without requiring the downloading of any additional software viewers, ActiveX controls, applets, or other components. The architecture allows for easy adaptation to other display platforms including digital set-top boxes, satellite decoders, video game consoles, wireless application protocol (WAP) devices, and the like.

[0054] In addition to the above features, the navigation system may be configured to cooperate with a set of authoring tools to allow the creation and management of navigation maps, XML configuration files to allow easy connection to legacy databases, and utilities to make deployment of maps a simple process. In one practical embodiment, these additional tools may be accessed (via, e.g., the Internet) by the entity that deploys the navigation system architecture. Such tools may communicate with the map system servers in a suitable manner to enable direct customization of interactive map interfaces by the broadcast service providers.

[0055] Navigation Interface Display

[0056] An exemplary navigation interface display screen **100** is depicted in **FIG. 1**. As described in more detail below, display **100** is preferably generated by a system configured in accordance with the present invention. Display **100** is shown and described herein for purposes of illustration; display **100** is not intended to limit or restrict the scope or applicability of the present invention in any way. Indeed, the specific configuration of display **100** may vary depending upon the particular application, system preferences, user preferences, and/or display device characteristics. For example, any number of the following (and other) features of display **100** may vary from application to application: the layout of the map "geography;" the number or arrangement of the symbols on the map geography; the number or arrangement of descriptive indicia on the map geography; the size or shape of the various display elements; the colors used in display **100**; and the type of media, files, or data associated with the control items.

[0057] In addition, the characteristics of the navigation interface display **100** may vary to accommodate different presentation devices. For example, display **100** may be suitable for use in connection with a computer and web browser implementation capable of receiving user inputs via a mouse, a trackball, a finger pad, or other pointing device having a substantially continuous cursor rendered on the display screen. An alternate embodiment may utilize a different navigation interface display that is more suitable for use with a remote control device having a limited number of directional navigation buttons (such remote control devices are commonly used to control set-top converter boxes in cable and satellite television systems). Yet another embodiment may utilize a navigation interface display having relatively low resolution and reduced finctionality to accommodate smaller presentation devices such as PDAs or wireless telephones.

[0058] Navigation interface display **100** may be subdivided into a number of general elements or components. For example, display **100** may include a title/banner element **102**, a navigation bar **104**, an information element **106**, and a map **108**. Title/banner element **102** may be used to identify a service or content provider such as a cable television company, a broadcasting network or media conglomeration, a provider or host associated with the deployment and/or maintenance of the navigation interface display system, a manufacturer of the presentation device upon which display **100** will be rendered, or the like. The specific content of title/banner element **102** may be fixed, selectable, or dynamically variable, depending upon the implementation of the interface display system.

[0059] Navigation bar **104**, or a functional equivalent, may be integrated into navigation interface display **100** to accommodate presentation devices that have a user-operated cursor rendered on the display screen (e.g., a mouse-driven cursor). In alternate embodiments, the functionality of navigation bar **104** can be included in a remote control device, a keyboard, or as an integrated hardware feature of the presentation device. In the exemplary embodiment shown in **FIG. 1**, navigation bar **104** includes arrows (or any suitable pan direction control indicators) that can be selected to pan or scroll map **108** in the indicated direction. To aid in the navigation, the arrows may be highlighted in response to the position of the cursor to indicate the selected direction. Navigation bar **104** may also include zoom controls that allow the user to change the level of magnification of map **108**. The zoom controls may include indicia representing a discrete number of magnification levels (such as the four circles shown in FIGS. **1-3**), indicia representing increasing and decreasing magnification, and/or indicia representing a change in the overall size of map **108**. For example, the current zoom level may be indicated by changing the appearance of one of the four circles. The zooming and panning features may be continuous or discrete depending on the specific implementation of the interactive navigation display system, the processing capabilities of the display system, and/or the characteristics of the respective display element upon which map **108** is rendered.

[0060] Information element **106** preferably contains "live" or real-time information regarding the currently selected active map item. Such information may change in accordance with variations in the broadcast or programming status, the specific content requested by the user, or any other variable criteria. In various embodiments, the displayed map items may represent any broadcast information, streaming media files, radio programs, television or radio networks, web page bookmarks, URLs, downloadable data files, applets, pay per view programs, video on demand programs, locally recorded videos, video games, chat rooms, e-commerce web sites, home automation systems (including appliances, security systems, and climate control systems), and any combination thereof. Accordingly, the content of information element **106** may vary depending on the particular application, and such content need not be limited to data associated with conventional or Internet-based television, radio, music, or video "stations."

[0061] In accordance with the practical embodiment illustrated in **FIG. 1**, the displayed map items represent cable television stations. In response to the selection of an active map item or "button" on map **108**, information element **106** displays information related to the programming associated with the respective station. In this respect, the selection of an active map item may prompt the display of additional data or cause the navigation display system to perform further related processes. For example, the illustrated information element **106** contains the station (or network) name, a station identifier such as an alphanumeric character string, an icon or logo associated with the station or program, and the name