415. A system for generating code to provide method of displaying content on a display of a device, said system having a Player, where said Player is a device-dependent code, said method comprising:

computer memory storing a registry of:

a) symbolic names required for evoking one or more web components each related to a set of inputs and outputs of a web service obtainable over a network, where the symbolic names are character strings that do not contain either a persistent address or pointer to an output value accessible to the web service, where each symbolic name has an associated data format class type corresponding to a subclass of User Interface (UI) objects that support the data format type of the symbolic name, and has a preferred UI object, and b) an address of the web service;

an authoring tool configured to:

define a (UI) object for presentation on the display,

defining a user interface (UI) object for presentation on the display, where said defined UI object corresponds to a web component included in saida registry of one or more web components selected from a group consisting of an input of thea web service and an output of the web service, where each web component includes a plurality of symbolic names of inputs and outputs associated with each web service, and where the registry includes: a) symbolic names required for evoking one or more web components each related to a set of inputs and outputs of the web service obtainable over a network, where the symbolic names are character strings that do not contain either a persistent address or pointer to an output value accessible to the web service, and b) an address of the web service, and where each defined UI object is either: 1) selected by a user of thean authoring tool; or 2) automatically selected by thea system as thea preferred UI object corresponding to thea symbolic name of the web component selected by the user of the authoring tool;

access said computer memory to select the symbolic name corresponding to the web component of the defined UI object,

associate selecting the selected symbolic name with from said web component corresponding to the defined UI object, where the selected symbolic name is only available to has an associated data format class type corresponding to a subclass of UI objects that support the defined data format associated with that type of the symbolic name, and has the preferred UI object;

associating the selected symbolic name with the defined UI object; and

produceproducing an Application including the selected symbolic name of the defined UI object, where said Application is a device-independent code; and a Player, where said Player is a device-dependent code, wherein, when the Application and Player are provided to the device and executed on the device, and when the user of the device provides one or more input values associated with an input symbolic name to an input of the defined UI object,

1) the device provides the user provided one or more input values and corresponding input symbolic name to the web service,



- 2) the web service utilizes the input symbolic name and the user provided one or more input values for generating one or more output values having an associated output symbolic name,
- 3) said Player receives the output symbolic name and corresponding one or more output values and provides instructions for the display of the device to present an output value in the defined UI object.
- 317. The systemmethod of claim 115, where said web component is a text chat, a video chat, an image, a slideshow, a video, or an RSS feed.
- <u>519</u>. The <u>systemmethod</u> of claim <u>115</u>, where said UI object is an input field for a web service.
- 620. The systemmethod of claim 115, where said UI object is an input field usable to obtain said web component, where said input field includes a text field, a scrolling text box, a check box, a drop down-menu, a list menu, or a submit button.
- 721. The systemmethod of claim 115, where said web component is an output of a web service, is the text provided by one or more simultaneous chat sessions, is the video of a video chat session, is a video, an image, a slideshow, an RSS display, or an advertisement.
- 1125. The systemmethod of claim 115, where further comprising:

 providing said code is provided Application and Player over said network.
- 1226. The systemmethod of claim 115, wherein said defined UI object corresponds to a widget.
- 1327. The systemmethod of claim 115, where said Player is activated and runs in a web browser.

