tional tactile feedback and generates kinesthetic feedback such as motion of a folder, slide movement, etc.

Aspect of Using Interaction Systems Using Kinesthetic Feedback

First Embodiment

[0061] FIG. **6** shows mechanical motions of the human interaction systems using kinesthetic feedback according to the present invention and FIGS. **7***a* and **7***b* show examples of using the human interaction systems using kinesthetic feedback according to the first embodiment of the present invention.

[0062] Referring to FIGS. **6** and **7***a*, when a user **10** closes the folder of the first terminal **110** by a predetermined extent, the folder of the second terminal **210** is closed by the same extent without having an additional external operation.

[0063] Referring to FIGS. **6** and **7***b*, if the second terminal **210** is obstructed by an obstacle or an external force **710** is applied to the second terminal **210** while the second terminal **210** is driven in interaction with the first terminal **110**, the first terminal **110** makes a motion corresponding to the motion of the second terminal **210** to generate feedback to the user **10**. This feedback corresponds to kinesthetic feedback. When the external force **710** applied to the second terminal **210** is weaker than the force of the user **10**, which is applied to the first terminal **110**, feedback is generated in such a manner that the folders of the first and second terminals **110** and **210** are closed slightly or slowly. Further, if the external force **710** is similar to the force of the user **10**, the folders of the first and second terminals **110** and **210** vibrate to generate kinesthetic feedback corresponding to the forces applied to the first and second terminals **110** and **210**. If the external force **710** applied to the second terminal **210** is greater than the force of the user **10**, kinesthetic feedback is generated in such a manner that the folders that are being closed are opened. The users of the first and second terminals **110** and **210** can respond to each other through the kinesthetic feedback.

Second Embodiment

[0064] FIGS. **8***a* and **8***b* show examples of using the human interaction systems using kinesthetic feedback according to the second embodiment of the present invention. Referring to FIGS. **6** and **8***a*, when the user **10** slides the first terminal **120**, the second terminal **220** slides by the magnitude of the sliding motion of the first terminal **120**.

[0065] However, if the second terminal **220** is obstructed by an obstacle or an external force **710** is applied to the second terminal **220** while the second terminal **220** is driven in interaction with the first terminal **120**, as shown in FIG. **8***b*, feedback corresponding to the motion of the second terminal **220** is generated in the first terminal **120**. This feedback corresponds to kinesthetic feedback. When the external force **710** applied to the second terminal **220** is weaker than the force of the user **10**, which is applied to the first terminal **120**, feedback is generated in such a manner that the first and second terminals **120** and **220** slowly slide. Further, if the external force **710** is similar to the force of the user **10**, slides of the first and second terminals **120** and **220** vibrate to generate kinesthetic feedback corresponding to the forces applied to the first and second terminals **120** and **220**. If the external force **710** applied to the second terminal **220** is greater than the force of the user **10**, kinesthetic feedback is generated in such a manner that the first and second terminals **120** and **220** reversely slide. The users of the first and second terminals **110** and **210** can respond to each other through the kinesthetic feedback.

Third Embodiment

[0066] FIGS. **9***a* to **9***c* show examples of using the human interaction systems using kinesthetic feedback according to the third embodiment of the present invention. Referring to FIG. **9***b*, when the user **10** bends the first flexible display **130**, the second flexible display **230** is bent by the magnitude of the bending motion of the first flexible display **130** without having an additional external operation.

[0067] Bending extents of the first and second flexible displays **130** and **230** can be controlled using the driver **300** such as wires having different lengths. The bending degrees of the first and second flexible displays **130** and **230** are measured at one side of each of the first and second flexible displays **130** and **230**, which is close to the end of the wires.

[0068] The first and second flexible displays **130** and **230** operate according to an aspect similar to the aspect of using the human interaction systems according to the first or second embodiment of the invention.

[0069] While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or modify the embodiments without departing from the scope and spirit of the present invention.

What is claimed is:

1. Human interaction systems **100** and **200** using kinesthetic feedback, which are connected to each other through communication, each human interaction system comprising:

a driver **300** driving the human interaction system according to handling of a user **10** and generating kinesthetic feedback;

a sensor **400** measuring force, physical quantity and path applied by the driver **300**;

a converter **500** converting a motion signal of the driver **300**, measured by the sensor **400**, into an electric signal in order to transmit and receive the motion signal; and

a communication module **600** transmitting and receiving the electric signal.

2. The human interaction systems of claim **1**, wherein the human interaction systems **100** and **200** correspond to folder type mobile terminals **110** and **210**, slide type mobile terminals **120** and **220**, or flexible displays **130** and **230**.

3. The human interaction systems of claim **1**, wherein the driver **300** is a DC motor, a linear motor or an SMA.

4. The human interaction systems of claim **1**, wherein the converter **500** comprises:

an encoder encoding motion information measured by the sensor **400** into an electric signal; and

a decoder decoding an electric signal received through the communication module **600**.

5. The human interaction systems of claim **4**, wherein the encoder corresponds to a linear encoder.

6. The human interaction systems of claim **1**, wherein the driver **300** includes a brake that restricts motions of the human interaction systems **100** and **200**.

7. The human interaction systems of claim **6**, wherein the brake is a magnetic particle brake, a linear brake or an SMA.

8. A method of operating first and second human interaction systems **100** and **200** connected to each other through communication, comprising: