SYSTEM AND METHOD FOR USER GENERATED CONTENT IN MEDIA ADVERTISEMENTS

Inventors: John SanGiovanni, Seattle, WA (US); Benjamin B. Bederson, Chevy Chase, MD (US); Sean House, Seattle, WA (US); Andrew Donovan, Seattle, WA (US)

Assignee: Zumobi, Inc., Seattle, WA (US)

Filed: Jan. 19, 2012

Publication Classification

Int. Cl.
G06Q 20/32 (2012.01)
G06Q 20/24 (2012.01)
G06F 21/24 (2006.01)

U.S. Cl.

705/14.64; 726/28; 705/39

ABSTRACT

Allowing an app having access to hidden resources on a device to present third party media to the device user via that app such that requests included in the third party media which require access to hidden resources can be fulfilled without requiring further permission by the user. In one embodiment, a third party advertisement is presented to a user via an app that has been enabled by the user. The enabled app is pre-approved by the user, and by any authorizing organization, to access hidden resources, such as camera, recorder, and personal data. In this manner, third party requests that require access to such hidden data can control such access without requiring further action by the user.
IS APPLICATION 13-2 OPEN?

IS CAMERA USAGE CURRENTLY AVAILABLE TO DEVICE USER?

ENABLE DEVICE CAMERA

HAS PHOTO BEEN TAKEN?

SEND PHOTO TO THIRD PARTY SERVER ASSOCIATED WITH APPLICATION 13-2

CONTINUE NORMAL DEVICE OPERATION

FIG. 4
FIG. 5

THIRD PARTY SERVER
31
31-1 MEMORY
31-2 PROCESSOR

SOCIAL NETWORK SERVER
51
MEMORY
PROCESSOR

APPLICATION SPONSOR SERVER (13-2)
33
33-1 MEMORY
33-2 PROCESSOR

10 TAKE A PICTURE AND SEND TO US - - - - - - - - 13-2
10-2 PROCESSOR
10-1 MEMORY

50

111 TAKE A PICTURE AND SEND TO US
111-1

501 FOLLOW

10 TAKE A PICTURE AND SEND TO US
13-2
10-1 MEMORY
10-2 PROCESSOR

111 TAKE A PICTURE AND SEND TO US
111-1

501' FOLLOWING

10 TAKE A PICTURE AND SEND TO US
13-2
10-1' MEMORY
10-2' PROCESSOR

530

32

331
FIG. 6

401
IS APPLICATION 13-2 OPEN?

403
IS CAMERA USAGE CURRENTLY AVAILABLE TO DEVICE USER?

404
ENABLE DEVICE CAMERA

405
HAS PHOTO BEEN TAKEN?

406
SEND PHOTO TO THIRD PARTY SERVER ASSOCIATED WITH APPLICATION 13-2

402
CONTINUE NORMAL DEVICE OPERATION

601
IS THIRD PARTY REQUEST PRESENT?

602
HAS DEVICE USER ENABLED REQUEST?

603
OBTAIN DEVICE USER'S IDENTIFICATION FROM THIRD PARTY APPLICATION SPONSOR

604
HAS IDENTIFICATION BEEN RECEIVED?

605
SEND REQUEST ACCEPTANCE PLUS USER'S IDENTIFICATION TO THIRD PARTY SOCIAL NETWORK

WAIT
SYSTEM AND METHOD FOR USER GENERATED CONTENT IN MEDIA ADVERTISEMENTS

TECHNICAL FIELD

[0001] This disclosure relates to uploading user generated content and more specifically to systems and methods for allowing a device user to use the device's resources to upload information to a third party.

BACKGROUND OF THE INVENTION

[0002] It is now common for devices, particularly mobile devices, to have device resources, such as cameras, recording equipment, and the like, built into the device. These resources are controlled by the device's operating system which is designed such that some of the resources (herein called the hidden resources) are always under the control of the device user. For example, it would not be practical if a remote party could, from time to time, turn the device's camera (a hidden resource) on remotely even when the device user is present. Thus, in situations where the device user is viewing a website of some third party it is not possible for such third party to gain access to the hidden resources of the device and thus it is not currently possible to easily upload information from the hidden resources to the third party.

[0003] One method for accomplishing uploads from a specific device's hidden resources is by first downloading an application (app) to the device (such as a banking app where checks can be deposited by taking a photograph of the check) and then allowing the user to snap the desired photograph of a check to be deposited. Such an arrangement requires the app to be downloaded in advance of the photograph being taken and also requires that a relationship preexist between the device user and the app supplier before the app supplier can gain access to the hidden resources.

