CLAIMS

1. An information providing system comprising:

a touch panel~~display device provided in a predetermined information provision target area, the display device having:~~

~~a display function~~ configured to display information and detect contact by the user~~, including an operating unit, to a user in the information provision target area; and~~

~~an operating function configured to receive a predetermined input from the user through the operating unit~~;

a three-dimensional sensor configured to acquire three-dimensional shape data around the touch panel~~on surroundings, including the user, of the display device~~; and

a processor configured to display information content on the touch panel~~an user attribute determination means configured to determine an attribute of the user based on the acquired three-dimensional shape data~~;

wherein the three-dimensional sensor is configured to acquire: background three-dimensional shape data that does not include a user; and measurement three-dimensional shape data that includes the user,

wherein the information providing system further comprises a user attribute discrimination portion configured to

extract user three-dimensional data related to the user by using the background three-dimensional shape data and the measurement three-dimensional shape data, and

discriminate the user's attribute by comparing with a shape data model stored in a storage, and

wherein the processor is further configured to change

a position of an operation button displayed on the touch panel according to the user's attribute determined by the user attribute determination portion

~~a positional relation acquisition means configured to obtain a positional relation between the user and the display device based on the acquired three-dimensional shape data; and~~

~~a controlling means configured to control the display device to display:~~

~~the operating unit at a position corresponding to the positional relation and the attribute of the user; and~~

~~information content corresponding to the positional relation and the attribute of the user~~.

~~2. A method of providing information, comprising:~~

~~a three-dimensional shape data acquisition step of acquiring three-dimensional shape data on surroundings of a display device provided in a predetermined information provision target area, the surroundings including a user in~~

~~the information provision target area, the display device having:~~

~~a display function configured to display information including an operating unit to the user; and~~

~~an operating function configured to receive a predetermined input from the user through the operating unit;~~

~~a user attribute determination step of determining an attribute of the user based on the acquired three-dimensional shape data;~~

~~a positional relation acquisition step of obtaining a positional relation between the user and the display device based on the acquired three-dimensional shape data; and~~

~~a control step of controlling the display device to display:~~

~~the operating unit at a position corresponding to the positional relation and the attribute of the user; and~~

~~information content corresponding to the positional relation and the attribute of the user.~~

2. The information providing system according to claim 1, further comprising:

a positional relationship acquisition portion configured to obtain a positional relationship between the user and the touch panel using the background three-dimensional shape data and the measurement three-dimensional shape data,

wherein the processor is configured to change the position of the operation button displayed on the touch panel according to the positional relationship.

3. The information providing system according to claim 1, wherein the processor is configured to change the

information content to be displayed on the touch panel according to the user's attribute.

4. A method of providing information, executed by using a touch panel configured to display information and detect contact by a user, a three-dimensional sensor configured to acquire three-dimensional shape data around the touch panel, and a processor configured to display information content on the touch panel, the method comprising:

acquiring background three-dimensional shape data that does not include a user and measurement three-dimensional shape data that includes the user,

extracting a user three-dimensional data related to the user by using the background three-dimensional shape data and the measurement three-dimensional shape data, and discriminating the user's attribute by comparing with a shape data model stored in a storage, and

changing a position of an operation button displayed on the touch panel according to the user's attribute.

5. The method according to claim 4, further comprising:

obtaining a positional relationship between the user and the touch panel using the background three-dimensional shape data and the measurement three-dimensional shape data,

wherein the changing step further comprises changing the position of the operation button displayed on the touch panel according to the positional relationship.

6. The method according to claim 4, wherein the changing step further comprises changing the information content to be displayed on the touch panel according to the user's attribute.