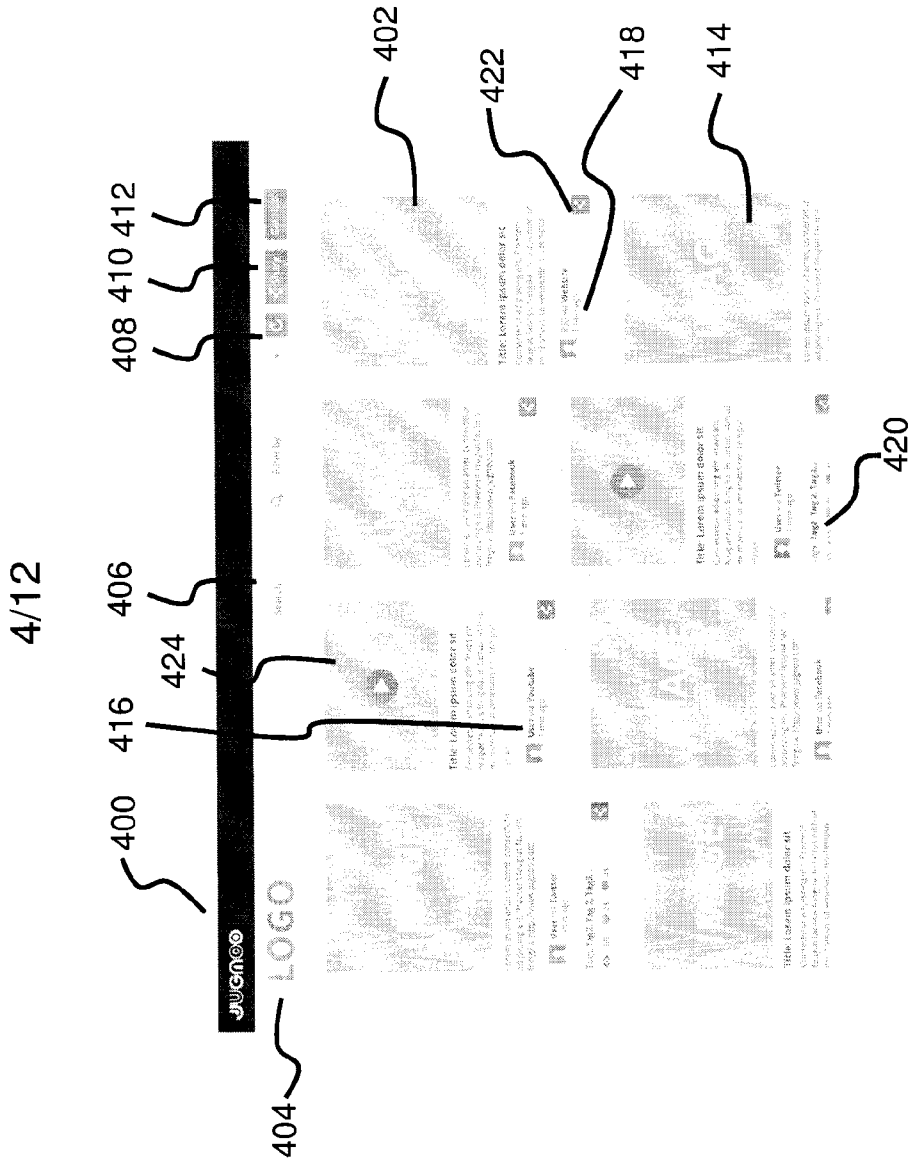


FIG. 4



EXTERNAL WEBSITE

FIG. 5

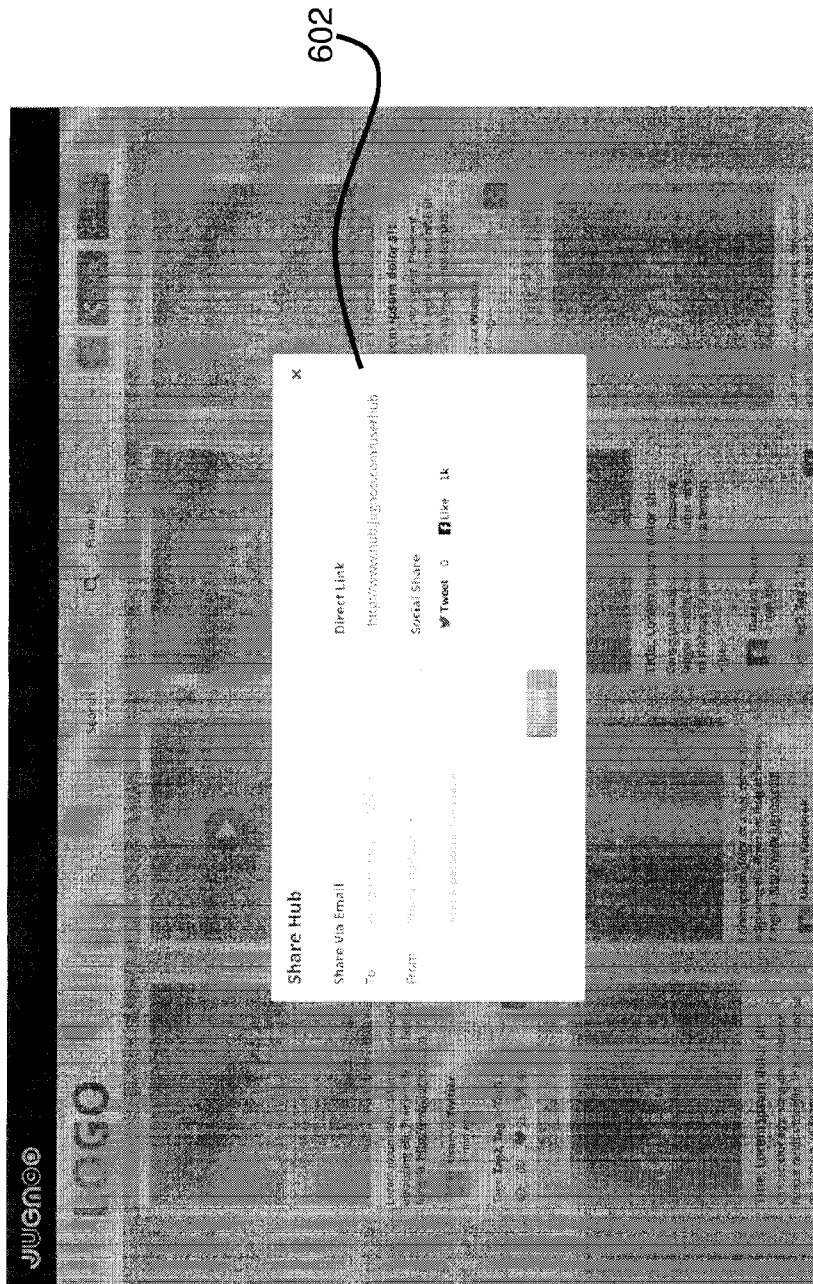
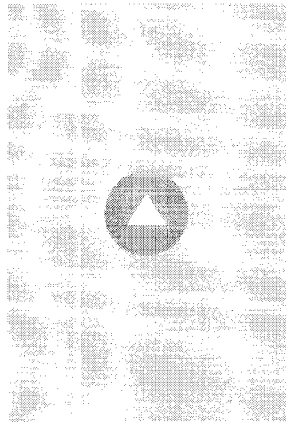


FIG. 6



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~User



User via Youtube
1 min ago



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent feugiat facilisis fringilla. <http://www.jugoso.com>



