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January 19, 2016

CONDITIONAL TRIGGERING OF USER SURVEY

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Recommended Citation

Chapple, Julia and Rose, Robert, "CONDITIONAL TRIGGERING OF USER SURVEY", Technical Disclosure Commons, (January 19, 2016)
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CONDITIONAL TRIGGERING OF USER SURVEY

ABSTRACT

A conditional survey system can be used to display a survey to a user within an application when some predefined triggering conditions for the survey are fulfilled. The survey captures user feedback regarding the use of the application. The system detects a series of actions, performed by the user in the application. The system then detects a terminal action performed by the user. Based on the series of user actions and the terminal action, the system identifies a relevant survey. The system then determines whether to present the survey to the user or not. Based on a positive determination, the system displays the survey to the user within the application.

PROBLEM STATEMENT

With the advent of software applications (apps) and their increasing popularity, the developers or marketers for these apps are very interested in receiving user feedback and improving based on such feedback. Therefore, a lot of user satisfaction surveys are displayed to users inside apps in order to receive feedback related to usage of the application. The feedback is used to measure and track user attitudes and experiences over time. The user feedback surveys are triggered by applications themselves, generally at the launch or exit of the application. In either case, these surveys usually fail to take into account user actions performed inside the application. As a result, the surveys are not able to capture accurate user feedback related to the use of the application. Also, application specific user satisfaction surveys are usually presented to users on a high frequency basis. For example, a user may get a feedback survey every time

they launch or exit the application, which is not a very positive experience for the user. Accordingly, an advanced system for displaying a user feedback survey to a user within an application is described.

DETAILED DESCRIPTION

The systems and techniques described in this disclosure relate to a conditional survey system that displays a survey to a user within an application. 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 that displays a survey to a user within an application running on a user device such as smartphone, laptop, or any other electronic device. The system detects an a) application launch by a user 102 and also detects b) a series of actions performed by the user in the application. For example, in a cloud storage application, after detecting launch of the cloud storage application on a user device, the system detects a series of actions which can include, navigating to the cloud application, searching for or locating a folder, searching for or locating a document file, etc. In the same application, a further set of series of actions can include creating a new document file, renaming the document file, moving the document file to a folder, etc. In a search application, a series of actions can include, opening a search application, inputting a search keyword or a string, selecting search parameters, etc. In another example, a user may share a group of pictures through email or another messaging

platform. The series of actions may include, opening a photo gallery, selecting pictures to share with another user, selecting a messaging platform and attaching the pictures, composing a message, etc. The system assigns a unique action ID to each series of actions performed within the application. The action ID represent the type of actions performed by the user in a particular application. The system may store these action IDs in a temporary memory location. In the abovementioned example of cloud application, the system assigns respective action IDs to the set of two series of user actions.

In another embodiment, the system may be part of the application which is used by the user. As a result, the system may directly start detecting a series of user actions being performed by the user, instead of first, detecting a launch of the application.

The system then detects 104 whether the user has performed a terminal action. For example, in the cloud storage application, a terminal action can be opening or previewing a document file, deleting a file, sharing a set of documents, etc. In the search application example, a terminal action can including previewing search results in response to a keyword string. In an email application, sending an email with attached images can be a terminal action performed by the user. The terminal action represents a successful completion of a task or a failed task for the user within the application. In the case of a failed task, for example, the terminal action can be failed to preview or load a document file, failure while sending email with attached photos, etc. The system assigns a unique action ID (different from the first action ID) to the terminal action and stores this terminal action ID in a temporary memory location. If a terminal action is not detected, the system may continue to detect any further series of actions being performed by the user within the application.

The system identifies 106 a survey based the series of user actions and the terminal action. The system uses the previously stored user action IDs (representing series of user actions) and the terminal action ID (representing the terminal action). The system may keep a database of a set of surveys (with each survey having its own survey ID) for different applications corresponding to different set of user action IDs and terminal action IDs. For example, a survey corresponding to a search application can be related to user navigation experience whereas another survey for the same application may be related to obtaining user feedback about the quality of search results. The system compares the set of user action IDs and the terminal action ID to the predefined set in order to select an appropriate survey.