BRIEF SUMMARY OF THE INVENTION

[0004] The present application provides systems, devices and methods which allow an app which has access to hidden resources on a device to present third party media to the device user via that app, where requests included in the third party media may gain access to hidden resources without requiring further permission by the user. In one embodiment, a third party advertisement is presented to a user via an app that has been enabled by the user. The enabled app is pre-approved by the user and/or by any authorization organization, to access hidden resources, such as a camera, camcorder, an audio recorder, personal data, and the like. In this manner, third party requests that require access to such hidden data can control such access without requiring further action by the user.

[0005] In one embodiment, a request is made by an advertisement executing within an app for the device user to take photographs of him/herself and upload them to the third party. In another embodiment, a request may be to upload personal information pertaining to the user, for example, information allowing the user to follow an advertiser or other third party on a social network.

[0006] The foregoing has outlined rather broadly the features and technical advantages of the present invention in order that the detailed description of the invention that follows may be better understood. Additional features and advantages of the invention will be described hereinafter which form the subject of the claims of the invention. It should be appreciated that those skilled in the art that the conception and specific embodiment disclosed may be readily utilized as a basis for modifying or designing other structures for carrying out the same purposes of the present invention. It should also be realized that those skilled in the art that such equivalent constructions do not depart from the spirit and scope of the invention as set forth in the appended claims. The novel features which are believed to be characteristic of the invention, both as to its organization and method of operation, together with further objects and advantages will be better understood from the following description when considered in connection with the accompanying figures. It is to be expressly understood, however, that each of the figures is provided for the purpose of illustration and description only and is not intended as a definition of the limits of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] For a more complete understanding of the present invention, reference is now made to the following descriptions taken in conjunction with the accompanying drawings, in which:

[0008] FIG. 1 shows one embodiment of the invention rendered on a mobile device;

[0009] FIG. 2 shows an example of media uploaded from a user's device being used in a commercial airing on general TV;

[0010] FIG. 3 shows one embodiment of a system for supporting the concepts of the invention;

[0011] FIG. 4 shows one embodiment of a method of supporting the system shown in FIG. 3;

[0012] FIG. 5 shows one embodiment of a system for supporting another embodiment of the concepts of the invention; and

[0013] FIG. 6 shows one embodiment of a method of supporting the system shown in FIG. 5.

DETAILED DESCRIPTION OF THE INVENTION

[0014] FIG. 1 shows one embodiment of the invention rendered on device 10 which has display space 12 and positioned thereon are several apps 13-1 to 13-N (shown on the (A) depiction of the device). Device 10 can be any device that allow users to select applications for use by the user from time to time. For example, device 10 may be a mobile phone, tablet device, MP3 player, and the like. Further, device 10 may be implemented as a desktop computer, notebook computer, and the like. As illustrated in FIG. 1, device 10 is a mobile device, such as a smartphone. Such devices have operating systems (OS) stored in memory, such as memory 10-1 and the operating system is run on a processor, such as processor 10-2. Operating systems may include systems which utilize tile-based applications such as iOS, Android, and the like. Code within the OS, as well as code within each app, controls the operation of the device as well as the operation of each respective app.

[0015] Conceptually, the user enters an app, such as app 13-2 thereby opening the app, as shown in the(B) depiction of device 10. The app may be any type of app. In this embodiment, app 13-2 is an app specializing in vehicle trends and some third party not necessarily related to the app supplier is presenting advertisement 111 showing vehicle 111-1. For an
example illustration of the functionality of an embodiment, assume that the third party is running a contest in which user 120 can take a photograph or video of him/herself and upload the photograph to the third party. Possibly, the third party will run a new advertisement showing user 120, along with vehicle 121, based on the uploaded image received from device 10 via camera 11. Such an advertisement is shown in FIG. 2 airing on TV 21 and featuring user 120 and his car 121, all as uploaded via camera 11 of device 10 under control of a third party. The third party, in this embodiment, gains control of the hidden resources, such as the camera, via app 13-2 for the purposes of allowing the user to upload the desired media. As will be discussed, the third party can exercise control over the uploaded media, either by human monitoring or by automatic filtering, such as is found using standard computer vision “classifiers.” These classifiers would, for example, the basic components of creating a training set of images including images in and not in the set of images desired; identifying visual “features” of those images (such as color and edges); applying any of a range of standard “machine learning” algorithms to “classify” the images into the “keep” or “filter out” set. Some such machine learning classification techniques are: “Supervised Machine Learning: A Review of Classification Techniques” by S. B. Kotsiantis in Emerging Artificial Intelligence Applications in Computer Engineering, IOS Press, 2007, which is hereby incorporated by reference herein.

