

**10.** The system of claim **1** wherein the artificial neural network is able to distinguish among a plurality of gestures.

**11.** A method for implementing a touch user interface, the method comprising:

receiving tactile sensing data from a touch surface disposed on a touch sensor, the touch sensor providing the tactile sensing data responsive to human touch made by a user to the touch surface;

providing the tactile sensing data to at least one processor for performing calculations on the tactile sensing data;

processing the tactile sensing data with the at least one processor to produce processed sensor data;

providing the processed sensor data to at least one artificial neural network for performing operations on the processed sensor data; and

performing operations on the processed sensor data with the artificial neural network to produce interpreted data, wherein the interpreted data comprises user interface information responsive to the human touch made by the user to the touch surface.

**12.** The method of claim **11** wherein the touch sensor comprises a capacitive matrix.

**13.** The method of claim **11** wherein the touch sensor comprises a pressure sensor array.

**14.** The method of claim **11** wherein the touch sensor comprises a light emitting diode (LED) array.

**15.** The method of claim **11** wherein the touch sensor comprises a video camera.

**16.** The method of claim **11** wherein the artificial neural network has been previously trained to respond to touch data obtained from an individual user.

**17.** The method of claim **11** wherein the artificial neural network has been previously trained to respond to touch data obtained from a plurality of representative users.

**18.** The method of claim **11** wherein the interpreted data produced by the artificial neural network comprises the identification of at least one touch-based gesture made by the user.

**19.** The method of claim **11** wherein the interpreted data produced by the artificial neural network comprises a calculation of at least one numerical quantity whose value is responsive to the touch-based gesture made by the user.

**20.** The method of claim **11** wherein the artificial neural network is able to distinguish among a plurality of gestures.

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