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MODIFYING METADATA BASED ON A RECEIVED GESTURE

ABSTRACT

A metadata modification system can be used to modify metadata associated with one or more products displayed at a display screen. The system presents the metadata associated with one or more products at the display screen of the electronic device. The system receives a gesture from a user at the display screen. The system modifies the metadata associated with one or more products based on the received gesture from the user.

PROBLEM STATEMENT

Search engines enable users to search for, find and purchase products and services over the Internet. However, search engines do not optimize its user interface real estate to show the details of the search results. This problem is exacerbated with shopping results. With limited screen space, current systems show limited product metadata e.g., brand, color, price, even if the user is interested in the product. For example, when a user interacts with a carousel displaying shopping results, the carousel of products rotates to show additional products. If a user wants more information about a particular product, the user selects the particular product and is directed to a different page, e.g., a specific product page. No mechanism is available to provide the user with additional metadata about the particular product on the same web page where the user indicates an initial interest. Accordingly, a system for modifying metadata associated with the products displayed on the electronic device is described.

DETAILED DESCRIPTION

The systems and techniques described in this disclosure relate to a metadata modification system that modifies the metadata associated with one or more products displayed in a user interface of a display screen of an electronic device. The system can be implemented for use in an Internet, an intranet, or another client and server environment. The system can be implemented locally on a client device or implemented across a client device and server environment. The client device can be any electronic device such as a mobile device, a smartphone, a tablet, a handheld electronic device, a wearable device, etc.

Fig. 1 illustrates an example method 100 to modify metadata associated with one or more products based on a gesture received from a user. The system presents metadata associated with one or more products at the display screen of the electronic device (102). The one or more products may be displayed in response to a user's search query entered on a web browser or a web application on a client device. The search query may be associated with a particular product or a service that the user may be interested to buy or explore. Based on the received query, the system may return one or more products or services that are determined to be associated with the search query. Each of the returned products or services can be represented by one or more items, e.g., images, links, videos, associated with the product or the service in the user interface a. The system may also present metadata for each of the returned products or services. The metadata may include a category, a price, a brand, a product line, etc., pertaining to the products or services displayed at the display screen. In an embodiment, a product carousel may be presented showing images of the relevant products and the associated metadata in a horizontal or vertical scroll list.

In an example, the user enters a search query “best running shoes” into a search engine or shopping website. The system returns search results in response to “best running shoes,” including one or more shoe products displayed on the web page. When displaying the images of shoes, the system presents metadata, such as, brand (Nike, Reebok), color (blue, black), etc., associated with the each of the shoes displayed. The various images of shoes may be presented in carousel form that the user can scroll through to view multiple shoe products.

The system receives a gesture at the display screen (104). The gesture can be any interaction that the user initiates with the product results in the user interface displayed at the display screen. The gesture may be entered by the user to move to the next item in the list, view more information about a particular product, move to a different search result, etc. Gestures may include, for example, a swipe on the touch-sensitive input device, a long press on the touch-sensitive input device operatively coupled to or included in the electronic device, single tap, double tap, single click, double click, physical shakes of the electronic device, touchless gestures detected by the electronic device, etc. The user can input gestures or commands through various input methods, for example, a finger touch, stylus, a mouse, a remote control a keyboard, etc.

The system modifies the metadata associated with the one or more products based on the received gesture (106). In an embodiment, the system modifies the metadata associated with one or more products to reveal richer metadata like product reviews, description, price alerts, etc., for the products. The system may reveal the additional metadata when the user is in the state where they would like to learn more about the products but have not committed to click on a product result that would cause a major content transition by leaving the search results page.

In an embodiment, as the user swipes, each item in the product carousel grows in width and height to make room for the new metadata. The system may also rearrange some of the products that were already displayed so that the layout can make use of the newly available space. To make the transition between the two states less jarring for the user, the system may use CSS transforms and customized animation sequences that gradually scales the image and fades in new content. This also allows a condensed and restful state before the user indicates interest and intent in the area. It allows the page to be more densely populated as a table of contents and provides deeper metadata afterwards. User is able to scan information quickly through lightweight UI elements.