The system then determines 108 whether to present the identified survey to the user. The system tracks how many surveys have been displayed to the user over a predetermined time period. Along with that, the system also tracks how recently a particular survey (using the survey ID) was presented to the user. In this manner, the system promotes presenting the user with different surveys, which have different survey IDs, during the predetermined period of time. If the system decides not to present a survey 112 to the user, the system flow ends. In an example, if a user is presented a feedback survey, upon completion of a series of actions and a terminal action, the system prevents the user from being asked for survey feedback about the same series of actions and terminal action within the same application.

In another embodiment, the system may start a timer after detecting start of an application with a predetermined time period of, e.g. 60 seconds. If a terminal action is not detected within the application for the predetermined period of time, the system may present a survey to the user. The survey may only be based on the action ID associated with the series of

actions taken by the user. For example, after a user start a search application, a preset timer may be started by the system, expecting a terminal action from user of the application within 90 seconds. After detecting series of actions, if a terminal action is not detecting before the preset timer expires, the system may identify a survey based on series of actions performed by the user.

The system displays 110 the survey to the user within the application. After the system determines that the user can be provided with a survey, the system fetches the survey, using the associated survey ID. The survey is presented in a user interface within the application. The survey may include a question for the user with multiple feedback options for the user to select. For example, the question included in a survey for a search application may be "How satisfied are you with these search results?" or "How would you rate your experience?" The input options can be, e.g., "Very Satisfied," "Somewhat Satisfied," "Not Satisfied," etc. The question can also be, e.g., "What was the purpose of your current search?" The feedback options can be, "Explore a topic," "Learn how to do something," "Get an answer," etc.

After a user enters a response by selecting one of the feedback options, a new dialog box can be provided to receive further input from the user about their reasoning for the selection. The survey may also include multiple questions related to the user's series of actions and terminal action in the application. Further, instead of multiple choice options, a user may be asked for specific feedback as well. The user may input their feedback using input devices associated with the user devices such as a keyboard, stylus, touch input, etc.

Figure 2a depicts a search application user interface on an electronic device. In an example implementation, a user may want to search for a particular topic. The user performs a series of actions in the search application interface. For example, first, the user opens a search

application interface 200a, inputs a search query in search bar 202a, and selects the search button 204a or presses [ENTER]. The user is then presented with a multiple links corresponding to the search query in section 206a of the search application interface. The system associates an action ID with the series of user actions performed by the user.

Figure 2b depicts the user interface 200b where the user has opened Link 1 in the interface 206b. The user may stay on this link for a particular time period. The system identifies the previewing of Link 1 as a terminal action and associated the terminal action with an action ID. The system triggers the survey presentation mechanism based on the user action ID and the terminal action ID . The survey is presented in the interface 208. As depicted, the interface includes a question, “How satisfied are you with your Search Result?” Further, feedback options for user selection can also be provided. The user can directly select one of the options from, “Very Satisfied,” “Somewhat Satisfied,” “Neither Satisfied nor Dissatisfied,” “Somewhat Dissatisfied,” and “Very Dissatisfied.” The system receives a user selection of one of the options as response to the survey question. The system keeps a track of the survey presentation and the associated series of actions and terminal action in order to improve the presentation of search results and future surveys.

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, and other devices 310' that can send and receive data/communications over network 340. 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 or 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

