METHODS AND SYSTEMS FOR PROVIDING FUNCTIONAL EXTENSIONS WITH A LANDING PAGE OF A CREATIVE

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ABSTRACT

Systems and methods for providing functional extensions on a landing page of a creative. The method includes identifying, by a data processing system, a creative for serving on a computing device. The creative can be associated with a network address of a landing page. The method also includes generating, by the data processing system, an actionable object, such as a functional extension, to be rendered with content of the landing page and providing, by the data processing system, the actionable object to be rendered with the content of the landing page responsive to an action taken on the creative when served on the computing device. Examples of functional extensions include click-to-call extensions and directions extensions.
IDENTIFY A CREATIVE TO SERVE ON A COMPUTING DEVICE, THE CREATIVE ASSOCIATED WITH A NETWORK ADDRESS OF A LANDING PAGE

GENERATE AN ACTIONABLE OBJECT TO BE ASSOCIATED WITH CONTENT OF THE LANDING PAGE

PROVIDE THE ACTIONABLE OBJECT TO BE SERVED WITH CONTENT OF THE LANDING PAGE RESPONSIVE TO AN ACTION TAKEN ON THE CREATIVE WHEN SERVED ON THE COMPUTING DEVICE

FIG. 4
Computer System 500

Output Device 510

Input Device 515

Processor 520

Memory 525

Communications Interface 505

Network 105
METHODS AND SYSTEMS FOR PROVIDING FUNCTIONAL EXTENSIONS WITH A LANDING PAGE OF A CREATIVE

RELATED APPLICATION

[0001] This application claims priority to U.S. Provisional Patent Application 61/941,751, entitled “Methods and systems for providing functional extensions with a landing page of a creative,” filed Feb. 19, 2014, the disclosure of which is incorporated by reference herein in its entirety.

BACKGROUND

[0002] Oftentimes, the landing page of a creative served on a mobile device is not optimized for mobile devices. As a result, the conversion rate of visitors of the landing page of the creative may be a lot lower than a landing page that is optimized for mobile devices. That being said, even landing pages that are optimized for mobile devices still struggle to convert visitors. This may be because the mobile device user may not be willing to put in the effort to find the information they are looking for and therefore, may leave the landing page without performing additional actions.

SUMMARY

[0003] At least one aspect is directed to a method for providing actionable objects on a landing page of a creative. The method includes identifying, by a data processing system, a creative for serving on a computing device. The creative can be associated with a network address of a landing page. The method also includes generating, by the data processing system, an actionable object to be rendered with content of the landing page and providing, by the data processing system, the actionable object to be rendered with the content of the landing page responsive to an action taken on the creative when served on the computing device.

[0004] In some implementations, the data processing system can generate an information resource that includes content of the landing page and the generated actionable object. The data processing system can also associate a network address of the information resource to the creative such that responsive to an action taken on the creative, the information resource is rendered. In some implementations the data processing system can render the actionable object on a first frame of the information resource and the content of the landing page on a second frame of the information resource. In some implementations, the first frame is rendered over the second frame. In some implementations, the first frame of the information resource includes an actionable item, which when selected, removes the first frame from the information resource rendered for display.

[0005] In some implementations, the data processing system can receive, in response to providing the actionable object, an indication of an action taken on the actionable object. The data processing system can then increment a conversion count responsive to receiving the indication.

[0006] In some implementations, the actionable object is configured to cause the computing device on which the actionable object is rendered to execute a particular task. In some implementations, the particular task includes one of launching a phone application, a location application, or another dedicated application.

[0007] In some implementations, the data processing system can provide a script for insertion in the landing page associated with the content. The script can be configured to cause the generated actionable object to be rendered for display with the content of the landing page responsive to an action taken on the creative.

[0008] In some implementations, the data processing system can analyze the content of the landing page to identify a particular type of content. In some implementations the data processing system can identify the particular type of content in the content of the landing page and use the identified particular type of content to generate the actionable object.

[0009] According to another aspect, a system for providing actionable objects on a landing page of a creative includes a data processing system. The data processing system is configured to identify a creative for serving on a computing device. The creative is associated with a network address of a landing page. The data processing system is further configured to generate an actionable object to be rendered with content of the landing page and provide the actionable object to be rendered with the content of the landing page responsive to an action taken on the creative when served on the computing device.

[0010] According to yet another aspect, a computer-readable storage medium storing instructions that when executed by a data processor, cause the data processor to perform operations is disclosed. The operations include identifying a creative for serving on a computing device, generating an actionable object to be rendered with content of the landing page and providing the actionable object to be rendered with content of the landing page responsive to an action taken on the creative when served on the computing device.

[0011] These and other aspects and implementations are discussed in detail below. The foregoing information and the following detailed description include illustrative examples of various aspects and implementations, and provide an overview or framework for understanding the nature and character of the claimed aspects and implementations. The drawings provide illustration and a further understanding of the various aspects and implementations, and are incorporated in and constitute a part of this specification.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The accompanying drawings are not intended to be drawn to scale. Like reference numbers and designations in the various drawings indicate like elements. For purposes of clarity, not every component may be labeled in every drawing. In the drawings:

[0013] FIG. 1 is a block diagram depicting one implementation of an environment for identifying competitors using content items including content extensions, according to an illustrative implementation;

[0014] FIG. 2 is a screenshot of a landing page of a creative;

[0015] FIG. 3A is a screenshot of a display of an information resource that includes content of the landing page and functional extensions displayed at a top portion of the display;

[0016] FIG. 3B is a screenshot of a display of an information resource that includes content of the landing page and functional extensions displayed at a bottom portion of the display;

[0017] FIG. 4 is a flow diagram depicting one implementation of the steps taken to render functional extensions with a landing page of a creative; and

[0018] FIG. 5 is a block diagram illustrating an implementation of a general architecture for a computer system that
may be employed to implement various elements of the sys-
tems and methods described and illustrated herein.

DETAILED DESCRIPTION

[0019] Following below are more detailed descriptions of
various concepts related to, and implementations of, meth-
ods, apparatuses, and systems for providing functional exten-
sions with a landing page of a creative. The various concepts
introduced above and discussed in greater detail below may
be implemented in any of numerous ways, as the described
concepts are not limited to any particular manner of imple-
mentation. Examples of specific implementations and applica-
tions are provided primarily for illustrative purposes.

[0020] The present disclosure aims to increase the conver-
sion rates of visitors of a landing page of a creative. In par-
ticular, a creative may be served on an information resource
(for example, a webpage or mobile application) on a user
computing device. A user of the user computing device can
take an action on the creative (for example, click on the
creative) that causes the user computing device to be directed
to a landing page associated with the creative.

[0021] The present disclosure relates to providing func-
tional extensions with a landing page of a creative. Functional
extensions are actionable objects, which when actuated, pro-
vide additional functionality. In some implementations, the
additional functionality can provide some type of measurable
conversion. These functional extensions can include a click to
call actionable object, which when actuated, establishes a
phone call between the user and the phone number associated
with the actionable object, such as the content provider asso-
ciated with the landing page. Other examples of functional
extensions include a directions actionable object, which when
actuated, can cause a map application to launch to direct a
user to a destination address associated with the actionable
object.

[0022] According to some implementations, the methods
and systems for providing functional extensions with a land-
ing page of a creative can be performed by a data processing
system. The data processing system can identify a creative for
serving on a computing device. In some implementations, the
data processing system can receive the creative from a third-
party content provider. In some implementations, the data
processing system can receive a request to serve the creative
according to a content serving criteria. In some implementa-
tions, the creative can be associated with a network address of
a landing page such that when an action is taken on the cre-
ative, the landing page associated with the network
address can be rendered on a computing device on which the
creative was served.