Fig. 2 illustrates an example graphical user interface (GUI) associated with the metadata modification system. The GUI can be displayed at a display screen or other output device associated with an electronic device. As shown in Fig. 2A, when a user enters a search query, “best running shoes,” the system presents metadata such as brand (xyz, pqr, mno), color (black, white, orange), associated with shoe 1, shoe 2, shoe 3, at the display screen of the electronic device. The user can scroll the list of displayed results to view other shoes. The system receives a swipe gesture at the display screen. Upon receiving the swipe gesture, as shown in Fig. 2B, the system modifies the metadata associated with shoe 1 and shoe 2. In this example, the along with the brand and color, the system also displays other metadata such as size, characteristics, price of the shoe 1 and shoe 2. The system increases the width and height of the displayed results to make room for more metadata. The system enables the user to review further details about the products that the user may be interested in without the need to leave the original page.

Fig. 3 is a block diagram of an exemplary environment that shows components of a system for implementing the techniques described in this disclosure. The environment includes client devices 310, servers 330, and network 340. Network 340 connects client devices 310 to servers 330. Client device 310 is an electronic device. Client device 310 may be capable of requesting and receiving data/communications over network 340. Example client devices 310 are personal computers (e.g., laptops), mobile communication devices, (e.g. smartphones, tablet computing devices), set-top boxes, game-consoles, embedded systems. The other devices 310' that can send and receive data/communications over network 340 may include refrigerator, cooler, fridge, cold storage, chiller, any other physical storage appliance which has the ability to store food products, etc. Client device 310 may execute an application, such as a web browser 312 or 314 or a native application 316. Web applications 313 and 315 may be displayed via a web browser 312 or 314. Server 330 may be a web server capable of sending, receiving and storing web pages 332. Web page(s) 332 may be stored on or accessible via server 330. Web page(s) 332 may be associated with web application 313 or 315 and accessed using a web browser, e.g., 312. When accessed, webpage(s) 332 may be transmitted and displayed on a client device, e.g., 310. Resources 318 and 318' are resources available to the client device 310 and/or applications thereon, or server(s) 330 and/or web pages(s) accessible therefrom, respectively. Resources 318' may be, for example, memory or storage resources; a text, image, video, audio, JavaScript, CSS, or other file or object; or other relevant resources. Network 340 may be any network or combination of networks that can carry data communication.

The subject matter described in this disclosure can be implemented in software and/or hardware (for example, computers, circuits, or processors). The subject matter can be

implemented on a single device or across multiple devices (for example, a client device and a server device). Devices implementing the subject matter can be connected through a wired and/or wireless network. Such devices can receive inputs from a user (for example, from a mouse, keyboard, or touchscreen) and produce an output to a user (for example, through a display). Specific examples disclosed are provided for illustrative purposes and do not limit the scope of the disclosure.

