**[0082]** The shape-changing upper surface layer **708** can be made of a material ("responsive medium") that changes size in response to a controlled input to the layer **708**. The responsive medium in the shape-changing upper surface layer **708** can be a material, such as a liquid or gel, that experiences a density and/or viscosity change, for instance changing from the liquid phase to the solid phase. Alternatively, the liquid can become denser depending upon the electric charge applied to the medium. The medium could also be a gas capable of changing the shape of the pocket in which the gas is held. In one implementation, the size-alterable zones comprise an electrically-responsive medium that changes volume when electrically stimulated. In a particular embodiment, the electrical stimulation is provided through a change in current or voltage being applied to the size-alterable zones. Other forms of stimulation (e.g. magnetic or thermal) that produce a volumetric change in a particular medium are also considered to fall within the scope of this disclosure. Some examples of appropriate volumetrically-changeable media are disclosed in U.S. Pat. No. 6,287,485, U.S. Pat. No. 7,212,332, U.S. Pat. No. 5,739,946, and U.S. Pat. No. 6,894,677. For example, some polyelectrolyte gels (hydrogels) are known to exhibit useful volume-modulation properties (swelling characteristics in the presence of a DC electric field). See, for example, Esmaiel Jabbari et al., "Swelling characteristics of acrylic acid polyelectrolyte hydrogel in a DC electric field" *Smart Mater. Struct*. (2007) Vol. 16, pp. 1614-1620. Use of such gels in a micro-electromechanical system (MEMS) to form a so-called gel network pump is discussed in U.S. Pat. No. 7,212,332 (Chee). Alternatively, in lieu of an array of pockets containing shape-changing fluids or gels, a solid layer of shape-changing material can be used (e.g. a shape-changing polymer or alloy that deforms locally when subjected to locally focused electrical or magnetic stimulation). A variety of smart materials (intelligent gels, ceramics, alloys, and polymers) that could be considered as potential candidates for a solid layer (i.e. the shape-changing upper surface layer **708**) are described in *Smart Materials: Emerging Markets for Intelligent Gels, Ceramics, Alloys, and Polymers* published by Technical Insights, Inc. and available online at http://www.the-infoshop.com/study/ti4914_smart_materials.html.

**[0083]** In one implementation, the size-alterable zones **720**, **722**, **724**, **726**, **728**, **730**, and **732** are configured such that the electrically responsive medium is confined within a pocket of a flexible sheet. The flexible sheet of the upper surface can be provided with pockets or voids that would accommodate an expandable gas or liquid. This would allow the upper surface to be constructed and assembled as a single unit. Depending on the medium encapsulated in the pockets of the flexible sheet and depending on the nature of the electrical stimulation that is applied, the size-alterable zones **720**, **722**, **724**, **726**, **728**, **730**, or **732** could be made to expand in a desired manner to form a convex lens.

**[0084]** As shown in FIG. **7**, the activated size-alterable zone **726** is expanded thereby establishing a convex bulge on the shape-changing upper surface layer **708** physically forming a magnifying lens. This expansion is caused through an increase in the volume of the medium in the size-alterable zone **726**. This increase in volume of the size-alterable zone **726** can be produced by the activation layer **706**, which in at least one implementation is capable of supplying electrical stimulation to the shape-changing upper surface layer **708**. Alternatively, a single size-alterable zone **720**, **722**, **724**, **726**, **728**, **730**, or **732** can be stimulated so that a convex lens is formed on the shape-changing upper surface layer **208**. The convex bulge serves as a lens to magnify information presented beneath. These convex bulges can be actuated by pressing the touchscreen at a location where a lens is desired, or alternatively, these lenses can be actuated by determining the location onscreen of a specific piece or portion of onscreen information for which magnification is desirable.

**[0085]** FIG. **8** is an example of a typical map downloaded to, and displayed on, a wireless communications device. Due to the limited size of the display screen, the amount of detail that can be presented in a visually ergonomic manner is limited. In this particular example, while major highways, geographical features (the lake and the river), and major points of interest (POI's) are displayed, the labels associated, for example, with the minor (secondary) roads in the central portion of the map between Interstate 90 and Highway 206 may be displayed in a small, unreadable font.

**[0086]** FIG. **9** schematically depicts how an arbitrarily positioned magnifying lens (created by actuating the shape-changing zones to form the lens) can be positioned arbitrarily onscreen to visually magnify a target area on the display. The magnifying lens can be placed at the target location by simply touching the touch-sensitive screen. Touching the screen would cause actuation of one or shape-changing zones/cells to bulge outwardly to form the lens. The radius of the lens can be preconfigured by the user or set automatically as a function of the zoom level and screen size in order to provide a useful amount of enlargement without unduly sacrificing peripheral information.

**[0087]** As depicted in FIG. **9**, the actuated lens would thus enlarge map details in the target area, thus revealing details that would otherwise not be readily visible (or which were simply not displayed at that zoom level, as will be explained below). In this example, the labels "First Avenue" and "Second Avenue" are presented in a readable fashion in the circular lens of FIG. **9**. As alluded to above, this lens technology can thus be used in two different ways: first, to simply magnify map details that are already presented onscreen for a given zoom level but which are not easily readable because their size is too small or, secondly, to provide an area for visually presenting further detail that is not present on the unmagnified map but which can be obtained by further download of data. In this latter scenario, additional map data is thus downloaded "on the fly" from the map server by accessing other data layers or entries in the map data (e.g. other Maplet layers or data entries in the specific implementation of vector-format map data) using the lens as a "bounding box" or "bounding circle" defining the target area of interest. In other words, the device can fetch one or more additional layers of map data or one or more additional individual entries (e.g., in the case of Maplets, one or more additional layers or DEntries can be downloaded by making an AOI request or a DEntry request). Accordingly, only data for that specific target area needs to be downloaded. The extra map data is then displayed in an enlarged/magnified manner onscreen in a circular lens frame or bubble as shown in FIG. **9**. As will be appreciated, the magnifier lens need not be circular, nor must it necessarily have a frame or boundary delimiting its radial reach.

**[0088]** FIG. **10** is an example of a map showing a current position of the wireless device downloaded to, and displayed on, the display screen of the wireless device. In this particular example, a small car icon is used to represent the real-time current position of the device. Of course, other icons (tri-