[0023] The data processing system can generate one or
more functional extensions for rendering with the content of
the landing page associated with the creative. In some imple-
mentations, the data processing system can analyze the con-
tent of the landing page to identify a particular type of content,
for example, a phone number or an address. The data process-
ing system can identify the particular type of content in the
content of the landing page and use the identified particular
type of content to generate a corresponding functional exten-
sion, such as a click-to-call actionable object or a directions
actionable object.

[0024] In some implementations, in response to an action
taken on the creative when the creative is served on the com-
puting device, the functional extension can be served on a
user interface with content of the landing page. In some
implementations, the data processing system can generate an
information resource that includes content of the landing
page and the generated actionable object. The data processing
system can associate a network address of the information
resource to the creative such that responsive to an action taken
on the creative, the information resource is rendered on the
computing device on which the creative was served. In some
implementations, the data processing system can render the
actionable object on a first frame of the information resource
and the content of the landing page on a second frame of the
information resource. In some implementations, the first
frame is rendered over the second frame.

[0025] In some implementations, the data processing sys-
tem can provide a computer-executable script or software
construct for insertion in the landing page associated with the
creative. The script is configured to cause the generated
actionable object to be rendered with the content of the land-
ing page responsive to an action taken on the creative.

[0026] FIG. 1 is a block diagram depicting one implemen-
tation of an environment for providing functional extensions
with a landing page of a creative. In particular, the system can
be configured to provide functional extensions with a landing
page of a creative. Functional extensions are actionable
objects, which when actuated, provide additional functional-
ity. In some implementations, the additional functionality can
provide some type of measurable conversion. These func-
tional extensions can include a click to call actionable object,
which when actuated, establishes a phone call between the
user and the phone number associated with the actionable
object, such as the content provider associated with the land-
ing page. Another example of a functional extension includes
a directions actionable object, which when actuated, can
cause a map application to launch to direct a user to a desti-
nation address associated with the actionable object. Func-
tional extensions can also include content extensions. Con-
tent extensions are features included in creatives or other
content items that provide additional functionality. These
content extensions can include sitelinks, which are links,
which when actuated, redirect a user to a specific web page
corresponding to the actuated link. Other examples of content
extensions include a rating extension, which indicates a rat-
ing of a particular product, service, item, entity or object, or a
social aggregate annotation extension, which indicates a
number of social networking users who have expressly
approved the entity associated with the landing page with
which the functional extension is rendered.

[0027] FIG. 1 illustrates an system 100 for providing func-
tional extensions with a landing page of a creative via at least
one computer network, such as the network 105. The network
105 can include computer networks such as the internet, local,
wide, metro or other area networks, intranets, satellite net-
works, other computer networks such as voice or data mobile
phone communication networks, and combinations thereof.
The system 100 can also include at least one computer sys-
tem 110, e.g., at least one computer system such as a comput-
ing device or server having a processor to communicate via
the network 105, for instance with at least one content provider
computer device 115, at least one content publisher comput-
ing device 120, or at least one end user computing device 125.

[0028] The data processing system 110 can include at least
one server. For instance, the data processing system 110 can
include a plurality of servers located in at least one data center
or server farm. In some implementations, the data processing
system 110 includes a content placement system, e.g., an ad
server or ad placement system. The data processing system 110 can include at least one functional extension generation module 130, at least one landing page modification module 135 and at least one database 140. The functional extension generation module 130 and the landing page modification module 135 can each include at least one processing unit, server, virtual server, circuit, engine, agent, appliance, or other logic device such as programmable logic arrays configured to communicate with the database 140 and with other computing devices (e.g., the content provider computing device 115, the content publisher computing device 120, or the end user computing device 125) via the network 105.

[0029] The functional extension generation module 130 and the landing page modification module 135 can include or execute at least one computer program or at least one script. The functional extension generation module 130 and the landing page modification module 135 can be separate components, a single component, or part of the data processing system 110. The functional extension generation module 130 and the landing page modification module 135 can include combinations of software and hardware, such as one or more processors configured to execute one or more scripts to identify a creative for serving on a computing device, the creative associated with a network address of a landing page, generate an actionable object to be associated with content of the landing page and provide the actionable object to be served with content of the landing page responsive to an action taken on the creative when served on the computing device, for instance.

[0030] The content provider computing devices 115 can include servers or other computing devices operated by a content provider entity to provide content items such as advertisements for display on information resources at the end user computing device 125. The content provided by the content provider computing device 115 can include third party content items or creatives (e.g., ads) for display on information resources such as a website or web page that includes primary content, e.g., content provided by the content publisher computing device 120. The content items can also be displayed on a search results web page. For instance, the content provider computing device 115 can provide or be the source of ads or other content items for display in content slots of content web pages such as a web page of a company where the primary content of the web page is provided by the company, or for display on a search results landing page provided by a search engine. The content items associated with the content provider computing device 115 can be displayed on information resources other than web pages, such as content displayed as part of the execution of an application on a smartphone or other end user computing device 125.

[0031] The content publisher computing devices 120 can include servers or other computing devices operated by a content publishing entity to provide primary content for display via the network 105. For instance, the content publisher computing device 120 can include a web page operator who provides primary content for display on the web page. The primary content can include content other than that provided by the content publisher computing device 120, and the web page can include content slots configured for the display of third party content items (e.g., ads) from the content publisher computing devices 115. For instance, the content publisher computing device 120 can operate the website of a company and can provide content about that company for display on web pages of the website. The web pages can include content slots configured for the display of third party content items such as ads of the content provider computing device 115. In some implementations, the content publisher computing device 120 includes a search engine computing device (e.g., server) of a search engine operator that operates a search engine website. The primary content of search engine web pages (e.g., a results or landing web page) can include results of a search as well as third party content items displayed in content slots such as content items from the content provider computing device 115.

[0032] The end user computing devices 125 can include computing devices configured to communicate via the network 105 to display data such as the content provided by the content publisher computing device 120 (e.g., primary web page content or other information resources) and the content provided by the content provider computing device 115 (e.g., third party content items such as ads configured for display in a content slot of a web page). The end user computing device 125, the content provider computing device 115, and the content publisher computing device 120 can include desktop computers, laptop computers, tablet computers, smartphones, personal digital assistants, mobile devices, end user computing devices, consumer computing devices, servers, clients, and other computing devices. The end user computing device 125, the content provider computing device 115, and the content publisher computing device 120 can include interfaces such as microphones, speakers, touchscreens, keyboards, pointing devices, a computer mouse, touchpad, or other input or output interfaces.

[0033] The content provider computing devices 115, the content publisher computing device 120 and the end user computing devices 125 may be any number of different user electronic devices, for example, a laptop computer, a desktop computer, a tablet computer, a smartphone, a digital video recorder, a set-top box for a television, a video game console, or any other computing device configured to communicate via the network 105. The content publisher computing devices 115, the content publisher computing device 120 and the end user computing devices 125 can include a processor and a memory, i.e., a processing circuit. The memory stores machine instructions that, when executed by processor, cause processor to perform one or more of the operations described herein. The processor may include a microprocessor, application-specific integrated circuit (ASIC), field-programmable gate array (FPGA), etc., or combinations thereof. The memory may include, but is not limited to, electronic, optical, magnetic, or any other storage or transmission device capable of providing the processor with program instructions. The memory may further include a floppy disk, CD-ROM, DVD, magnetic disk, memory chip, ASIC, FPGA, read-only memory (ROM), random-access memory (RAM), electrically-erasable ROM (EEPROM), erasable-programmable ROM (EPROM), flash memory, optical media, or any other suitable memory from which the processor can read instructions. The instructions may include code from any suitable computer-programming language such as, but not limited to, C, C++, C#, Java, JavaScript, Perl, Python and Visual Basic.

