

**910** that may be unfolded to reveal six different display sections **911, 912, 913, 914, 915** and **916**. Information may be displayed on any and/or all of sections **911, 912, 913, 914, 915**, and/or **916**. Associated with displays **710** and **910** are touch sensors overlying and/or underlying the display layers, as suggested by **FIGS. 4 and 6** to provide a digitizer for a user to provide input to handheld computer **700** or **900**. Further, in an alternative embodiment displays **710** and/or **910** may be configured to be separable or detachable from handheld computer **700** or **900** respectively, as depicted in **FIG. 1**. A touch sensor, as it is described earlier remains in association with displays **710** and **910** and may be used when the display is detached from the handheld computer. The configurations of foldable displays are not limited to those depicted in **FIGS. 1-9**, but may be provided in any variety of configurations and/or forms.

[0030] Referring again to **FIG. 1**, display **140** includes its own microprocessor **150**, memory **160**, power source **170**, and transceiver **180** so that it can operate detached from handheld computer **100**. Handheld computer **100** may also include a transceiver which communicates information to transceiver **180**. In an exemplary embodiment transceiver **180** may be a Bluetooth transceiver but other types of transceivers may also be applied including infrared (IR) transceiver. Microprocessor **150** is configured with software to interpret and control the input of information through transceiver **180** and to control the movement of information to and from memory **160**. Further, microprocessor **150** is configured with software to control the information displayed on display **140**. In the exemplary embodiment depicted in **FIG. 1**, display **140** includes its own power source **170** such that the display itself may be powered along with the associated electronics, microprocessor **150**, memory **160**, transceiver **180**, etc. Further, microprocessor **150** is used to process information relating to information received from a touch sensor overlying and/or underlying display **140**, in accordance with **FIGS. 2 and/or 5**.

[0031] In an exemplary embodiment, a user of handheld computer, such as handheld computer **700** of **FIG. 7**, may view an image on an unenlarged viewing area **710** of a flexible, a foldable, and/or an expandable display. A user may be able to provide touch screen input to screen **710** because a touch sensor is available in association with display **710**. However, the user of handheld computer **700** may feel that the small format of display **710** is inadequate for the task at hand. In such a case the user would enlarge the flexible display to provide an enlarged viewing area. The enlargement may be accomplished by unfolding the display, stretching the display, unrolling the display, or any other applicable method which has the result of enlarging the viewing area. Once the display area has been enlarged, a user may then be able to view an image in the enlarged viewing area. Because flexible display **710** is provided with a flexible touch sensor that is associated with the entire surface of the enlarged viewing area, a user may then provide input to the handheld computer via the touch sensor. In an exemplary embodiment, such touch input may be provided using a finger tip, a stylus, or another type of input or writing device. Further, the touch sensor may be any of a variety of types of touch sensors including, but not limited to transparent coatings, and electrotextile fabric, etc. Yet further still, the use of an enlargeable display having a touch sensor is not limited to handheld computers but may also be applied to mobile phones, laptop computers, calculators,

personal digital systems, personal organizers, messaging devices, pagers, etc. Further, the display being of a flexible, enlargeable, or foldable type may be any of a variety of display types including, but not limited to bistable displays, including electronic paper (e-paper), and the like.

[0032] While the detailed drawings, specific examples and particular formulations given describe preferred and exemplary embodiments, they serve the purpose of illustration only. The inventions disclosed are not limited to the specific forms shown. For example, the methods may be performed in any of a variety of sequence of steps. The hardware and software configurations shown and described may differ depending on the chosen performance characteristics and physical characteristics of the computing devices. For example, the type of computing device, communications bus, or processor used may differ. The systems and methods depicted and described are not limited to the precise details and conditions disclosed. Furthermore, other substitutions, modifications, changes, and omissions may be made in the design, operating conditions, and arrangement of the exemplary embodiments without departing from the scope of the invention as expressed in the appended claims.

What is claimed is:

1. A display system, detachable from a host device, the display system, comprising:

- a power source;
  - a processor coupled to the power source;
  - a memory coupled to the power source and the processor;
  - a flexible electronic display coupled to the processor and the power source;
  - a coupler for coupling the flexible electronic display to the host device; and
  - a flexible touch sensor movable with the flexible electronic display.
2. The display system of claim 1, wherein the flexible electronic display is electronic paper (e-paper).
3. The display system of claim 1, wherein the flexible display is foldable.
4. The display system of claim 1, wherein the host device is a handheld computer.
5. The display system of claim 1, wherein the flexible touch sensor includes a transparent coating.
6. The display system of claim 1, wherein the flexible touch sensor includes an electrotextile.
7. A portable electronic device, comprising: a housing;

- a coupler connected to the housing; and
- a flexible display screen assembly, the flexible display screen assembly being viewable when coupled to the coupler and expandable to provide a larger viewing area, at least when decoupled from the coupler, the flexible display screen assembly including,
  - a power source;
  - a processor coupled to the power source;
  - a memory coupled to the power source and the processor;
  - a flexible electronic display coupled to the processor and the power source; and