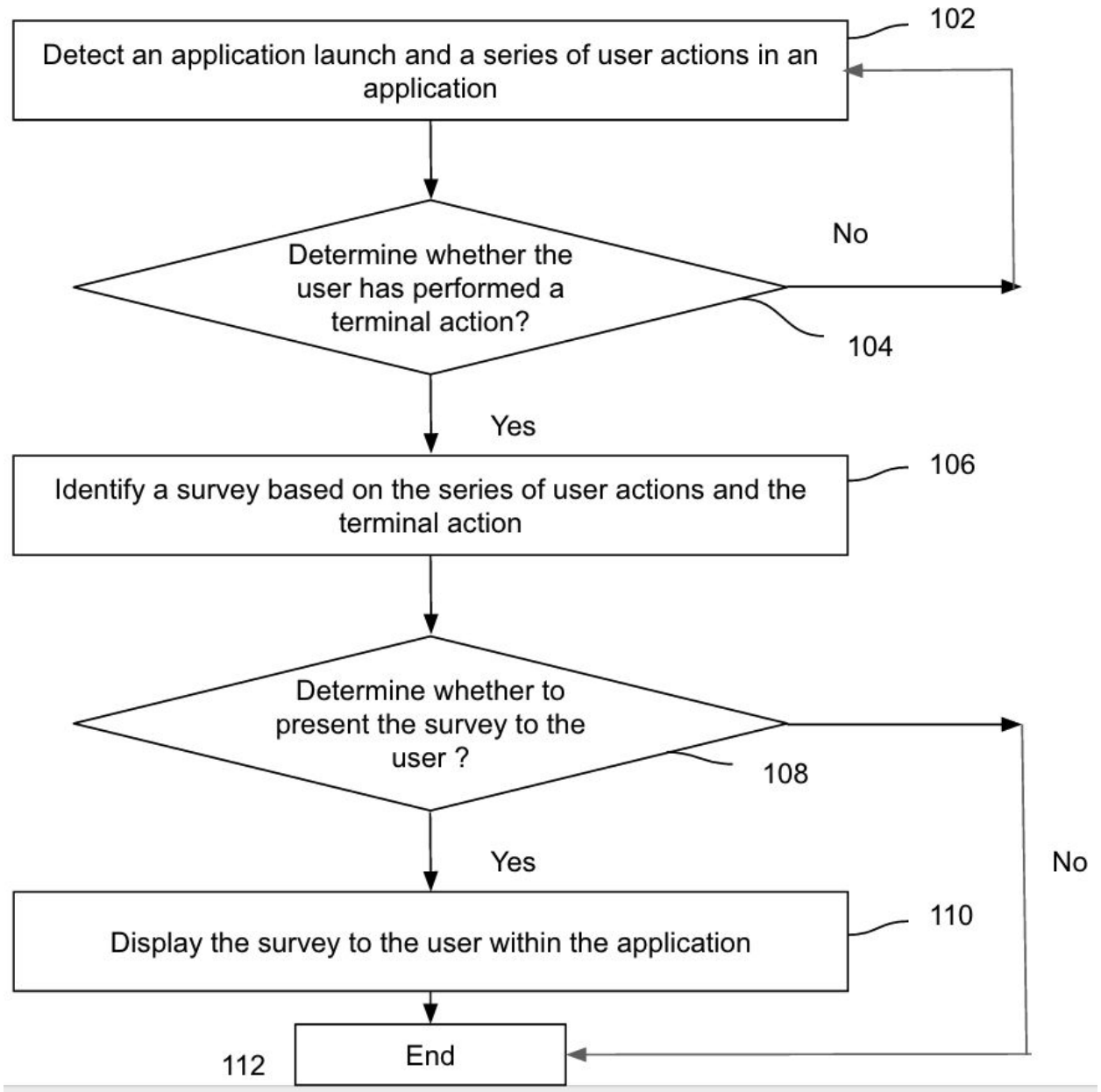


Fig. 1