[0034] The content provider computing devices 115, the content publisher computing device 120 and the end user computing devices 125 may also include one or more user interface devices. In general, a user interface device refers to any electronic device that conveys data to a user by generating sensory information (e.g., a visualization on a display, one or more sounds, etc.) and/or converts received sensory informa-
tion from a user into electronic signals (e.g., a keyboard, a mouse, a pointing device, a touch screen display, a microphone, etc.). The one or more user interface devices may be internal to a housing of the content provider computing devices 115, the content publisher computing device 120 and the end user computing devices 125 (e.g., a built-in display, microphone, etc.) or external to the housing of the content provider computing devices 115, the content publisher computing device 120 and the end user computing devices 125 (e.g., a monitor connected to the user computing device 115, a speaker connected to the user computing device 115, etc.), according to various implementations. For example, the content provider computing devices 115, the content publisher computing device 120 and the end user computing devices 125 may include an electronic display, which visually displays web pages using webpage data received from one or more content sources and/or from the data processing system 110 via the network 105. In some implementations, a content placement campaign manager or advertiser can communicate with the data processing system 110 via the content provider computing device 115. In some implementations, the advertiser can communicate with the data processing system 110 via a user interface displayed on the user interface devices of the content provider computing device 115.

[0035] The data processing system 110 can include at least one server. In some implementations, the data processing system 110 includes a functional extension generation module 130 and a landing page modification module 135. The data processing system can also include one or more content repositories or databases 140. The data processing system 110 can be configured to identify a creative for serving on a computing device, the creative associated with a network address of a landing page, generate an actionable object to be associated with content of the landing page, and provide the actionable object to be served with content of the landing page responsive to an action taken on the creative served on the computing device.

[0036] The functional extension generation module 130 can be part of, or can include scripts executed by, one or more servers in the data processing system 110. In some implementations, the functional extension generation module 130 can be designed, constructed or configured to identify a creative for serving on a computing device. The functional extension generation module 130 can identify the creative by receiving a request to serve a creative for a content serving or content placement campaign.

[0037] In some implementations, the functional extension generation module 130 can identify a creative eligible for participation in one or more content serving opportunities. In some implementations, the creative can be associated with a network address of a landing page such that when an action is taken on the creative, the landing page associated with the creative is rendered. In some implementations, the network address can be an IP address or a URL of the landing page. In some implementations, the functional extension generation module 130 can identify the creative by receiving a request to modify a landing page of a creative. In some implementations, the functional extension generation module 130 can be configured to receive a request to modify the landing page of a creative from a third-party content provider providing the creative to participate in content serving opportunities. In some implementations, the functional extension generation module 130 can receive the request responsive to a third-party content provider selecting an option on a user interface. In some implementations, the user interface can be a content placement campaign management user interface through which the third-party content provider can manage one or more content placement campaigns.

[0038] In some implementations, the functional extension generation module 130 can automatically determine to modify a landing page of a creative without receiving a request. In some implementations, the functional extension generation module 130 can automatically determine to modify the landing page in response to determining that the creative is competing for content serving opportunities on mobile devices, such as smart phones, phablets or tablets. In some implementations, the functional extension generation module 130 can determine to modify a landing page of a creative responsive to analyzing a landing page associated with a creative provided to participate in content serving opportunities. In some implementations, the functional extension generation module 130 can determine to modify the landing page responsive to identifying that the landing page has not been optimized for a particular type of computing device. In some implementations, the functional extension generation module 130 can determine to modify the landing page responsive to identifying that the landing page is not rendered with one or more functional extensions.

[0039] The functional extension generation module 130 can be configured to generate an actionable object to be associated with content of the landing page. In some implementations, the functional extension generation module 130 can be configured to generate an actionable object responsive to receiving a request to modify a landing page of a creative. In some implementations, the functional extension generation module 130 can be configured to generate an actionable object responsive to receiving a request to optimize a landing page of a creative for a mobile device, such as a phablet or tablet.

[0040] In some implementations, the functional extension generation module 130 can receive information that can be used to generate one or more functional extensions. As described above, the functional extensions are actionable objects. In some implementations, the functional extension generation module 130 can receive functional extension generating information from a content provider associated with a landing page with which the actionable object is to be associated. Examples of such functional extension generating information can include a phone number, an address, amongst others. In some implementations, a content provider that communicates with the data processing system 110 to manage a content placement campaign may be configured to submit a request to participate in content serving opportunities. The request can include a creative and an associated landing page. In some implementations, the request can include a request to generate one or more functional extensions. In some implementations, the request can identify the types of functional extensions to generate for rendering with content of the landing page included in the request. In some implementations, the request can include a phone number or an address to be used for generating functional extensions.

[0041] In some implementations, the functional extension generation module 130 can be configured to generate one or more functional extensions responsive to identifying a landing page of a creative. In some implementations, the functional extension generation module 130 can inspect or analyze a landing page associated with a creative to determine if the landing page is optimized for rendering on a mobile device.
In some implementations, the functional extension generation module 130 may determine that the landing page may not be optimized for rendering on a mobile device if the landing page does not include one or more functional extensions through which a user of the mobile device on which the landing page is rendered is unable to perform additional functionality, such as placing a phone call to a phone number associated with the landing page or get directions to an address associated with the landing page. In some implementations, the functional extension generation module 130 can identify one or more particular types of content included within the landing page. For example, the particular types of content can include phone numbers, addresses, or other content that can be used to generate functional extensions. In some implementations, the functional extensions generation module 130 can employ one or more scripts to identify phone numbers, addresses, or other content that can be used to generate functional extensions. For example, the script can identify an icon (for example, a “Book Now” icon) that is linked to a reservation page.

In some implementations, the functional extension generation module 130 can be configured to generate a functional extension using the information received within a request or using functional extension generating information determined from the landing page. In some implementations, the functional extension generation module can be configured to generate a functional extension using information retrieved from additional sources, including one or more additional web pages associated with the landing page (such as from the same website or from one or more web pages corresponding to links on the landing page). In some implementations, the functional extension generation module 130 can generate the functional extension as an actionable object. As such, the functional extension generation module 130 can define a triggering event, which when performed, actuates the actionable object. The triggering event can be performed responsive to a triggering action being performed. The triggering action can be a mouse over, a click, a tap, a selection, amongst others. In some implementations, the triggering action can be a gesture, such as a gesture to move the mobile phone on which the functional extension is rendered towards the user’s ear (in the event of a click-to-call functional extension). In some implementations, the triggering action can be a voice activated command. In some implementations, the functional extension generation module 130 can define a region within which the triggering action is to occur in order for the triggering action to actuate the actionable object. For example, a click or tap on a particular icon or region of a display.

The functional extension generation module 130 can further define or associate an function to be performed by the computing device on which the functional extension is rendered in response to the performance of the triggering event associated with the functional extension. The function to be performed can be executed by the computing device. In some implementations, the functional extension generation module 130 can be configured to cause the computing device to launch a phone application responsive to the performance of the triggering event associated with a click-to-call functional extension. In some implementations, the computing device can provide a phone number associated with the functional extension to the phone application. In some implementations, the computing device can automatically trigger a phone call to be placed responsive to launching the phone application. In some implementations, the computing device can launch the phone application and initiate the phone call responsive to an additional input received from the user of the computing device.

In some implementations, the functional extension generation module 130 can be configured to cause the computing device to launch a map application responsive to the performance of the triggering even associated with a directions functional extension. In some implementations, the computing device can provide an address associated with the functional extension to the map application. In some implementations, the computing device can be configured to initiate one or more additional applications, for example, the computing device can actuate a GPS module such that the current location of the computing device can be determined and entered as the starting address in the map application.

In some implementations, responsive to identifying that the functional extension has been actuated, the functional extension generation module 130 can be configured to cause an instruction to be generated indicating that the functional extension has been actuated. In some implementations, the instruction can indicate a type of functional extension that has been actuated. The instruction can be received by a browser of the computing device or some other application of the computing device, which can cause the computing device to execute one or more instructions to perform the function associated with the functional extension. These instructions can include launching an appropriate application, providing data to the application, for example, the phone number or address associated with the functional extension, and initiating the execution of a function of the launched application.