DRAWINGS

100

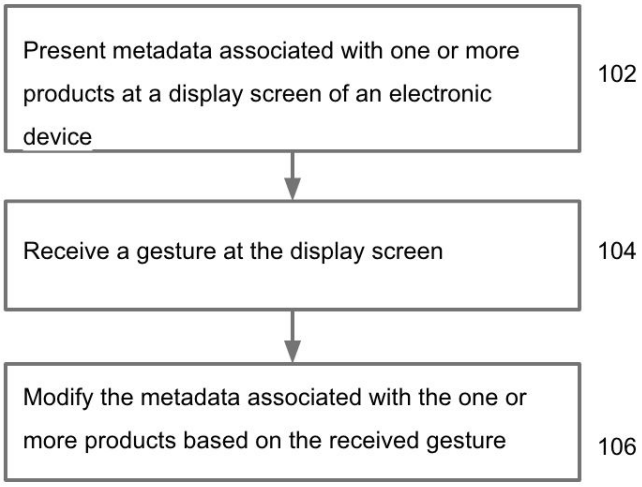

Fig. 1

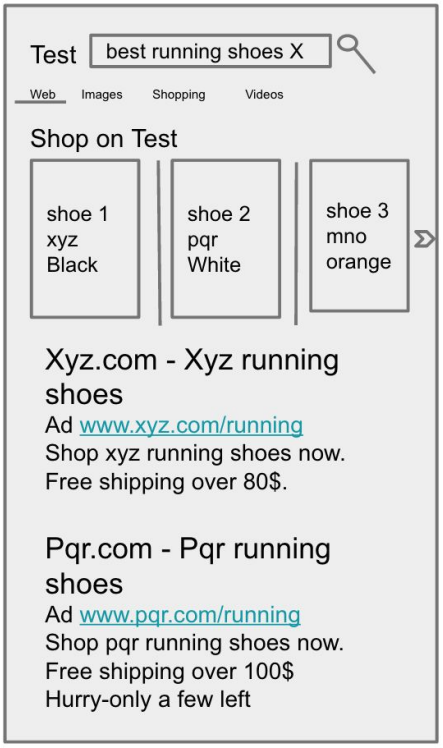

Fig. 2A

Fig. 2B

Fig. 2

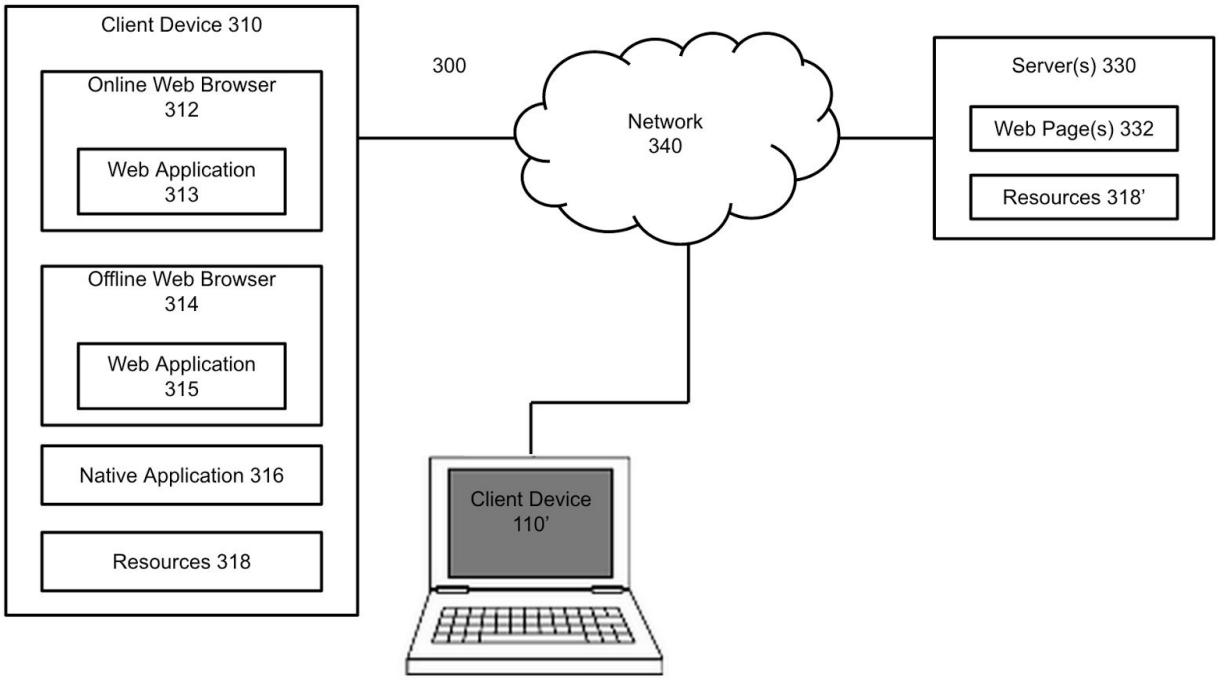
Client Device 310
Online Web Browser 312
Web Application 313
Offline Web Browser 314
Web Application 315
Native Application 316
Resources 318
300
Network 340
Server(s) 330
Web Page(s) 332
Resources 318'
Client Device 110'

Fig. 3