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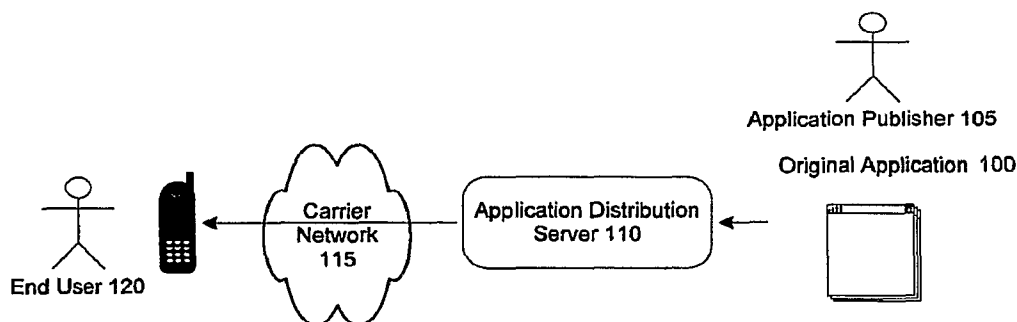
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(54) Title: SYSTEM AND METHODS FOR MANAGING CONTENT IN PRE-EXISTING MOBILE APPLICATIONS



(57) Abstract: Methods and systems for managing distribution and retrieval of data (for example advertising content and viewing statistics) and insertion of control logic (for example display of advertising content) into pre-existing mobile applications. In some arrangements the method includes analyzing the pre-existing application in the context of the target platform and the desired placement of new content, and instrumenting the application to support the addition of the new content. The instrumenting process can include modification of the application to support one or more of features selected from a group comprising user identification, usage tracking, bi-directional communication with an advertising server, and displaying advertising content. The analysis and instrumenting process can be applied in a just-in-time fashion during application download. In some arrangements, a portal application can be provided to reside on the mobile device for managing communications with an advertising server.

WO 2007/087251 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/01619

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 15/16 (2008.01)

USPC - 455/419; 709/219; 719/317

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC: 455/419; 709/219; 719/317

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
US: 455/418, 419; 709/219, 220, 221; 719/317Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST(PGPB, USPT, USOC, EPAB, JPAB); GOOGLE; Search Terms: application, data, information, advertisement, creative, distribute, wireless, mobile, demographic, tracking, modify, predetermine, compensate, payment, advertiser, distributor, thread, image, audio, video, text, creative, code, delete, automate, client, compile

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,857,119 B1 (Desai) 15 February 2005 (15.02.2005), entire document, especially; abstract, col. 1, ln 17-24, col. 2, ln 13-14, col. 3, ln 24-27, col. 6, ln 37-38, ln 67 - col. 7, ln 1, col. 7, ln 22-26, col. 8, ln 47-54, Fig. 3C	1-26 ----- 28-34, 38-59
X --- Y	US 6,769,010 B1 (Knapp et al.) 27 July 2004 (27.07.2004), entire document, especially; abstract, col. 3, ln 34-38, 41-42, col. 11, ln 35-36, col. 15, ln 65-57, col. 19, ln 58-62, col. 39, ln 41-46, col. 48, ln 27-28	27, 35-37, 94-101 ----- 38
Y	US 2002/0069244 A1 (Blair et al.) 06 June 2002 (06.06.2002), entire document, especially; abstract, para. [0033], [0039], [0040]	28-34, 39, 40, 46
Y	US 2002/0010759 A1 (Hitson et al.) 24 January 2002 (24.01.2002), entire document, especially; abstract, para. [0098], [0136]-[0138], [0141], [0142], Claim 13, 30	41-45, 47-59

☒ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/01619

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group 1: Claims 1-26;
Group 2: Claim 27 and 35-38;
Group 3: Claims 28-34, 39-40 and 46;
Group 4: Claims 41-45 and 47-59;
Group 5: Claims 60-84;
Group 6: Claims 85-86;
Group 7: Claims 87-92;
Group 8: Claim 93;
Group 9: Claims 94-101;
Group 10: Claims 102-110 and 119-120;
Group 11: Claims 111-114;
Group 12: Claims 115-117;
Group 13: Claim 118. -see continuation sheet-

