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AGGREGATION AND DISPLAY OF USER-SUBMITTED COMMENTS IN A BROWSER

ABSTRACT

A system and method that facilitates the sharing of user-generated content is disclosed. By way of example and as described in more detail below, a system may aggregate comments regarding a webpage from multiple users, store the comments on a different server from the website, and display the comments in a browser alongside the webpage.

Example System

Systems such as those described above may include one or more computing devices. For instance, Figure 1 provides the example of system 100, which includes computing devices 120, 140, 160 and 170. The devices may include a processor such as processor 111, which may be a commercially available central processing unit (CPU). The instructions used by a computing device may include any set of one or more instructions that are accessed and executed by the computing device. For example, instructions 113 may be stored in a format that is capable of execution by processor 111 with or without additional processing, e.g., machine code, object code, script, or independent source code modules that are interpreted on demand.

The instructions may be stored in a memory. For instance, instructions 113 are stored in memory 112 and processor 111 and memory 112 are configured so that processor 111 can read, modify, delete and add values stored in memory 112. Memory may store information that is used by, or results from, the operations performed by the computing device. By way of example, memory 112 stores data 114, which includes values that are retrieved or stored by processor 111 in accordance with instructions 113. The instructions may include programs, such as a browser.

A computing device may include components for receiving direct user input to the device. Similar to device 210, device 120 includes a processor 121, memory 122, instructions 123 and
data 124. Device 120 also includes a user input component 125 having circuitry and other components configured to receive input from user 150, such as information provided tactiley (e.g., a mouse, keyboard or touchscreen), visually (e.g., hand gestures via a camera) and audibly (e.g., verbal commands via a microphone). A computing device may include components for providing output directly to users. For example, a component may include circuitry that outputs visual, audio or tactile (e.g., haptic) information to users of the device, such as display 130 or speaker 128.

A computing device may include one or more components for communicating with other computing devices. By way of example, devices 160, 170, 120 and 140 include a network interface connecting each device to a different node of communication network 190. Network 190 may be composed of multiple networks using different communication protocols. For instance, when device 160 transmits information to device 120, the information may be sent as an HTML document over one or more of the Internet (e.g., via core Internet routers in accordance with the Transmission Control Protocol (TCP) and Internet Protocol (IP)), a cellular network (e.g., in accordance with the LTE (Long-Term Evolution) standard), a local network (e.g., an Ethernet or Wi-Fi network), or a Bluetooth connection. A device may provide information to a user via other devices, e.g., device 160 may display information to user 150 by sending the information via network 190 to device 120 for display on display 130.

Although Figure 1 shows computing devices 160, 170, 120 and 140 as individual blocks, each of which contains its own processor and memory, the operations described herein may involve a single computing device or many computing devices, e.g., in the “cloud”. Various operations described below as involving a single computing device (e.g., a single CPU in a single server) may involve a plurality of computing devices (e.g., a distributed configuration). By way of
example, processor 121 and memory 122 may be contained in a desktop personal computer or a wireless phone.

In the examples described herein, devices 160 and 170 are assumed to be servers and devices 120 and 140 are assumed to be client devices. For instance, device 160 may be a web server operated by a website provider. Device 120 and may be a desktop computer system operated by an individual user, and device 140 may be a mobile device such as a cell phone.

In the instance where the user consents to the use of such data, one or more of the comments provided by an individual users may be uploaded or otherwise provided to the system. A user may be provided with controls allowing the user to make the election as to both if and when the devices and operations described herein enable collection of user information (e.g., information about a user’s social network, social actions or activities, comments, images and time/location of submission, preferences, etc.), and if the user is sent content or communications from a server.

In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user’s identity may be treated so that no personally-identifiable information can be determined for the user, or a geographic location may be generalized (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

In that regard, device 170 may be a server receives, stores and provides comments about webpages, including webpages that might be provided by a different entity than the service provider operating the comment server. For instance, when comment server 170 receives a comment regarding a webpage, the server may store the comment’s content (e.g., text entered by
the user), the URL of the page to which the comment pertains and, optionally, a unique identifier related to the user (e.g., the user’s user name). The comment server(s) with which a browser communicates may be set by the user.

Example Method

Operations in accordance with a variety of aspects of the method will now be described. It should be understood that the following operations do not have to be performed in the precise order described below. Rather, various steps can be handled in a different order or simultaneously.

As shown in blocks 210 and 220 of Figure 2, a browser may request and receive a webpage from a website provider. For instance and as shown in Figure 3, a browser 300 running on device 120 may request and display webpage 330 from a website hosted on web server 160, and may display the webpage in portion 320 of the browser’s GUI. As shown in block 230, the browser may also request and receive a list of comments regarding the webpage from comment server 170. In that regard, in response to a user navigating to webpage 330, browser 300 may request a list of comments regarding webpage 320 from comment server 170 and display comments 360 that are provided response in portion 350 of the browser’s GUI.

Figures 4 and 5 provide an example wherein some users share comments about a webpage using features that were provided with the webpage and other users share comments about a webpage without relying upon features or other content provided via the webpage.

As shown in Figure 4, web server 160 may provide the same webpage 420 to four different users 430, namely, User A, User B, User C and User D. Users 430 may enter comments 440 about the page. User A and User B may provide their comments to web server 160 and User C and User D may provide their comments to comment server 170. The comments provided to web server 160
may be displayed to users via the webpage, e.g., the comment may be included in the webpage the next time it is sent. The comments provided to comment server 170 may be displayed to users in browser 300 independently of the webpage.

By way of example and as shown in Figure 5, web server 160 may provide webpage 220 to User A for display in browser 300. The HTML code for webpage 530 may include text and imagery 330 provided by web server 160 and comments 340 provided by users. Comments 340 may have been provided using features that were included in the HTML code for webpage 530, e.g., via text-input field 390.

The instructions for the browser may be configured to display a window containing comments regarding the webpage that were provided, stored and received from the comment server. By way of example, when a user navigates to URL 210 of webpage 530, browser 300 may send a query for comments regarding the page to comment server 170, and may display the comment received in response in window pane 360. Window pane 360 or another aspect of the browser may receive comments from the user and send the comments to the content server 170.

The instructions for receiving comments from a user and displaying comments entered by users may be built into the browser’s instructions. For example, the browser may send only the URL to comment server 170 and receive only the text of comments associated with the URL in return. The instructions for displaying and receiving the comments in window pane 360 may also be provided by the comment server, e.g., in response to receiving the URL for a new webpage, comment server 170 may provide an HTML page containing comments 370 and text-input field 380.

The service provider may send comments to any browser that has been configured to receive such comments. For instance, if a user logs into the browser and the user’s profile indicates that
the user wants to receive comments from the service provider, the browser may keep the service provider advised of the pages that it is visiting in order to view comments associated with the page.

As these and other variations and combinations of the features discussed above can be utilized without departing from the claimed subject matter, the foregoing description of the embodiments should be taken by way of illustration rather than by way of limitation. The provision of examples (as well as clauses phrased as "such as," "e.g.", "including" and the like) should not be interpreted as limiting the claims to the specific examples; rather, the examples are intended to illustrate only some of many possible aspects. Similarly, references to “based on” and the like means “based at least in part on”.

FIGURE 1
210
Browser requests and receives webpage from website provider

220
Browser displays webpage in portion of browser GUI

230
Browser requests and receives comments regarding the webpage from service provider

FIGURE 2

300
Webpage provided by website provider

320
Comments to and from service provider

330

360

FIGURE 3
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FIGURE 4
FIGURE 5