User via Twitter
1 min ago

Tags: **Tag2, Tag 2, Tag3...**



100



25



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FIG. 7

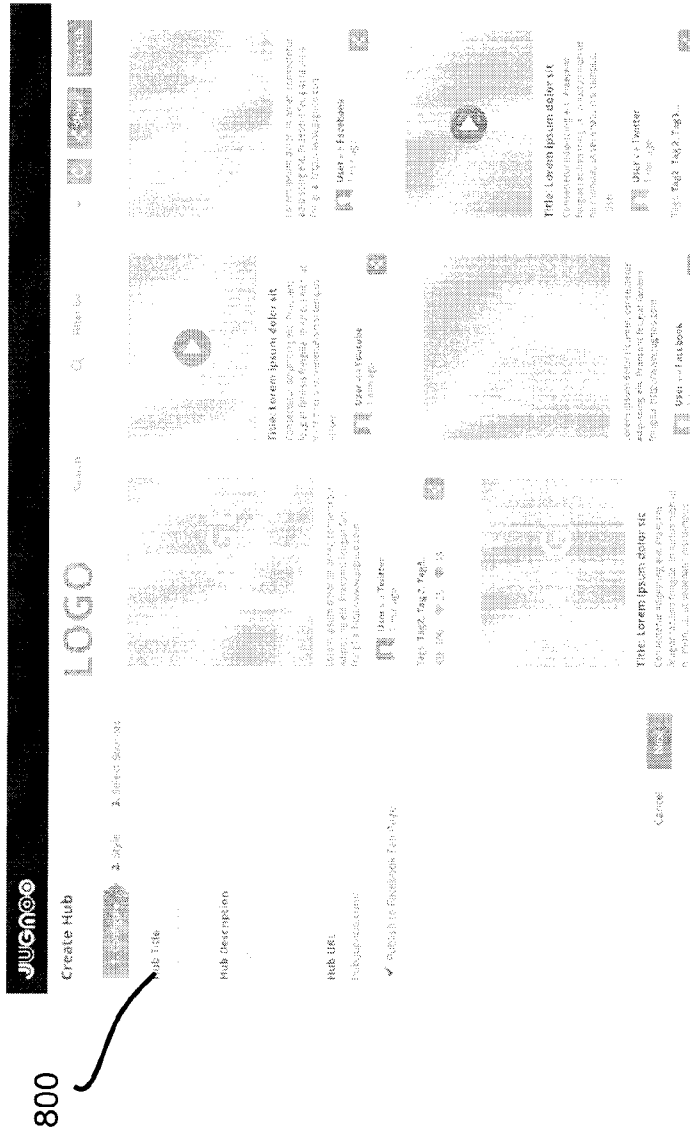


FIG. 8

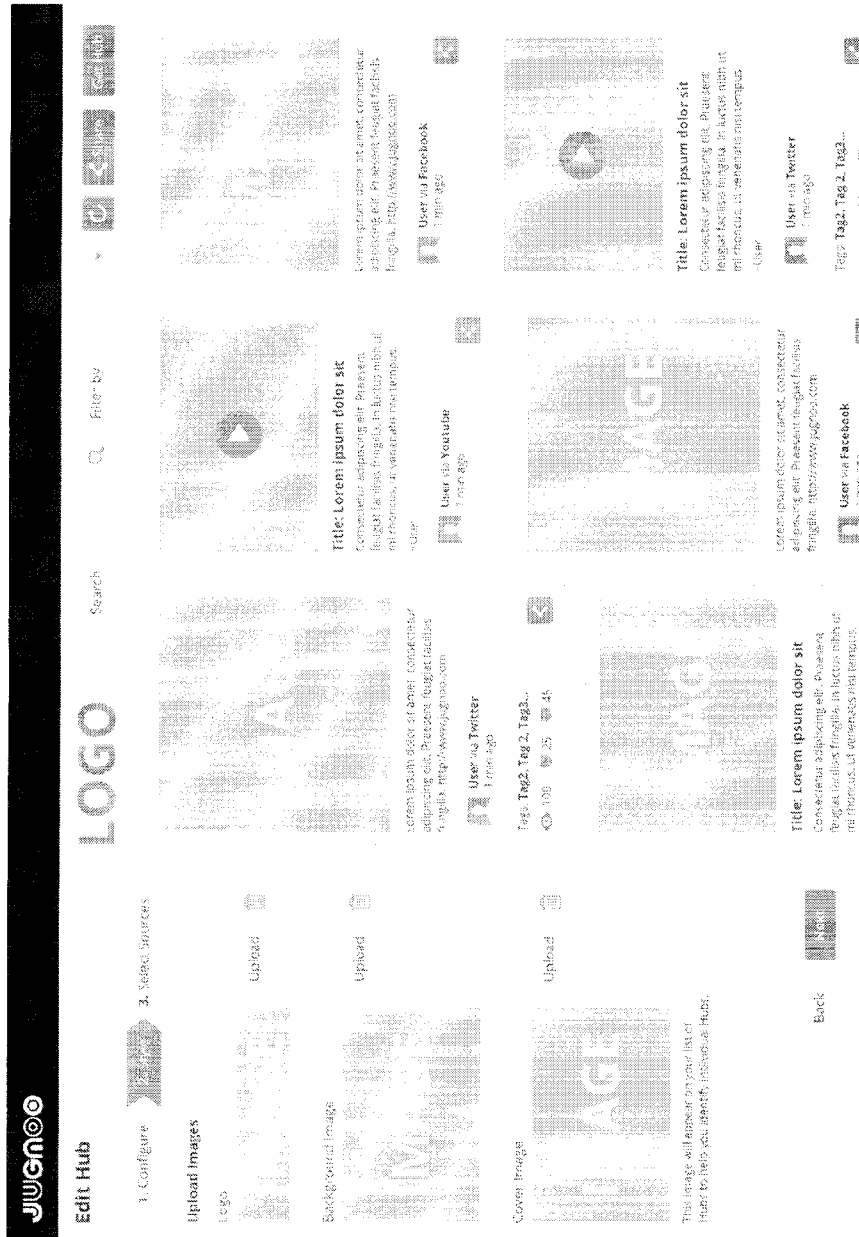


FIG. 10

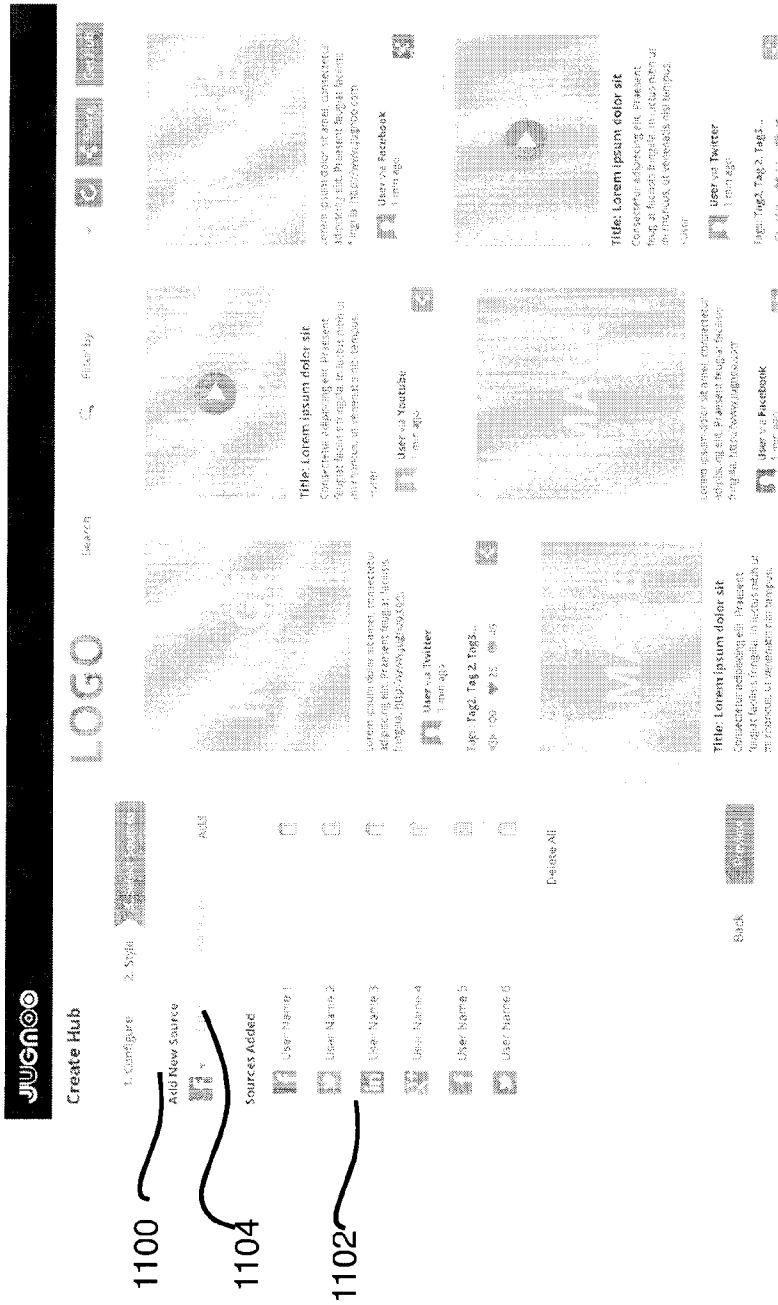


FIG. 11

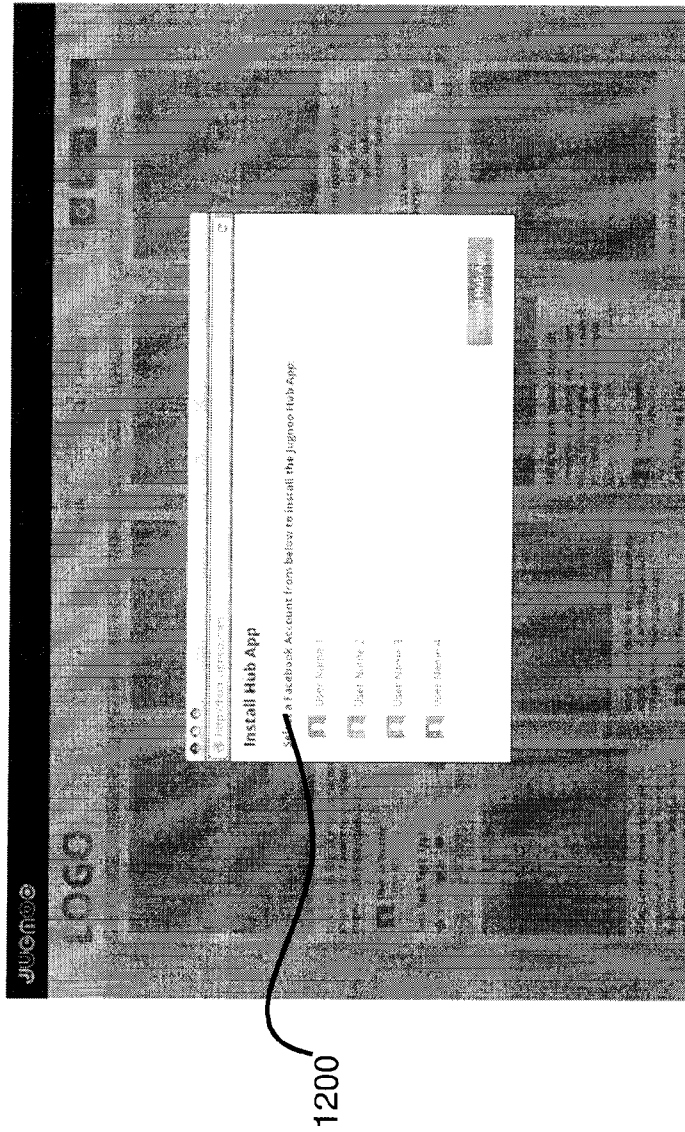


FIG. 12

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2013/050520

| <p>A. CLASSIFICATION OF SUBJECT MATTER IPC: H04N 21/431 (2011.01) , G06F 17/00 (2006.01) , G06Q 30/02 (2012.01) , H04L 12/16 (2006.01) According to International Patent Classification (IPC) or to both national classification and IPC</p> | | | | | | | | | | | | | | | | | | | | |
|---|---|--|-----------|--|-----------------------|---|---|---------|---|--|---------|---|--|---------|---|--|--|-----|--|--|
| <p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) H04N (2011.01), G06F (2006.01), G06Q (2012.01), H04L (2006.01)</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Google, Google Scholar, Total Patent and Intellect. Keywords: dashboard, social media, widgets, filters, network and similar terms.</p> | | | | | | | | | | | | | | | | | | | | |
| <p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Category*</th> <th style="width:60%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width:30%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td