[0083] FIG. **6***a* shows the cell phone in FIG. **1** provided with a second exemplifying tactile touchscreen **20***d* comprising a display **24** and an exemplifying touch-surface **22***b* arranged between a first electrode **30***aa* and a second electrode **30***ab*. Here it is preferred that the touch-surface **22***b* or at least an upper layer of the touch-surface **22***b* is formed of an electroactive polymer, e.g., an electroactive polymer as described in connection with the first exemplifying tactile touchscreen **20***a*. However, the electrodes **30***aa*, **30***ab* are preferably the same as the electrodes **30***aa*, **30***ab* though other electrodes are clearly conceivable. As can be seen in FIG. **6***a* it is preferred that the electrodes **30***aa*, **30***ab* are arranged on substantially opposite sides of the touch-surface **22***b* forming a region of an electroactive polymer or an upper layer of the touch-surface **22***b* forming a region of an electroactive polymer. However, in the same or similar manner as described in connection with the first exemplifying touch screen **20***a* there are other positions wherein the electrodes **30***aa*, **30***ab* may be arranged to operatively affect the touch surface **22***b* formed by an electroactive polymer or an upper layer of the touch-surface **22***b* formed by an electroactive polymer. It is also preferred that the electrodes **30***aa*, **30***ab* are connected or at least controlled by the tactile control **42** of the cell phone **10** and that the tactile control **42** is arranged so as to operatively apply a voltage to the electrodes **30***aa*, **30***ab* as a response to a touch on the touch-surface **22***b*. In this manner the touch-surface **22***b* formed by an electroactive polymer or at least an upper layer of the touch-surface **22***b* formed by an electroactive polymer can be actuated by applying a voltage across the polymer by means of the electrodes **30***aa*, **30***ab* as a response to a touch on the touch-surface **22***b*, e.g. being repeatedly deformed by being contracted and then returned to its original position as described above for the first exemplifying actuator **30***a*.

[0084] FIG. **6***b* shows a section of the cell phone **10** and the fourth exemplifying tactile touchscreen **20***d* seen in the direction indicated by the arrows A-A in FIG. **6***a*. As can be seen in FIG. **6***b* the tactile touchscreen **20***d* comprises a display **24** where the above mentioned touch-surface **22***b* is arranged above the display **24** so as to substantially cover the display **24**. In this respect the touchscreen **20***d* is similar to the first tactile touch screen **20***a* as described above with reference to FIG. **3***b*.

[0085] However, as already indicated above the tactile touchscreen **20***d* has an actuator **30***d* that differs from the actuator **30***a* of the previously described touchscreen **20***a*. As mentioned above it is preferred that the touch-surface **22***b* or at least an upper layer of the touch-surface **22***b* is made of an electroactive polymer. It is even more preferred that substantially the entire touch-surface **22***b* or at least an entire upper layer thereof is made of an electroactive polymer. As can be seen in FIG. **6***b* the electrodes **30***aa*, **30***ab* that are preferably arranged on opposite sides of the intermediate touch-surface **22***b* or at least an upper layer thereof are preferably attached to the body **10'** or similar of the cell phone **10** or similar. As a person skilled in the art realizes, in this manner it is possible to affect substantially the entire touch surface **22***d* or an entire upper layer of the touch-surface **22***b* by applying a suitable voltage to the electrodes **30***aa*, **30***ab*. As the observant reader realizes, in this embodiment the actuator arrangement **30***d* comprises the touch-surface **22***b* or at least an upper layer of the touch-surface **22***b* and the electrodes **30***aa*, **30***ab*.

[0086] In particular, it is preferred that the touch-surface **22***b* or at least an upper layer of the touch-surface **22***b* is arranged so that it can be oscillated by the tactile control **42** applying a voltage to the electrodes **30***aa*, **30***ab* as a response to a touch on the touch-surface **22***a* detected by means of the tactile control **42** comprising such hardware and software that is well known to those skilled in the art as being suitable for detecting a touch on the touch-surface **22***a* as previously discussed. The oscillation caused by a voltage applied over the electrodes **30***aa*, **30***ab* is preferably generating a wave or similar that propagates in the touch-surface **22***b*. This implies that the touch-surface **22***a* or an upper layer of the touch-surface **22***b* can be substantially rigidly attached, e.g. rigidly attached to the cell phone **10** at the edges of the touch-surface **22***a*, whereas the touch-surface **22***a* itself moves and/or oscillates or similar. The movement and/or oscillation or similar of the touch-surface **22***a* may occur in the horizontal as well as in the vertical direction as indicated by the two pairs of opposite arrows in FIG. **6***b*. This is generally so in case a wave or similar propagates in the touch-surface as described in connection with the embodiment herein.

[0087] A person skilled in the art realizes that the exemplifying actuator arrangement **30***d* of the second exemplifying tactile touchscreen **20***d* in FIGS. **6***a*-**6***b* is designed so that the deformation of the touch-surface **22***b* causes movements that can be perceived by a user of the cell phone **10** touching the touch-surface **22***b*. The deformation may e.g. cause the touch-surface **22***b* to oscillate in a manner that can be felt by a user touching the touch-surface **22***b*.

[0088] In an alternative embodiment the oscillation caused by a voltage applied over the electrodes **30***aa*, **30***ab* and the touch-surface **22***b* or an upper layer of the touch-surface **22***b* in FIGS. **6***a*-**6***b* is preferably generating a sound wave or similar that propagates in the air surrounding the touch-surface **22***b*. This can e.g. be utilized to propagate speech and 10 other sounds from the cell phone **10** into the air. In this manner the loudspeaker **13** of the cell phone **10** may be replaced or supplemented by the sound generating touch-surface **22***b* of the tactile touchscreen **20***d*. The same or similar applies mutatis mutandis to the touch surface **22***a* of the touchscreens **20***a*-**20***c* described above, which by suitable selections of the properties of the actuator **30***a* and the touch-surface **22***a* can be made to vibrate and/or oscillate so as to generate audible sounds perceivable to a user of the cell phone **10**.

[0089] As explained above, a cell phone **10** according to an embodiment of the present invention comprises a touchscreen provided with a touch-surface arranged to be actuated, and an actuator of an electroactive polymer arranged to operatively actuate the touch-surface. In particular, as will be explained in more detail below, the actuator is arranged to be operatively actuated by the tactile control **42** as a response to a touch on the touch-surface detected by the tactile control **42** comprising such hardware and software that is well known to those skilled in the art as being suitable for detecting a touch on the touch-surface.

[0090] Advantageous embodiments of the present invention use an actuator comprising a electroactive polymer arrangement, which provides a shockproof and highly flexible actuator with high compliance, low density, low power consumption, simple manufacturing and low cost.

[0091] The attention is now directed to the steps in an exemplifying method for providing a tactile response to a touch on the touch-surface detected by the tactile control **42**, which exemplifying steps will be described with reference to the exemplifying flowchart in FIG. **7**. The steps of the method