In one embodiment, the image processing system will remove unwanted items from a photograph, or block a photograph, under certain situations. Thus, assume the advertisement asks for anybody owning a Jaguar to take a picture of the proud owner standing beside his automobile. Someone then takes a photograph of himself beside a truck and the system, if desired, will automatically reject the picture.

In one embodiment, the technology that allows the advertisement to control the hidden assets is two-fold. First it is the use of, for example, HTML (which is not typically used in advertisements) in combination with allowing the HTML to flow through an app (app 13-2 in our example) which app already is in privacy with the device user such that the app has already received user permission to enable or otherwise use the desired hidden resource. It is noted that while the above embodiment utilizes HTML, embodiments may also use other languages such as Javascript, or Javascript combined with the HTML code, to implement inventive concepts outlined herein.

FIG. 3 shows one embodiment 30 of a system for supporting the concepts of the invention. As shown, app server 33 controls app 13-2 (and any number of other apps), downloads via network 32 an app to a specific mobile device, such as to device 10. In some situations, the app must be pre-certified by a certification entity, and as part of that certification, the app is allowed to have access to (and control over) at least some of the hidden resources on the device such as a camera, stored information, and the like. In other cases, the user must specifically allow the app to have access to (and control over) one or more of the hidden resources.

In one embodiment, one or more third parties, via third party server 31, has a relationship with app server 33 such that content from third party server 31 will flow over connection 330 and via network 32 and over connection 331 to app server 33 and then via app server 33 via network 32 and connection 332 to app 13-2 on device 10. It is noted that information may flow between third party server 31, app server 33 and device 10 in any manner, order or direction, which will be generally dictated by the app. For example, third party server may send data directly to device 10 under control of the app executing on the device. It is further noted that network 32 represents one or more networks that would be used in this embodiment, including without limitation, cellular, wireline, WiFi, 3G, etc. In the operational example discussed above, third party server 31 is an advertisement server and operates to send an appropriate advertisement for display on device 10 when the user at device 10 accesses app 13-2. In this embodiment, the user at device 10 does not seek the advertisement from the third party but it is presented as part of the operation of app 13-2 even though the app is not specifically designed to deliver just this one advertisement or any advertisement.

Note that the HTML code used to control the hidden resources of device 10 is code resident in app 13-2 and does not necessarily need to be inserted into the advertisement from server 31. In this manner, permission to use the hidden resource need be given only once (to app 13-2) and not every time a third party advertisement is downloaded to device 10. Also, in some situations, such as when utilizing Apple® devices, where apps must be certified or approved, the approval of app 13-2 serves to allow third parties (server 31 in this example) to use the already approved code of another party’s (server 33 in this example) app to control device 10.

In one embodiment, a native mobile application on device 10 provides hardware access capabilities to the resources, including the hidden resources. This includes the ability to control the taking of photographs. The native application also has the ability to display an embedded web page and has the ability to enable that embedded web page to access the native photograph taking capability that it provides. So when an advertisement comes from server 31 (or from any other server authorized by server 33) the HTML page which can be downloaded and provided externally can thus take advantage of the native hardware on the phone, for example taking a picture which otherwise would not be available to standard HTML. Note that the advertisement from server 31 need not, in some embodiments, pass through server 33, but can be delivered directly to device 10 provided that the advertisement is delivered to app 13-2 such that the code (HTML code in this embodiment) can be used with the native mobile application to control the hidden resources on device 10. This then allows the web browser code of app 13-2 to act as the control of the mobile device as opposed to allowing the code in the web browser of the advertisement from server 31 to control the mobile device application which it could not generally accomplish.

FIG. 4 shows one embodiment 40 of a method of supporting the system shown in FIG. 3. The processes of the embodiments shown in this disclosure are controlled by code running in, for example, one or more processors 31-2, processors 33-2 and 10-2. Process 401 determines if app 13-2 is currently in use on device 10. If not, normal device 10 operations continue as controlled by process 402. If so, then process 403 determines if camera usage has been enabled (desired) by app 13-2 which app already has the necessary approvals of device 10’s user and, if necessary, an approval agency (Apple®, etc). The desire to enable the camera (a hidden resource) comes from, in this example, a communication from advertisement 111 (FIG. 1) under control of third party server 31. Process 403, upon receipt of a valid request
for enabling a hidden resource, causes process 44 to enable the device via the above-described mobile device application.