align="center">Y</td> <td>http://web.archive.org/web/20120630183703/http://www.apple.com/downloads/dashboard/ (Apple™) 30 June 2012 (30-06-2012) *see whole document</td> <td align="center">1 to 20</td> </tr> <tr> <td align="center">Y</td> <td>http://www.youtube.com/watch?v=7FCCHoQDUEk (BZG and Jello Media) 21 July 2011 (21-07-2011) * see whole video</td> <td align="center">1 to 20</td> </tr> <tr> <td align="center">Y</td> <td>http://web.archive.org/web/20120608153202/http://support.apple.com/kb/PH4101 (Apple™) 08 June 2012 (08-06-2012) * see whole document</td> <td align="center">1 to 20</td> </tr> <tr> <td align="center">A</td> <td>http://web.archive.org/web/20111121141938/http://en.wikipedia.org/wiki/Yahoo!_Widgets (Wikipedia™) 21 November 2011 (21-11-2011)</td> <td></td> </tr> <tr> <td align="center">P,A</td> <td>http://web.archive.org/web/20130520041328/http://www.joinscope.com/ (Scope) 20 May 2013 (20-05-2013)</td> <td></td> </tr> </tbody> </table> | | | Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | Y | http://web.archive.org/web/20120630183703/http://www.apple.com/downloads/dashboard/ (Apple™) 30 June 2012 (30-06-2012) *see whole document | 1 to 20 | Y | http://www.youtube.com/watch?v=7FCCHoQDUEk (BZG and Jello Media) 21 July 2011 (21-07-2011) * see whole video | 1 to 20 | Y | http://web.archive.org/web/20120608153202/http://support.apple.com/kb/PH4101 (Apple™) 08 June 2012 (08-06-2012) * see whole document | 1 to 20 | A | http://web.archive.org/web/20111121141938/http://en.wikipedia.org/wiki/Yahoo!