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/01619

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/0149738 A1 (Jacobs et al.) 07 August 2003 (07.08.2003), entire document, especially; abstract, para. [0012], [0015], [0020], [0026], [0092], [0102], [0104], [0126], [0138], [0139], [0147], [0149], [0168], [0224], Claim 61	60-86, 102-110, 115-120
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Y		87-92
Y	US 2004/0102182 A1 (Reith et al.) 27 May 2004 (27.05.2004), entire document, especially; abstract, para. [0042], [0077], [0193]	87-92
X	US 6,021,433 A (Payne et al.) 01 February 2000 (01.02.2000), entire document, especially; abstract, col. 8, ln 22-25, col. 26, ln 28-31	93
X	US 2002/0068525 A1 (Brown et al.) 06 June 2002 (06.06.2002), entire document, especially; abstract, para. [0008], [0046]	111-114

Continuation of Box III --- Observations where unity of invention is lacking

Group 13 requires the special technical step of charging a first fee for the download of the ad and charging a second fee for the rendering of the ad, not required by Groups 1-12.

Group 12 requires the special technical steps of downloading to the wireless user device an ad which is available for display to a user during the running of the application and storing on a server an indicia indicative of the rendering of the ad on the wireless user device where the storing is not contemporaneous with the rendering of the ad, not required by Groups 1-11 and 13.

Group 11 requires the special technical steps of establishing a first thread for running the application on the wireless device and establishing a second thread for downloading the advertising substantially without interacting with the user interface, not required by Groups 1-10 and 12-13.

Group 10 requires the special technical steps of inserting into downloadable data direct or indirect indicia of a user's demographic factors or metadata and charging for the data based on a correlation of the demographic factors with the demographic criteria or metadata, not required by Groups 1-9 and 11-13.

Group 9 requires the special technical step of apportioning at least a portion of the revenues in accordance with the stored indicia, not required by Groups 1-8 and 10-13.

Group 8 requires the special technical steps of receiving at least one creative, the creative being provided in a plurality of formats, wherein each of the plurality of formats is compatible with one of a plurality of device types, organizing the at least one creative according to compatible device types and serving an appropriate format of the at least one creative in accordance with the user's device type, not required by Groups 1-7 and 9-13.

Group 7 requires the special technical steps of identifying a number of impressions of an advertisement expected for a campaign and downloading, during one or more downloads, an application and the advertisement to a quantity of users where the potential quantity of resulting impressions is in excess of the expected number of impressions, not required by Groups 1-6 and 8-13.

Group 6 requires the special technical steps of providing to the wireless device an advertisement capable of being rendered on the device, and providing a plurality of user-selectable actions in response to predetermined user interaction with the advertisement, not required by Groups 1-5 and 7-13.

Group 5 requires the special technical step of rendering the advertisement in accordance with a predetermined criteria resident on the wireless device, not required by Groups 1-4 and 6-13.

Group 4 requires the special technical step of receiving user-specific information and modifying the application to include user-specific information, not required by Groups 1-3 and 5-13.

Group 3 requires the special technical step of detecting a predetermined event and downloading to the user's wireless device new content in response to the detection of the predetermined event, not required by Groups 1-2 and 4-13.

Group 2 requires the special technical step of receiving tracking data from the user's wireless device after the additional content has been rendered, not required by Groups 1 and 3-13.

Group 1 requires the special technical steps of receiving application comprising code and executable on a client device, identifying locations within the code where additional code can be inserted, modifying the application by inserting code to add predetermined functionality, and returning the modified application for delivery to the client device, not required by Groups 2-13.

None of the technical features identified above are common to the other groups, nor do they correspond to a special technical feature that would otherwise provide unity between the groups. Groups 1-13 therefore lack unity of invention.