

least part of a foldable or rollable map **1200**. The map **1200** may provide real-time location information to a user as he or she travels by means of wireless communication with a data network such as the Internet or World Wide Web, and/or with a global positioning satellite (GPS) system, as discussed further below with reference to **FIG. 12A**. The location information may enable a display of an area in the vicinity of the map **1200** and the map's location **1220** (and thus the location of a map user) therein. Other parts of the electronic display device **130** may be used, for example, to advertise the locations of businesses near the location of the user, such as restaurants **1250**, tourist attractions **1270**, service and gas stations **1260**, and hotels **1240**. Local weather **1280** could also be displayed.

**[0037]** The lightweight materials from which the carrier material **110** may be formed and the flexible property of the carrier material **110** have the advantages of making the map **1200** easily portable, so that unlike fixed devices built into cars, embodiments of the present invention can be taken from a car by a traveler and the traveler can review map information at his convenience. For example, the foldable or rollable map **1200** could be folded or rolled into a tube, and reviewed by a traveler while he is dining in a restaurant or resting in his hotel. The map **1200** may further allow for hikers, campers, and military personnel to find their locations as well as understand the location of roads, landmarks, and scenic or wilderness locations relative to where the map **1200** and, thus, the user is located. Pilots and sailors can utilize the map **1200** to determine their locations. The inventive map will provide a significant feeling of safety, convenience and assistance to the user.

**[0038]** To provide location information as described above, the map **1200** may communicate with wireless or wired systems. The wireless systems may include data networks such as the Internet or World Wide Web and GPS systems. A communication link with such wireless systems may enable a map **1200** to download information needed to generate a corresponding display. **FIG. 12A** shows elements that may be associated with an implementation of embodiments of the present invention in the form of a map **1200**. In addition to elements described with reference to **FIG. 2**, above, a GPS circuit **1260** and an additional antenna **1250** for communication with GPS satellites may be provided to obtain location information. Details of a map image **1210** may be obtained, for example, by downloading corresponding information from the Internet via a wireless communication link implemented through a transceiver circuit **1270** and an associated antenna **1280**. The elements shown in **FIG. 12A** could be integrated into the structure of the carrier material **110**. On the other hand, some elements may be external to the carrier material **110**, such as arranged on an attachment thereto. The inventive map disclosed above may allow for the user to map any region in the world and to, for example, identify the user's whereabouts within or with respect to the region, and/or to identify a route of travel and monitor in real time his or her whereabouts on his or her route of travel in the region. The inventive map may further be used to identify, communicate with and learn about important locations for the convenience of the user.

**[0039]** **FIG. 13** illustrates yet another use of inventive embodiments of the present invention. In **FIG. 13**, a flexible carrier material **110** and associated electronic display device **130** form at least part of a floor mat or floor covering **1300**

on a floor of a commercial establishment such as a grocery store. The flexible carrier material **110** and associated electronic display device **130** may be used in this way to display advertising content relating to products on a nearby shelf **1301**, for example.

**[0040]** In still further applications, inventive embodiments of the present invention could be incorporated into such articles of manufacture such as book binders, notebooks, information packets, organizers, calendars, price hangtags, or product information advertising hangtags.

**[0041]** A further example of an electronic display device according to inventive embodiments of the present invention is shown in **FIGS. 14A-14C**. According to the embodiments, an electronic display device **1400** could comprise lightweight materials able to flex and bend as shown in **FIG. 14A**. More specifically, the electronic display device **1400** may include a lightweight flexible display element layer **1420** and a lightweight flexible frame **1410**. The display element layer **1420** may comprise such display elements as small molecule OLEDs, polymeric OLEDs, PLEDs or LEPs. **FIGS. 14B and 14C** are cross-sectional views along lines **14B-14B** and **14C-14C**, respectively. As shown in **FIG. 14B**, the flexible frame **1410** may include a lightweight flexible transparent protective layer **1430** and a lightweight flexible backing layer **1460**. The display element layer **1420** may be arranged between the backing layer **1460** and the transparent protective layer **1430**. The transparent protective layer could comprise, for example, polycarbonate, Mylar, or other rugged transparent plastic. As shown in **FIG. 14C**, the electronic display device **1400** might further comprise a lightweight flexible thin film battery **1470** to power the display. The thin film battery **1470** could be arranged between the display element layer **1420** and the backing layer **1460**.

**[0042]** The electronic display device **1400** may further comprise lightweight control electronics **1440** for driving a display of the display element layer. As shown, the control electronics **1440** may be housed with the frame **1410**, laterally to the display element layer **1420**. Alternatively, the control electronics could be arranged, for example, between the display element layer **1420** and the backing layer **1460** (**FIG. 14B**), or between the backing layer **1460** and the thin film battery **1470** (**FIG. 14C**).

**[0043]** The electronic display device **1400** may be configurable to display electronically modifiable arbitrary content. As noted, an electronic display device **1400** as described above would very lightweight and therefore easily portable. For example, it is contemplated that the electronic display device **1400** could be rolled up and carried under one's arm like a newspaper.

**[0044]** Several embodiments of the present invention are specifically illustrated and/or described herein. However, it will be appreciated that modifications and variations of the present invention are covered by the above teachings and within the purview of the appended claims without departing from the spirit and intended scope of the invention.

What is claimed:

1. A menu comprising:

a flexible carrier material;

an electronic display device associated with the flexible carrier material;