[0023] Process 405 then controls the use of the hidden resource and when the resource has been used causes process 406 to send the results of the resource use (photograph, video, audio, etc.) to a third party, e.g. to third party server 31. In one embodiment, the photograph is sent with no action required by the user other than to snap the photograph using the built-in camera on the device. This communication can be made directly to server 31 or via one or more intermediary servers.

[0024] FIG. 5 shows one embodiment 50 of a system for supporting another embodiment utilizing the concepts of the invention. In this embodiment, social network server 51 is added to the system shown in FIG. 3. Server 51 can be used with or without server 31 and operates as does server 31 as a third party server in conjunction with one or more apps, such as app 13-2, via app server 33.

[0025] In operation, when app 13-2 is active (or when a specific third party advertisement is presented to the user via app 13-2) banner 501 is caused to be displayed, either under control of code from app 13-2 or under control of code from a third party advertisement. Banner 501 in this embodiment, represents a specific social network (such as Facebook®, Twitter®, etc.). If the user enables (usually by touching) banner 501, code controlled by app 13-2 accesses a database maintained by app 13-2 to retrieve the specific user login information (typically user name and password) and forwards that information to the appropriate social network under control of app 13-2. In the illustrated embodiment banner 501 represents a selection to follow material related to the contents of the app via a social network site. Note that the “following” and “shown by display 501” is not a following of app 13-2 in this embodiment, but rather of the third party that is currently being displayed via app 13-2. However, in other embodiments content of banner 501, e.g. the social network follow request, may be directly related to the content of app 13-2 and embodiments will process the social network access in a similar manner.

[0026] Use of this arrangement then is in substitution for requiring the user at device 10 to manually enable his/her login information for each specific social network which would normally cause the user to navigate away from the app 13-2 either to a web browser or a different app related to the relevant social network. The specific user login information can be located, for example, in memory 10-1 on device 10 and accessed (as a hidden resource) by app 13-2 and not by the third party directly, or the login information could be located in memory 33-1 in association with app 13-2 on server 33.

[0027] In some embodiments, access of social network server 51, such as after making a follow request, may be done by validating login information with social network server 51 via a social networking application programming interface (API), such as a web service. Login information may be accessed from storage and provided to the social networking API. Additionally, in some embodiments, the first request to the social network server will require the user to log in. Thereafter, subsequent requests may send and receive information to social network server 51 utilizing the previously provided login without navigating away from app 13-2.

[0028] FIG. 6 shows one embodiment 60 of a method of supporting the system shown in FIG. 5. Processes 401-406 are described with respect to FIG. 4 and will not be repeated. Process 601 determines if a valid third party request, such as FOR FOLLOWING on a social network has been received and displayed on device 10. Note that in the embodiment being discussed this request is for following or joining a social network. But, as will be discussed, since the enablement of the request involves sending the third party hidden data, the concepts discussed herein could also extend to other hidden data and functions, such as credit card, passwords, medical information, or other personal information. Using credit card data would allow a user to shop in a one-click mode on sites that the user has not pre-registered with. These sites can be websites or even perhaps restaurants when the bill is presented. As will be discussed, the operation is through a pre-accepted app, such as app 13-2 and the data to be released to a third party via that app has been pre-approved by the user.

[0029] If process 601 determines that a valid third party request has been received, then process 602 determines if the user has enabled the request, for example, by tapping display button 501 (FIG. 5). Once the user enables the request, process 603 obtains the hidden data necessary to satisfy the request. This hidden data can be user name and password, credit card data, or the like. As discussed above, this data can be stored on device 10 or at a remote location accessible under control of server 33 on behalf of app 13-2. Process 604 determines if the proper response data has been gathered and, if so, process 605 delivers the response data to the proper third party location.

[0030] Note that the third party request could at times be a multiple request, such as for different social networks, or for a combination of different operations. For example, the user may wish to buy a product from company X that has advertised to the user via app 13-2. The user then could click on a BUY button (not shown) and could also click on a FOLLOW button, such that his/her purchase can be both facilitated and posted on the social network concurrently.