In some implementations, the functional extension generation module 130 can be configured to generate one or more functional extensions for one or more landing pages identified as being able to benefit from having functional extensions. In some implementations, the functional extension generation module 130 can be configured to identify such landing pages in an offline process. In some implementations, the functional extension generation module 130 can be configured to analyze landing pages associated with creative seeking to be served in one or more content serving opportunities. In some implementations, the functional extension generation module 130 can identify content providers associated with the landing pages that can benefit from having functional extensions. In some implementations, the benefit can be identified as a benefit that increases the conversion rate of visitors visiting the landing page. In some implementations, the conversions can be measured as a number of calls made to the content provider associated with the landing page. In some implementations, the conversions can be measured as a number of emails sent to the content provider associated with the landing page. In some implementations, the conversions can be measured as a number of people who subscribe with the content provider associated with the landing page via the landing page, amongst others.

In some implementations, the functional extension generation module 130 can be configured to generate a functional extension such that it visually matches the content of the landing page with which the functional extension is to be rendered. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears at a top portion of a display. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears at a bottom portion of a display. In some implementations, the functional
extension can be designed, shaped, sized or otherwise configured such that it appears as an overlap over the landing page. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears as a pop up window over the landing page. In some implementations, the functional extension can include graphical icons indicating the type of functional extension. For instance, a click-to-call functional extension can appear as an object that includes a phone icon. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured to fit within a display of the computing device on which the functional extension is being rendered. In some implementations, the functional extension can be displayed with other functional extensions.

In some implementations, the functional extension generation module 130 can be configured to store the functional extensions in a data store, such as the database 140. In some implementations, the functional extension generation module 130 can be configured to store the functional extensions such that another module of the data processing system 110 can access the functional extensions. In some implementations, the functional extension generation module 130 can be configured to store the functional extensions such that the landing page modification module 135 can be configured to retrieve and utilize the generated functional extensions.

The landing page modification module 135 can be configured to render one or more functional extensions with content of the landing page responsive to an action taken on the creative when served on the computing device. In some implementations, the landing page modification module 135 can be configured to render the actionable object with content of the landing page of a creative in response to an action taken on the creative.

In some implementations, the landing page modification module 135 can be configured to generate an information resource (for example, a web page) that includes content of the landing page and one or more functional extensions generated by the functional extension generation module 130 that corresponds to the landing page. In some implementations, the landing page modification module 135 can be further configured to associate a network address of the information resource to the creative such that responsive to an action taken on the creative, the information resource is rendered.

In some implementations, in response to the data processing system 110 receiving a creative for serving in content serving opportunities, the landing page modification module 135 can be configured to identify a landing page associated with the creative. The landing page modification module 135 can be configured to generate an information resource that is to serve as a new landing page for the creative. The information resource can be managed, maintained or hosted by the data processing system 110. The information resource can be configured to include the contents of the landing page originally associated with the creative.

The landing page modification module 135 can further be configured to include one or more functional extensions in the information resource, such that when the information resource is rendered on a computing device, both the landing page originally associated with the creative and the one or more functional extensions are rendered. In some implementations, the landing page modification module 135 can be configured to render the functional extensions at a top portion of the display of the computing device while rendering the landing page originally associated with the creative below the functional extensions. Conversely, in some implementations, the landing page modification module 135 can be configured to render the functional extensions at a bottom portion of the display of the computing device while rendering the landing page originally associated with the creative above the functional extensions. In some implementations, the landing page modification module 135 can be configured to render the functional extensions as an overlay over the landing page originally associated with the creative. In some implementations, the functional extensions can be minimized or otherwise hidden from the display. In some implementations, the functional extensions can be rendered in the same frame of the information resource in which the primary content of the landing page is rendered. In some implementations, an actionable item can be provided by the landing page modification module, which when actuated, causes the functional extensions to hide from view if visible. Stated in another way, the actionable item can be a minimize button or object, which when selected, removes a frame in which the functional extensions are rendered from the display. In some implementations, an actionable object can be provided by the landing page modification module 135, which when actuated, causes the functional extensions to become visible on the display if it is not already visible.

In some implementations, the information resource can include a plurality of frames, of which one frame can be shaped, sized or otherwise configured to render the content of the landing page originally associated with the creative. In some implementations, the information resource can be configured to render the one or more functional extensions on a second frame separate from the frame in which the content of the landing page originally associated with the creative is rendered. In some implementations, the frame in which the functional extensions are rendered can be positioned over the frame in which the content of the landing page originally associated with the creative is rendered.

In some implementations, the landing page modification module 135 can be configured to monitor activity that occurs at the information resource generated by the landing page modification module 135. In some implementations, the landing page modification module 135 can be configured to increment a counter identifying a total number of times a functional extension has been actuated each time a functional extension is actuated. In some implementations, the counter can be specific to a particular type of functional extension. In some implementations, the landing page modification module 135 can identify a number of visits to the information resource. In some implementations, the landing page modification module 135 can be configured to determine a conversion rate based on a ratio of the number of visits that resulted in an action being taken on each of the one or more functional extensions rendered. In some implementations, the landing page modification module 135 can be configured to determine a conversion rate of a creative associated with the information resource. In some implementations, the landing page modification module 135 can also be configured to determine a conversion rate of a creative associated with the information resource. In some implementations, the landing page modification module 135 can, via one or more additional modules of the data processing system 110, determine a total number of times the creative was served. The landing page modification...
tion module 135 can determine a conversion rate of the creative by determining a ratio of a total number of visits to the landing page via the creative to the number of times the creative was served.

[0056] In some implementations, the landing page modification module 135 can be configured to provide the content provider associated with the creative a script or other software construct through which the landing page originally associated with the creative can be modified to include one or more functional extensions. In some implementations, the script can be inserted or embedded within in the landing page. In some implementations, the landing page modification module 135 can be configured to modify the software code associated with the landing page to insert the script within the software code. In some implementations, the script can be configured to communicate with a server of the data processing system 110. In some implementations, the script can be configured to modify the landing page associated with the creative such that when the landing page is rendered on a computing device of a user, the content of the landing page is rendered with one or more functional extensions. In some implementations, the script can be configured to call on the server of the data processing system 110 to retrieve one or more functional extensions generated for rendering with the content of the landing page. In some implementations, the script can be configured to generate one or more functional extensions and render the generated functional extensions without having the functional extension generation module 130 generate the functional extensions. In some implementations, the script can include instructions for generating the functional extensions. In some implementations, the script can include the functional extension generation module 130. In some implementations, the content provider computing device 115 can render the modified landing page, which includes the content of the landing page originally associated with the creative and the functional extensions to the end user computing device 125. In some implementations, the content provider computing device 115 can execute the script such that the functional extensions are rendered with the content of the landing page originally associated with the creative when the modified landing page is served or rendered on the end user computing device 125.

[0057] The data processing system 110 can also include one or more data stores, such as the database 140. The database can be included in the data processing system 110. In some implementations, the database may be located remote to the data processing system but accessible by the data processing system. The database can store a wide variety of content. For example, the database can store auction log data, including auction log data corresponding to the various types of content extensions. It should be appreciated that the data processing system 110 can include one or more additional modules to provide some or all of the features described herein as well as other additional features.

[0058] FIG. 2 is a screenshot of a display including a landing page of a creative. In some implementations, a display 200 includes content of a landing page 202 can be a landing page provided by a content provider. In some implementations, the landing page 202 can have a network address 204, such as an IP address or URL that is associated with the content provider configured to provide a creative with which the landing page is associated. As shown in FIG. 2, the URL of the landing page is www.restaurantname.com, which is hosted by the content provider or any other entity with which the content provider chooses to link the creative. In some implementations the landing page can include particular types of content, for example, a phone number 206 or an address 208, which can be used to generate functional extensions.