_Widgets (Wikipedia™) 21 November 2011 (21-11-2011) | | P,A | http://web.archive.org/web/20130520041328/http://www.joinscope.com/ (Scope) 20 May 2013 (20-05-2013) | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | | | | | | | | | | | | | | | | | | |
| Y | http://web.archive.org/web/20120630183703/http://www.apple.com/downloads/dashboard/ (Apple™) 30 June 2012 (30-06-2012) *see whole document | 1 to 20 | | | | | | | | | | | | | | | | | | |
| Y | http://www.youtube.com/watch?v=7FCCHoQDUEk (BZG and Jello Media) 21 July 2011 (21-07-2011) * see whole video | 1 to 20 | | | | | | | | | | | | | | | | | | |
| Y | http://web.archive.org/web/20120608153202/http://support.apple.com/kb/PH4101 (Apple™) 08 June 2012 (08-06-2012) * see whole document | 1 to 20 | | | | | | | | | | | | | | | | | | |
| A | http://web.archive.org/web/20111121141938/http://en.wikipedia.org/wiki/Yahoo!_Widgets (Wikipedia™) 21 November 2011 (21-11-2011) | | | | | | | | | | | | | | | | | | | |
| P,A | http://web.archive.org/web/20130520041328/http://www.joinscope.com/ (Scope) 20 May 2013 (20-05-2013) | | | | | | | | | | | | | | | | | | | |
| <p><input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.</p> | | <p><input checked="" type="checkbox"/> See patent family annex.</p> | | | | | | | | | | | | | | | | | | |
| * | Special categories of cited documents : | | | | | | | | | | | | | | | | | | | |
| "A" | document defining the general state of the art which is not considered to be of particular relevance | "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 | | | | | | | | | | | | | | | | | | |
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| "O" | document referring to an oral disclosure, use, exhibition or other means | "&" document member of the same patent family | | | | | | | | | | | | | | | | | | |
| "P" | document published prior to the international filing date but later than the priority date claimed | | | | | | | | | | | | | | | | | | | |
| <p>Date of the actual completion of the international search 09 September 2013 (09-09-2013)</p> | | <p>Date of mailing of the international search report 26 September 2013 (26-09-2013)</p> | | | | | | | | | | | | | | | | | | |
| <p>Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476</p> | | <p>Authorized officer Arthur Winnik (819) 934-7880</p> | | | | | | | | | | | | | | | | | | |

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/CA2013/050520

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| A | http://web.archive.org/web/20120621030116/https://en.wikipedia.org/wiki/Flipboard (Wikipedia™) 21 June 2012 (21-06-2012) | |