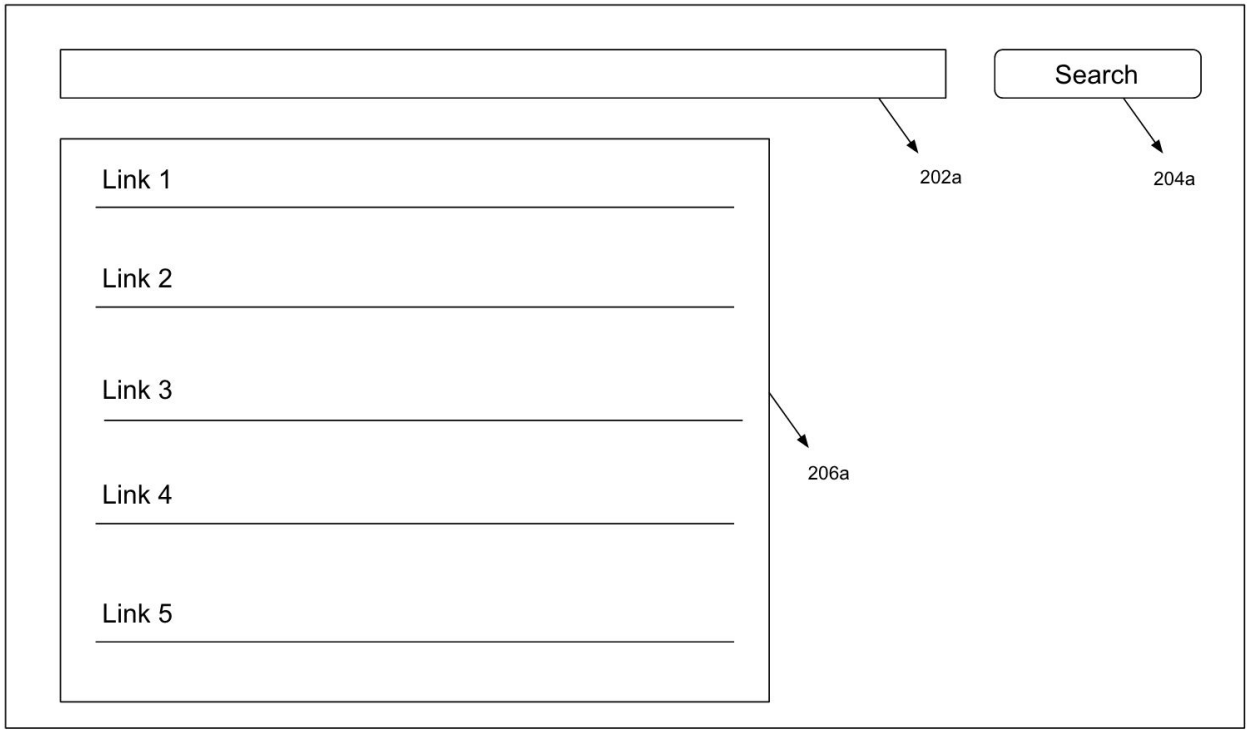
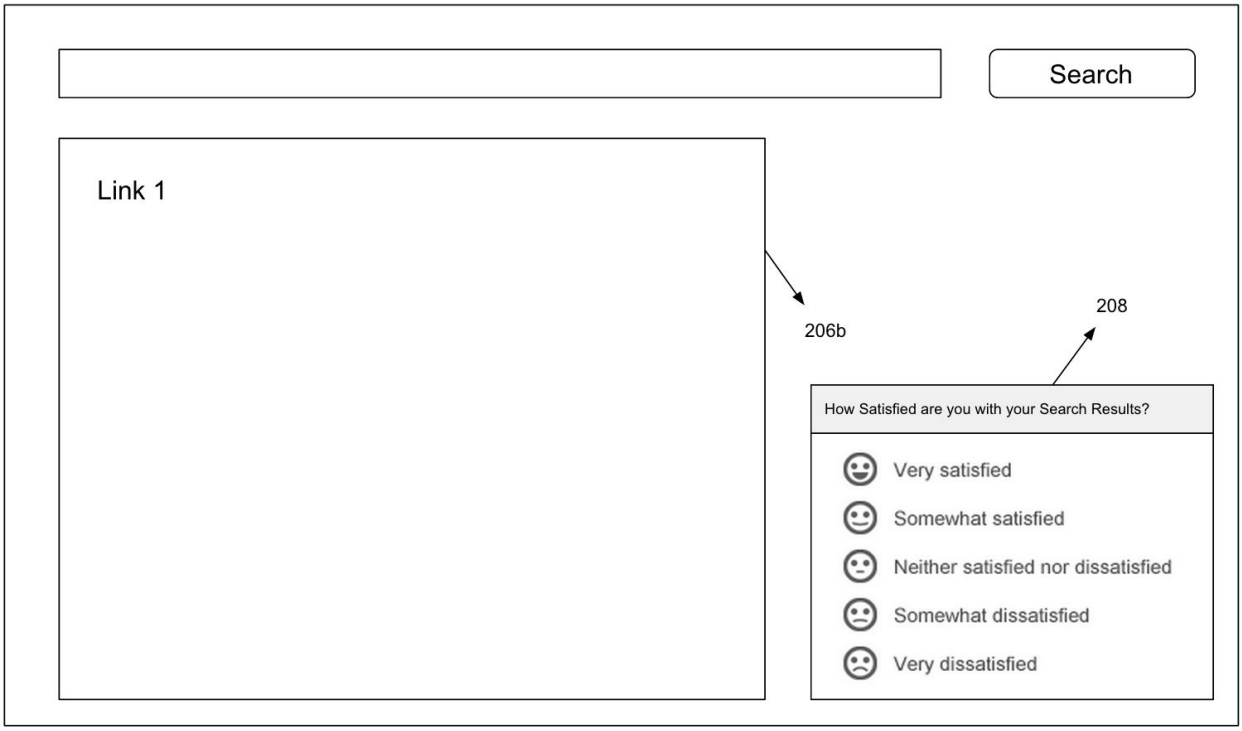