[0059] FIG. 3A is a screenshot of a display of an information resource that includes content of the landing page and functional extensions displayed at a top portion of the display. The display 300 includes an information resource 304 that corresponds to a destination address 302 that is associated with the data processing system 110 (shown in FIG. 1). The information resource 304 can include content of the landing page 202 (shown in FIG. 2) rendered in a first frame and a plurality of functional extensions rendered in a functional extension frame 308. The functional extension frame 308 includes a first functional extension 310A, which is depicted as a click-to-call functional extension, and a second functional extension 310B, which is depicted as a directions functional extension. The functional extension frame 308 also includes an actionable item 314 for minimizing or hiding the functional extension frame from the display. Responsive to an action taken on the actionable item 314, the functional extension frame can be removed from the display 300. Responsive to an action taken on the click-to-call functional extension 310A, the computing device can be triggered to launch a phone application to establish a call with the phone number (for example, phone number 206) associated with the functional extension 310A. Responsive to an action taken on the directions functional extension 310B, the computing device can be triggered to launch a map application to provide directions to an address (for example, address 208) associated with the functional extension 310A.

[0060] FIG. 3B is a screenshot of a display of an information resource that includes content of the landing page and functional extensions displayed at a bottom portion of the display. This display is very similar to the display shown in FIG. 3A except that the functional extension frame 308 is positioned at a bottom portion of the display 350 such that the frame displaying the content of the landing page 202 is positioned above the functional extension frame 308.

[0061] FIG. 4 is a flow diagram depicting one implementation of the steps taken to render functional extensions with a landing page of a creative. In particular, FIG. 4 illustrates a flow diagram depicting a method 400 for providing actionable objects on a landing page of a creative. In some implementations, the method can be executed by a data processing system, such as the data processing system 110 shown in FIG. 1. In brief overview, the method includes identifying a creative for serving on a computing device (BLOCK 405), generating an actionable object to be rendered with content of the landing page (BLOCK 410) and providing the actionable object to be rendered with the content of the landing page responsive to an action taken on the creative when served on the computing device (BLOCK 415).

[0062] In further detail, the data processing system can identify a creative for serving on a computing device (BLOCK 405). In some implementations, the data processing system can identify a creative eligible for participation in one or more content serving opportunities. In some implementations, the creative can be associated with a network address of a landing page such that when an action is taken on the creative, the landing page associated with the creative is rendered. In some implementations, the network address can be an IP address or a URL of the landing page. In some imple-
In some implementations, the data processing system can identify a creative by receiving a request to modify a landing page of a creative. In some implementations, the data processing system can receive a request to modify the landing page of a creative from a third-party content provider providing the creative to participate in content serving opportunities. In some implementations, the data processing system can receive the request responsive to a third-party content provider selecting an option on a user interface. In some implementations, the user interface can be a content placement campaign management user interface through which the third-party content provider can manage one or more content placement campaigns.

In some implementations, the data processing system, as part of identifying a creative for serving on a computing device, can automatically determine to modify a landing page of a creative without receiving a request. In some implementations, the data processing system can automatically determine to modify the landing page in response to determining that the creative is competing for content serving opportunities on mobile devices, such as smart phones, phablets or tablets. In some implementations, the data processing system can determine to modify a landing page of a creative responsive to analyzing a landing page associated with a creative provided to participate in content serving opportunities. In some implementations, the data processing system can determine to modify the landing page responsive to identifying that the landing page has not been optimized for a particular type of computing device. In some implementations, the data processing system can determine to modify the landing page responsive to identifying that the landing page is not rendered with one or more functional extensions.

The data processing system can generate a functional extension to be rendered with content of the landing page (BLOCK 410). In some implementations, the functional data processing system can generate a functional extension responsive to receiving a request to modify a landing page of a creative. In some implementations, the data processing system can generate an actionable object responsive to receiving a request to optimize a landing page of a creative for a mobile device, such as a phablet or tablet.

In some implementations, the data processing system can receive information that can be used to generate one or more functional extensions. As described above, the functional extensions are actionable objects. In some implementations, the data processing system can receive functional extension generating information from a content provider associated with a landing page with which the actionable object is to be associated. Examples of such functional extension generating information can include a phone number, an address, amongst others. In some implementations, a content provider that communicates with the data processing system to manage a content placement campaign may be configured to submit a request to participate in content serving opportunities. The request can include a creative and an associated landing page. In some implementations, the request can include a request to generate one or more functional extensions. In some implementations, the request can identify the types of functional extensions to generate for rendering with content of the landing page included in the request. In some implementations, the request can include a phone number or an address to be used for generating functional extensions.

In some implementations, the data processing system can be configured to generate one or more functional extensions responsive to identifying a landing page of a creative. In some implementations, the data processing system can inspect or analyze a landing page associated with a creative to determine if the landing page is optimized for rendering on a mobile device. In some implementations, the data processing system may determine that the landing page may not be optimized for rendering on a mobile device if the landing page does not include one or more functional extensions through which a user of the mobile device on which the landing page is rendered is unable to perform additional functionality, such as placing a phone call to a phone number associated with the landing page or get directions to an address associated with the landing page. In some implementations, the data processing system can identify one or more particular types of content included within the landing page. For example, the particular types of content can include phone numbers, addresses, or other content that can be used to generate functional extensions. In some implementations, the data processing system can employ one or more scripts to identify phone numbers, addresses, or other content that can be used to generate functional extensions. For example, the script can identify an icon (for example, a "Book Now" icon) that is linked to a reservation page.

In some implementations, the data processing system can be configured to generate a functional extension using the information received within a request or using functional extension generating information determined from the landing page. In some implementations, the functional extension generation module can be configured to generate a functional extension using information retrieved from other sources, including one or more additional web pages associated with the landing page (such as from the same web site or from one or more web pages corresponding to links on the landing page). In some implementations, the data processing system can generate the functional extension as an actionable object. As such, the data processing system can define a triggering event, which when performed, actsuates the actionable object. The triggering event can be performed responsive to a triggering action being performed. The triggering action can be a mouse over, a click, a tap, a selection, amongst others. In some implementations, the triggering action can be a gesture, such as a gesture to move the mobile phone on which the functional extension is rendered towards the user's ear (in the event of a click-to-call functional extension). In some implementations, the triggering action can be a voice activated command. In some implementations, the data processing system can define a region within which the triggering action is to occur in order for the triggering action to actuate the actionable object. For example, a click or tap on a particular icon or region of a display.

The data processing system can further define or associate an function to be performed by the computing device on which the functional extension is rendered in response to the performance of the triggering event associated with the functional extension. The function to be performed can be executed by the computing device. In some implementations, the data processing system can be configured to cause the computing device to launch a phone application responsive to the performance of the triggering event associated with a click-to-call functional extension. In some implementations, the computing device can provide a phone number associated with the functional extension to the phone application. In some implementations, the computing device can automatically trigger a phone call to be placed responsive to
launching the phone application. In some implementations, the computing device can launch the phone application and initiate the phone call responsive to an additional input received from the user of the computing device.

In some implementations, the data processing system can launch the phone application and initiate the phone call responsive to the performance of the triggering event associated with the functional extension. In some implementations, the computing device can provide an address associated with the functional extension to the map application. In some implementations, the computing device can be configured to initiate one or more additional applications, for example, the computing device can actuate a GPS module such that the current location of the computing device can be determined and entered as the starting address in the map application.

In some implementations, responsive to identifying that the functional extension has been actuated, the data processing system can instruct the device to be generated indicating that the functional extension has been actuated. In some implementations, the instruction can indicate a type of functional extension that has been actuated. The instruction can be received by a browser of the computing device or some other application of the computing device, which can cause the computing device to execute one or more instructions to perform the function associated with the functional extension. These instructions can include launching an appropriate application, providing data to the application, for example, the phone number or address associated with the functional extension, and initiating the execution of a function of the launched application.