[0031] Although the present invention and its advantages have been described in detail, it should be understood that various changes, substitutions and alterations can be made herein without departing from the spirit and scope of the invention as defined by the appended claims. Moreover, the scope of the present application is not intended to be limited to the particular embodiments of the process, machine, manufacture, composition of matter, means, methods and steps described in the specification. As one of ordinary skill in the art will readily appreciate from the disclosure of the present invention, processes, machines, manufacture, compositions of matter, means, methods, or steps, presently existing or later to be developed that perform substantially the same function or achieve substantially the same result as the corresponding embodiments described herein may be utilized according to the present invention. Accordingly, the appended claims are intended to include within their scope such processes, machines, manufacture, compositions of matter, means, methods, or steps.

What is claimed is:

1. A method of gaining access to a hidden resource on a device by a party not privy to such hidden resource, said method comprising:

- presenting a request to a user of said device, said request stemming from a third party and requiring use of said hidden resource, said request presented to said user through an application enabled by said user;
- allowing access to said third party to said hidden resource, said allowing controlled, at least in part, by said enabled application upon affirmatively enabling said request by said user.
2. The method of claim 1 wherein said hidden resource comprises at least one of the following: camera, camcorder, audio recorder, credit card data, social network accessing data, passwords, personal data.

3. The method of claim 1 wherein said request is imbedded in an advertisement displayed on said device while said user of said device is currently using said application.

4. The method of claim 3 wherein said request within said advertisement is for said user to take a photograph using a camera of said device, and said photograph is transmitted under control of the third party.

5. The method of claim 4 wherein the photograph is sent to said third party.

6. The method of claim 1 wherein said request is embedded in a merchandise order displayed on said device while said user of said device is currently using said application, and wherein said hidden resource is credit card information to facilitate payment for ordered merchandise.

7. The method of claim 1 wherein said request is in relation to a third party and is a request for said user to follow said third party on a social network, and wherein said hidden resource is said user’s login information to said social network.

8. The method of claim 1 wherein the device is a hand-held mobile computing device including at least one of a mobile phone, tablet and MP3 player.

9. The method of claim 1 wherein the device is one of a desktop and notebook computer.

10. The method of claim 1 wherein said third party provides content within said application which includes HTML coding.

11. The method of claim 1 wherein said HTML coding provides instructions to said application regarding the use of said hidden resource.

12. A method of allowing a party not in privy with a mobile device to access hidden resources on said device, said method comprising:

   opening an app on said mobile device, said app having pre-authorized access to at least certain of said hidden resources;

   displaying within said open app media originating from a third party, said media containing at least one request to be accepted or rejected by a user of said app; and

   upon accepting a request from a third party, enabling one of said certain hidden resources to be under control of said third party using said app’s pre-authorized access to said certain hidden resources.

13. The method of claim 12 wherein enabling one of said certain hidden resources provides the third party control of a camera on said mobile device.

14. The method of claim 12 wherein enabling one of said certain hidden resources provides the third party with the ability to retrieve a voice recording from said mobile device.

15. The method of claim 12 wherein enabling one of said certain hidden resources provides the third party with the ability to retrieve a video recording from said mobile device.

16. The method of claim 12 wherein enabling one of said certain hidden resources provides the third party with the ability to retrieve a stored information from said mobile device.

17. The method of claim 16 wherein said stored information includes at least one of photographs, video recordings and audio recordings.

18. The method of claim 12 wherein said third party request requires use of said device’s camera, wherein when a photograph is taken with said camera said photograph is communicated to said third party without further action by said user.

19. The method of claim 12 wherein said third party request requires personal data of said user and wherein when said user accepts said request said personal data is communicated to said third party without further action by said user.

20. The method of claim 12 wherein the mobile device is one of a tablet device, smartphone, and MP3 player.

21. A method of uploading photographs from a mobile device; said method comprising:

   delivering media to said mobile device, said media containing an advertisement from a party not in privy with said device, said media delivered to said device via an enabled application contained on said device, said application not exclusively associated with said party delivering said media, said application having a pre-established permission relationship with said mobile device to enable certain media creation resources;

   displaying on said device said delivered media, communicating to a user of said device via said displayed media a request for said user to create local media at said device using said device’s media creation resources, said media creation resources not being controllable by said third party, and

   enabling said media creation resources under at least partial control of said particular application.

22. The method of claim 21 further comprising:

   uploading locally created media upon creation without further action required by said user.

23. The method of claim 21 wherein said media includes HTML coding.

24. The method of claim 23 wherein said HTML coding provides instructions to said particular application regarding the use of said media creation resources.