Fig. 2a


Search
Link 1
206b
208
How Satisfied are you with your Search Results?
Very satisfied
Somewhat satisfied
Neither satisfied nor dissatisfied
Somewhat dissatisfied
Very dissatisfied

200b

Fig. 2b

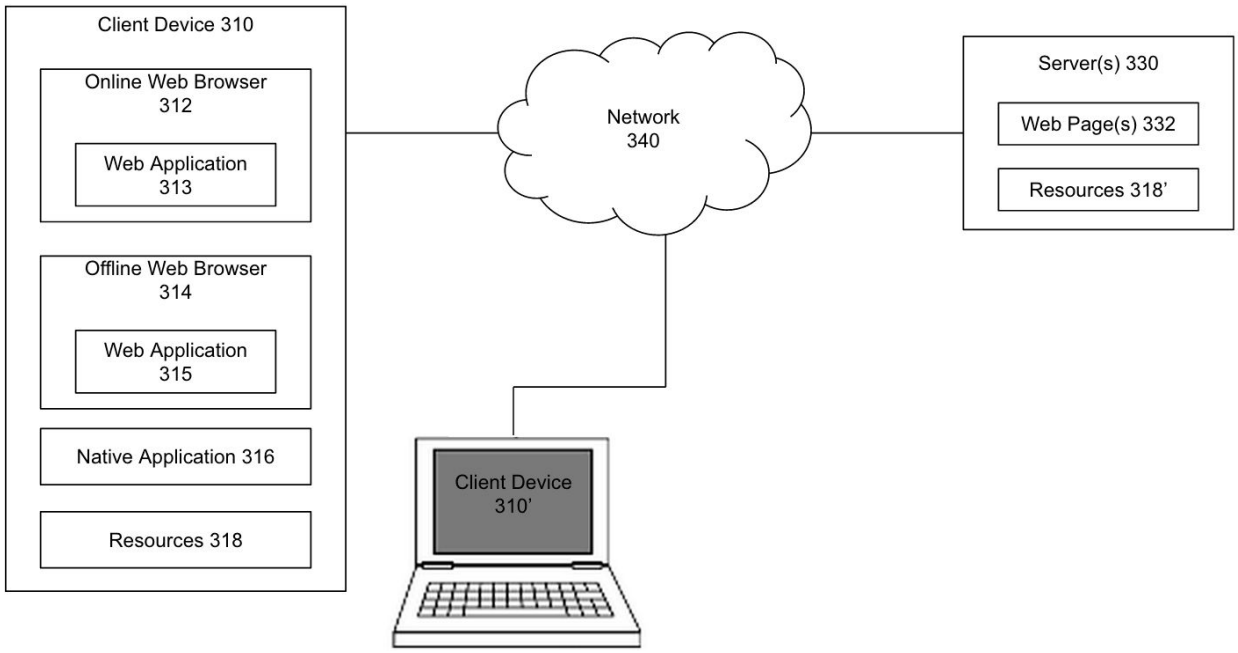

Client Device 310
Online Web Browser 312
Web Application 313
Offline Web Browser 314
Web Application 315
Native Application 316
Resources 318
Network 340
Server(s) 330
Web Page(s) 332
Resources 318'
Client Device 310'

Fig. 3