In some implementations, the data processing system can generate one or more functional extensions for one or more landing pages identified as being able to benefit from having functional extensions. In some implementations, the data processing system can identify such landing pages in an offline process. In some implementations, the data processing system can analyze landing pages associated with creatives seeking to be served in one or more content serving opportunities. In some implementations, the data processing system can identify content providers associated with the landing pages that can benefit from having functional extensions. In some implementations, the benefit can be a benefit that increases the conversion rate of visitors visiting the landing page. In some implementations, the conversions can be measured as a number of calls made to the content provider associated with the landing page. In some implementations, the conversions can be measured as a number of people who subscribe with the content provider associated with the landing page via the landing page, amongst others.

In some implementations, the data processing system can generate a functional extension such that it visually matches the content of the landing page with which the functional extension is to be rendered. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears at a top portion of a display. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears at a bottom portion of a display. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears as an overlap over the landing page. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured such that it appears as a pop up window over the landing page. In some implementations, the functional extension can include graphical icons indicating the type of functional extension. For instance, a click-to-call functional extension can appear as an object that includes a phone icon. In some implementations, the functional extension can be designed, shaped, sized or otherwise configured to fit within a display of the computing device on which the functional extension is being rendered. In some implementations, the functional extension can be displayed with other functional extensions.

In some implementations, the data processing system can store the functional extensions in a data store, such as the database 140 shown in FIG. 1. In some implementations, the data processing system can store the functional extensions such that the data processing system can retrieve and utilize the generated functional extensions at a later time.

The data processing system can provide the functional extension to be rendered with the content of the landing page responsive to an action taken on the creative when served on the computing device (BLOCK 415). In some implementations, the data processing system can provide the functional extension for insertion into an information resource that is to be rendered on a computing device responsive to an action taken on a creative associated with the functional extension when the creative is served on the computing device. In some implementations, the data processing system can render the functional extension with content of the landing page of the creative.

In some implementations, the data processing system can generate an information resource (for example, a web page) that includes content of the landing page and one or more functional extensions that correspond to the landing page. In some implementations, the data processing system can associate a network address of the information resource to the creative such that responsive to an action taken on the creative, the information resource is rendered. In some implementations, the data processing system can replace the network address associated with the creative from the network address associated with a landing page originally provided with the creative by the content provider to a network address of the information resource generated by the data processing system.

In some implementations, in response to the data processing system receiving a creative for serving in content serving opportunities, the data processing system can identify a landing page associated with the creative. The data processing system can generate an information resource that is to serve as a new landing page for the creative. The information resource can be managed, maintained or hosted by the data processing system. The information resource can be configured to include the contents of the landing page originally associated with the creative.

The data processing system can include one or more functional extensions in the information resource, such that when the information resource is rendered on a computing device, both the landing page originally associated with the creative and the one or more functional extensions are rendered. In some implementations, the data processing system can render the functional extensions at a top portion of the display of the computing device while rendering the landing page originally associated with the creative below the func-
tional extensions. Conversely, in some implementations, the data processing system can render the functional extensions at a bottom portion of the display of the computing device while rendering the landing page originally associated with the creative above the functional extensions. In some implementations, the data processing system can render the functional extensions as an overlay over the landing page originally associated with the creative. In some implementations, the functional extensions can be minimized or otherwise hidden from the display. In some implementations, an actionable item can be provided by the data processing system, which when actuated, causes the functional extensions to hide from view if visible. In some implementations, an actionable item can be provided by the data processing system, which when actuated, causes the functional extensions to become visible on the display if it is not already visible.

[0078] In some implementations, the information resource can include a plurality of frames, of which one frame can be shaped, sized or otherwise configured to render the content of the landing page originally associated with the creative. In some implementations, the information resource can be configured to render the one or more functional extensions on a second frame separate from the frame in which the content of the landing page originally associated with the creative is rendered. In some implementations, the frame in which the functional extensions are rendered can be positioned over the frame in which the content of the landing page originally associated with the creative is rendered.

[0079] In some implementations, the data processing system can monitor activity that occurs at the information resource generated by the data processing system. In some implementations, the data processing system can increment a counter identifying a total number of times a functional extension has been actuated each time a functional extension is actuated. In some implementations, the counter can be specific to a particular type of functional extension. In some implementations, the data processing system can identify a number of visits to the information resource. In some implementations, the data processing system can identify a number of visits that resulted in an action being taken on each of the one or more functional extensions rendered. In some implementations, the data processing system can determine a conversion rate based on a ratio of the number of visits that resulted in an action being taken on the one or more functional extensions to the total number of visits to the information resource.

[0080] In some implementations, the data processing system can determine a conversion rate of a creative associated with the information resource. In some implementations, the data processing system can determine a total number of times the creative was served. The data processing system can determine a conversion rate of the creative by determining a ratio of a total number of visits to the landing page via the creative to the number of times the creative was served.

[0081] In some implementations, the data processing system can provide the content provider associated with the creative a script or other software construct through which the landing page originally associated with the creative can be modified to include one or more functional extensions. In some implementations, the script can be inserted or embedded within the landing page. In some implementations, the data processing system can modify the software code associated with the landing page to insert the script within the software code. In some implementations, the script can be configured to communicate with a server of the data processing system. In some implementations, the script can be configured to modify the landing page associated with the creative such that when the landing page is rendered on a computing device of a user, the content of the landing page is rendered with one or more functional extensions. In some implementations, the script can be configured to call on the server of the data processing system to retrieve one or more functional extensions generated for rendering with the content of the landing page. In some implementations, the script can be configured to generate one or more functional extensions and render the generated functional extensions without having the data processing system generate the functional extensions. In some implementations, the script can include instructions for generating the functional extensions. In some implementations, the content provider computing device can render the modified landing page, which includes the content of the landing page originally associated with the creative and the functional extensions to the end user computing device. In some implementations, the content provider computing device can execute the script such that the functional extensions are rendered with the content of the landing page originally associated with the creative the modified landing page is served or rendered on the end user computing device.

[0082] FIG. 5 shows the general architecture of an illustrative computer system 500 that may be employed to implement any of the computer systems discussed herein (including the system 100 and its components such as the functional extension generation module 130 and the landing page modification module 135) in accordance with some implementations. The computer system 500 can be used to provide information via the network 105 for display. The computer system 500 of FIG. 5 comprises one or more processors 520 communicatively coupled to memory 525, one or more communications interfaces 505, and one or more output devices 510 (e.g., one or more display units) and one or more input devices 515. The processors 520 can be included in the data processing system 110 or the other components of the system 100 such as the functional extension generation module 130 and the landing page modification module 135.

[0083] In the computer system 500 of FIG. 5, the memory 525 may comprise any computer-readable storage media, and may store computer instructions such as processor-executable instructions for implementing the various functionalities described herein for respective systems, as well as any data relating thereto, generated thereby, or received via the communications interface(s) or input device(s) (if present). Referring again to the system 100 of FIG. 1, the data processing system 110 can include the memory 525 to store information related to one or more creatives, one or more information resources generated for the creatives and one or more functional extensions generated for rendering with content of landing pages associated with the creatives. The memory 525 can include the database 140. The processor(s) 520 shown in FIG. 5 may be used to execute instructions stored in the memory 525 and, in so doing, also may read from or write to the memory various information processed and or generated pursuant to execution of the instructions.

[0084] The processor(s) 520 of the computer system 500 shown in FIG. 5 also may be communicatively coupled to or control the communications interface(s) 505 to transmit or receive various information pursuant to execution of instructions. For example, the communications interface(s) 505 may be coupled to a wired or wireless network, bus, or other
communication means and may therefore allow the computer system 500 to transmit information to or receive information from other devices (e.g., other computer systems). While not shown explicitly in the system of FIG. 1, one or more communications interfaces facilitate information flow between the components of the system 100. In some implementations, the communications interface(s) may be configured (e.g., via various hardware components or software components) to provide a website as an access portal to at least some aspects of the computer system 500. Examples of communications interfaces 505 include user interfaces (e.g., web pages), through which the user can communicate with the data processing system 110.

