CLAIMS

1. An information providing system comprising:

a touch panel configured to display information and detect contact by the 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;

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.

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.