[0085] The output devices 510 of the computer system 500 shown in FIG. 5 may be provided, for example, to allow various information to be viewed or otherwise perceived in connection with execution of the instructions. The input device(s) 515 may be provided, for example, to allow a user to make manual adjustments, make selections, enter data, or interact in any of a variety of manners with the processor during execution of the instructions. Additional information relating to a general computer system architecture that may be employed for various systems discussed herein is provided further herein.

[0086] Implementations of the subject matter and the operations described in this specification can be implemented in digital electronic circuitry, or in computer software embodied on a tangible medium, firmware, or hardware, including the structures disclosed in this specification and their structural equivalents, or in combinations of one or more of them. Implementations of the subject matter described in this specification can be implemented as one or more computer programs, i.e., one or more modules of computer program instructions, encoded on computer storage medium for execution by, or to control the operation of, a data processing apparatus. The program instructions can be encoded on an artificially-generated propagated signal, e.g., a machine-generated electrical, optical, or electromagnetic signal that is generated to encode information for transmission to suitable receiver apparatus for execution by a data processing apparatus. A computer storage medium can be, or be included in, a computer-readable storage device, a computer-readable storage substrate, a random or serial access memory array or device, or a combination of one or more of them. Moreover, while a computer storage medium is not a propagated signal, a computer storage medium can be a source or destination of computer program instructions encoded in an artificially-generated propagated signal. The computer storage medium can also be, or be included in, one or more separate physical components or media (e.g., multiple CDs, disks, or other storage devices).

[0087] The features disclosed herein may be implemented on a smart television module (or connected television module, hybrid television module, etc.), which may include a processing module configured to integrate internet connectivity with more traditional television programming sources (e.g., received via cable, satellite, over-the-air, or other signals). The smart television module may be physically incorporated into a television set or may include a separate device such as a set-top box, Blu-ray or other digital media player, game console, hotel television system, and other companion device. A smart television module may be configured to allow viewers to search and find videos, movies, photos and other content on the web, on a local cable TV channel, on a satellite TV channel, or stored on a local hard drive. A set-top box (STB) or set-top unit (STU) may include an information appliance device that may contain a tuner and connect to a television set and an external source of signal, turning the signal into content which is then displayed on the television screen or other display device. A smart television module may be configured to provide a home screen or top level screen including icons for a plurality of different applications, such as a web browser and a plurality of streaming media services, a connected cable or satellite media source, other web "channels", etc. The smart television module may further be configured to provide an electronic programming guide to the user. A companion application to the smart television module may be operable on a mobile computing device to provide additional information about available programs to a user, to allow the user to control the smart television module, etc. In alternate implementations, the features may be implemented on a laptop computer or other personal computer, a smartphone, other mobile phone, handheld computer, a tablet PC, or other computing device.

[0088] The operations described in this specification can be implemented as operations performed by a data processing apparatus on data stored on one or more computer-readable storage devices or received from other sources.

[0089] The terms "data processing apparatus", "data processing system", "user device" or "computing device" encompasses all kinds of apparatus, devices, and machines for processing data, including by way of example a programmable processor, a computer, a system on a chip, or multiple ones, or combinations, of the foregoing. The apparatus can include special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application-specific integrated circuit). The apparatus can also include, in addition to hardware, code that creates an execution environment for the computing program in question, e.g., code that constitutes processor firmware, a protocol stack, a database management system, an operating system, a cross-platform runtime environment, a virtual machine, or a combination of one or more of them. The apparatus and execution environment can realize various different computing model infrastructures, such as web services, distributed computing and grid computing infrastructures. The functional extension generation module 130 and the landing page modification module 135 can include or share one or more data processing apparatuses, computing devices, or processors.

[0090] A computer program (also known as a program, software, software application, script, or code) can be written in any form of programming language, including compiled or interpreted languages, declarative or procedural languages, and it can be deployed in any form, including as a stand-alone program or as a module, component, subroutine, object, or other unit suitable for use in a computing environment. A computer program may, but need not, correspond to a file in a file system. A program can be stored in a portion of a file that holds other programs or data (e.g., one or more scripts stored in a markup language document), in a single file dedicated to the program in question, or in multiple coordinated files (e.g., files that store one or more modules, sub-programs, or portions of code). A computer program can be deployed to be executed on one computer or on multiple computers that are located at one site or distributed across multiple sites and interconnected by a communication network.

[0091] The processes and logic flows described in this specification can be performed by one or more programmable
processors executing one or more computer programs to perform actions by operating on input data and generating output. The processes and logic flows can also be performed by, and apparatuses can also be implemented as, special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application-specific integrated circuit).

[0092] Processors suitable for the execution of a computer program include, by way of example, both general and special purpose microprocessors, and any one or more processors of any kind of digital computer. Generally, a processor will receive instructions and data from a read-only memory or a random access memory or both. The essential elements of a computer are a processor for performing actions in accordance with instructions and one or more memory devices for storing instructions and data. Generally, a computer will also include, or be operatively coupled to receive data from or transfer data to, or both, one or more mass storage devices for storing data, e.g., magnetic, magneto-optical disks, or optical disks. However, a computer need not have such devices. Moreover, a computer can be embedded in another device, e.g., a mobile telephone, a personal digital assistant (PDA), a mobile audio or video player, a game console, a Global Positioning System (GPS) receiver, or a portable storage device (e.g., a universal serial bus (USB) flash drive), for example. Devices suitable for storing computer program instructions and data include all forms of non-volatile memory, media and memory devices, including by way of example semiconductor memory devices, e.g., EPROM, EEPROM, and flash memory devices; magnetic disks, e.g., internal hard disks or removable disks; magneto-optical disks; and CD-ROM and DVD-ROM disks. The processor and the memory can be supplemented by, or incorporated in, special purpose logic circuitry.

[0093] To provide for interaction with a user, implementations of the subject matter described in this specification can be implemented on a computer having a display device, e.g., a CRT (cathode ray tube), plasma, or LCD (liquid crystal display) monitor, for displaying information to the user and a keyboard and a pointing device, e.g., a mouse or a trackball, by which the user can provide input to the computer. Other kinds of devices can be used to provide for interaction with a user as well; for example, feedback provided to the user can be any form of sensory feedback, e.g., visual feedback, auditory feedback, or tactile feedback; and input from the user can be received in any form, including acoustic, speech, or tactile input. In addition, a computer can interact with a user by sending documents to and receiving documents from a device that is used by the user; for example, by sending web pages to a web browser on a user’s client device in response to requests received from the web browser.

[0094] Implementations of the subject matter described in this specification can be implemented in a computing system that includes a back-end component, e.g., as a data server, or that includes a middleware component, e.g., an application server, or that includes a front-end component, e.g., a client computer having a graphical user interface or a Web browser through which a user can interact with an implementation of the subject matter described in this specification, or any combination of one or more such back-end, middleware, or front-end components. The components of the system can be interconnected by any form or medium of digital data communication, e.g., a communication network. Examples of communication networks include a local area network ("LAN") and a wide area network ("WAN"), an inter-network (e.g., the Internet), and peer-to-peer networks (e.g., ad hoc peer-to-peer networks).

[0095] The computing system such as system 500 or system 100 can include clients and servers. For example, the data processing system 110 can include one or more servers in one or more data centers or server farms. A client and server are generally remote from each other and typically interact through a communication network. The relationship of client and server arises by virtue of computer programs running on the respective computers and having a client-server relationship to each other. In some implementations, a server transmits data (e.g., an HTML page) to a client device (e.g., for purposes of displaying data to and receiving user input from a user interacting with the client device). Data generated at the client device (e.g., a result of the user interaction) can be received from the client device at the server.

[0096] While this specification contains many specific implementation details, these should not be construed as limitations on the scope of any inventions or of what may be claimed, but rather as descriptions of features specific to particular implementations of the systems and methods described herein. Certain features that are described in this specification in the context of separate implementations can also be implemented in combination in a single implementation. Conversely, various features that are described in the context of a single implementation can also be implemented in multiple implementations separately or in any suitable subcombination. Moreover, although features may be described above as acting in certain combinations and even initially claimed as such, one or more features from a claimed combination can in some cases be excluded from the combination, and the claimed combination may be directed to a subcombination or variation of a subcombination.

[0097] Similarly, while operations are depicted in the drawings in a particular order, this should not be understood as requiring that such operations be performed in the particular order shown or in sequential order, or that all illustrated operations be performed, to achieve desirable results. In some cases, the actions recited in the claims can be performed in a different order and still achieve desirable results. In addition, the processes depicted in the accompanying figures do not necessarily require the particular order shown, or sequential order, to achieve desirable results.

[0098] In certain circumstances, multitasking and parallel processing may be advantageous. Moreover, the separation of various system components in the implementations described above should not be understood as requiring such separation in all implementations, and it should be understood that the described program components and systems can generally be integrated together in a single software product or packaged into multiple software products. For example, the functional extension generation module 130 and the landing page modification module 135 can be part of the data processing system 110, a single module, a logic device having one or more processing modules, one or more servers, or part of a search engine.

[0099] Having now described some illustrative implementations and implementations, it is apparent that the foregoing is illustrative and not limiting, having been presented by way of example. In particular, although many of the examples presented herein involve specific combinations of method acts or system elements, those acts and those elements may be combined in other ways to accomplish the same objectives.
Acts, elements and features discussed only in connection with one implementation are not intended to be excluded from a similar role in other implementations.

[0100] The phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting. The use of “including” “comprising” “having” “containing” “involving” “characterized by” “characterized in that” and variations thereof herein, is meant to encompass the items listed thereafter, equivalents thereof, and additional items, as well as alternate implementations consisting of the items listed thereafter exclusively. In one implementation, the systems and methods described herein consist of one, each combination of more than one, or all of the described elements, acts, or components.

[0101] Any references to implementations or elements or acts of the systems and methods herein referred to in the singular may also embrace implementations including a plurality of these elements, and any references in plural to any implementation or element or act herein may also embrace implementations including only a single element. References in the singular or plural form are not intended to limit the presently disclosed systems or methods, their components, acts, or elements to single or plural configurations. References to any act or element being based on any information, act or element may include implementations where the act or element is based at least in part on any information, act, or element.

[0102] Any implementation disclosed herein may be combined with any other implementation, and references to “an implementation,” “some implementations,” “an alternate implementation,” “various implementation,” “one implementation” or the like are not necessarily mutually exclusive and are intended to indicate that a particular feature, structure, or characteristic described in connection with the implementation may be included in at least one implementation. Such terms as used herein are not necessarily all referring to the same implementation. Any implementation may be combined with any other implementation, inclusively or exclusively, in any manner consistent with the aspects and implementations disclosed herein.

[0103] References to “or” may be construed as inclusive so that any terms described using “or” may indicate any of a single, more than one, and all of the described terms.

[0104] Where technical features in the drawings, detailed description or any claim are followed by reference signs, the reference signs have been included for the sole purpose of increasing the intelligibility of the drawings, detailed description, and claims. Accordingly, neither the reference signs nor their absence have any limiting effect on the scope of any claim elements.

[0105] The systems and methods described herein may be embodied in other specific forms without departing from the characteristics thereof. Although the examples provided herein relate to an advertising program, the systems and methods described herein can be applied to any program in any vertical in which image-based content can be created from text-based content. The foregoing implementations are illustrative rather than limiting of the described systems and methods. Scope of the systems and methods described herein is thus indicated by the appended claims, rather than the foregoing description, and changes that come within the meaning and range of equivalency of the claims are embraced therein.

What is claimed is:
1. A method for providing actionable objects on a landing page of a creative, comprising:
   identifying, by a data processing system, a creative for serving on a computing device, the creative associated with a network address of a landing page;
   generating, by the data processing system, an actionable object to be rendered with content of the landing page; and
   providing, by the data processing system, the actionable object to be rendered with the content of the landing page responsive to an action taken on the creative when served on the computing device.
2. The method of claim 1, further comprising:
   generating, by the data processing system, an information resource that includes content of the landing page and the generated actionable object; and
   associating, by the data processing system, a network address of the information resource to the creative such that responsive to an action taken on the creative, the information resource is rendered.
3. The method of claim 2, further comprising:
   rendering the actionable object on a first frame of the information resource and the content of the landing page on a second frame of the information resource, wherein the first frame is rendered over the second frame.
4. The method of claim 1, wherein the first frame of the information resource includes an actionable item, which when selected, removes the first frame from the information resource rendered for display.
5. The method of claim 1, further comprising:
   receiving, in response to providing the actionable object, an indication of an action taken on the actionable object; and
   incrementing a conversion count responsive to receiving the indication.
6. The method of claim 1, wherein the actionable object is configured to cause the computing device on which the actionable object is rendered to execute a particular task.
7. The method of claim 1, wherein the particular task includes one of launching a phone application, a location application, or another dedicated application.
8. The method of claim 1, further comprising:
   providing, by the data processing system, a script for insertion in the landing page associated with the content, the script configured to cause the generated actionable object to be rendered for display with the content of the landing page responsive to an action taken on the creative.
9. The method of claim 1, further comprising:
   analyzing the content of the landing page to identify a particular type of content;
   identifying the particular type of content in the content of the landing page; and
   using the identified particular type of content to generate the actionable object.
10. A system for providing actionable objects on a landing page of a creative, comprising a data processing system configured to:
   identify a creative for serving on a computing device, the creative associated with a network address of a landing page;
   generate an actionable object to be rendered with content of the landing page; and
provide the actionable object to be rendered with content of the landing page responsive to an action taken on the creative when served on the computing device.

11. The system of claim 10, wherein the data processing system is further configured to:
- generate an information resource that includes content of the landing page and the generated actionable object;
- and
- associate a network address of the information resource to the creative such that responsive to an action taken on the creative, the information resource is rendered.

12. The system of claim 11, wherein the data processing system is further configured to:
- render the actionable object on a first frame of the information resource and the content of the landing page on a second frame of the information resource, wherein the first frame is rendered over the second frame.

13. The system of claim 10, wherein the first frame of the information resource includes an actionable item, which when selected, removes the first frame from the information resource rendered for display.

14. The system of claim 10, wherein the data processing system is further configured to:
- receive, in response to providing the actionable object, an indication of an action taken on the actionable object;
- and
- increment a conversion count responsive to receiving the indication.

15. The system of claim 10, wherein the actionable object is configured to cause the computing device on which the actionable object is rendered to execute a particular task.

16. The system of claim 10, wherein the particular task includes one of launching a phone application, a location application, or another dedicated application.

17. The system of claim 10, wherein the data processing system is further configured to:
- provide a script for insertion in the landing page associated with the content, the script configured to cause the generated actionable object to be rendered for display with the content of the landing page responsive to an action taken on the creative.

18. The system of claim 10, wherein the data processing system is further configured to:
- analyze the content of the landing page to identify a particular type of content;
- identify the particular type of content in the content of the landing page; and
- use the identified particular type of content to generate the actionable object.

19. A computer-readable storage medium storing instructions that when executed by a data processor, cause the data processor to perform operations, comprising:
- identifying a creative for serving on a computing device, the creative associated with a network address of a landing page;
- generating an actionable object to be rendered with content of the landing page; and
- providing the actionable object to be rendered with content of the landing page responsive to an action taken on the creative when served on the computing device.

20. The computer-readable storage medium of claim 19, storing further instructions that when executed by one or more data processors, cause the one or more data processors to perform operations, comprising:
- generating an information resource that includes content of the landing page and the generated actionable object;
- and
- associating a network address of the information resource to the creative such that responsive to an action taken on the creative, the information resource is rendered.