

WHAT IS CLAIMED IS:

1. A test method comprising:

setting, by a test system, parameters of a test grid used for grid testing, to obtain corresponding setting parameters;

simulating and generating a virtual test grid corresponding to the setting parameters for the uppermost layer surface of an operating interface of a tested application;

extracting a preset number of coordinate data from within the virtual test grid according to a preset coordinate extraction rule;

acquiring a configuration file of the tested application from terminal under test, and determining an area pixel data of various controls of the tested application from the acquired configuration file;

testing the various controls based on the acquired coordinate data and the area pixel data according to a preset test rule, to obtain a test data of the various controls, wherein the various controls are tested based on the acquired coordinate data and the area pixel data according to the preset test rule by performing steps of: grouping the extracted coordinate data by the area pixel data to which the extracted coordinate data belongs; sorting test priorities of the various controls according to a preset sorting rule, to obtain the various controls that have been ordered according to the test priorities; and testing the various sorted controls one by one according to a preset test rule, to obtain the test data of the various controls; and

generating a corresponding test report for the tested application based on the obtained test data.

2. The test method of claim 1, wherein the extracting the preset number of coordinate data from within the virtual test grid according to the preset coordinate extraction rule comprises:

extracting coordinates from one or more preset positions on each of various grid blocks in the virtual test grid, so as to obtain the preset number of coordinate data, where the preset number is an integral multiple of the number of grid blocks in the virtual test grid;

or determining the grid blocks of the virtual test grid that fall in [X, Y] pixel area range, where both X and Y are positive integers; and extracting coordinates from one or more preset positions on each of the determined grid blocks to obtain the preset number of coordinate data.

3. The test method of claim 1, wherein the testing the various sorted controls one by one according to the preset test rule to obtain the test data of the various controls comprises:

sending corresponding test prompt messages for the various controls to the terminal under test in an one-by-one manner by the test priority order, and identifying whether the test data of the corresponding control has been received from the terminal under test;

if identifying that the test data of the corresponding control has been acquired from the terminal under test, continuing to send the test prompt message for the control ordered after the corresponding control according to the test priority order; and

otherwise if identifying that no test data of the corresponding control has been acquired from the terminal under test, continuing to acquire the test data of the corresponding control from the terminal under test.

4. The test method of claim 1, wherein the generating the corresponding test report for the tested application based on the obtained test data comprises:

matching the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file;

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determining that the control corresponding to the test data is a test-abnormal control; and

generating a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

5. The test method of claim 2, wherein the generating the corresponding test report for the tested application based on the obtained test data comprises:

matching the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file;

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determining that the control corresponding to the test data is a test-abnormal control; and

generating a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

6. The test method of claim 1, wherein the generating the corresponding test report for the tested application based on the obtained test data comprises:

matching the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file;

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determining that the control corresponding to the test data is a test-abnormal control; and

generating a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

7. The test method of claim 3, wherein the generating the corresponding test report for the tested application based on the obtained test data comprises:

matching the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file;

if there the test data that doesn't match the corresponding area pixel data in the configuration file, determining that the control corresponding to the test data is a test-abnormal control; and

generating a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

8. A test system comprising:

a setting module configured to set parameters of a test grid used for grid testing, to obtain corresponding setting parameters;

a grid generation module configured to simulate and thus generate a virtual test grid corresponding to the setting parameters for the uppermost layer surface of an operating interface of a tested application;

an extraction module configured to extract a preset number of coordinate data from within the virtual test grid according to a preset coordinate extraction rule;

an acquisition module configured to acquire a configuration file of the tested application from terminal under test, and determine an area pixel data of various controls of the tested application from the acquired configuration file;

a test module configured to test the various controls based on the acquired coordinate data and the area pixel data according to a preset test rule, to obtain a test data of the various controls; wherein the test module comprises: a grouping unit configured to group the extracted coordinate data by the area pixel data to which the extracted coordinate data belongs; a sorting unit configured to sort test priorities of the various controls according to a preset sorting rule, to obtain the various controls that have been ordered according to the test priorities; and a testing unit configured to test the various sorted controls one by one according to a preset test rule, to obtain the test data of the various controls; and

a report generation module configured to generate a corresponding test report for the tested application based on the obtained test data.

9. The test system of claim 8, wherein the extraction module comprises:

an extraction unit configured to extracting coordinates from one or more preset positions on each of various grid blocks in the virtual test grid so as to obtain the preset number of coordinate data, where the preset number is an integral multiple of the number of grid blocks in the virtual test grid;

or the extraction module further comprises a determination unit configured to determine the grid blocks of the virtual test grid that fall in [X, Y] pixel area range,

where both X and Y are positive integers; wherein the extraction unit is further configured to extract coordinates from one or more preset positions on each of the determined grid blocks, so as to extract the preset number of coordinate data.

10. The test system of claim 8, wherein the testing unit is further configured to:

send corresponding test prompt messages for the various controls to the terminal under test in an one-by-one manner according to the test priority order, and identify whether the test data of the corresponding control has been received from the terminal under test;

if identifying the test data of the corresponding control has been acquired from the terminal under test, continue to send the test prompt message for the control ordered after the corresponding control according to the test priority order; and

otherwise if identifying no test data of the corresponding control has been acquired from the terminal under test, continue to acquire the test data of the corresponding control from the terminal under test.

11. The test system of claim 8, wherein the report generation module comprises:

a matching unit configured to match the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file; and

a generating unit configured to:

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determine that the control corresponding to the test data is a test-abnormal control; and

generate a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

12. The test system of claim 9, wherein the report generation module comprises:
a matching unit configured to match the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file;
and

a generating unit configured to:

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determine that the control corresponding to the test data is a test-abnormal control; and

generate a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

13. The test system of claim 8, wherein the report generation module comprises:
a matching unit configured to match the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file;
and

a generating unit configured to:

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determine that the control corresponding to the test data is a test-abnormal control; and

generate a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

14. The test system of claim 10, wherein the report generation module comprises:

a matching unit configured to match the acquired corresponding test data of each of the various controls with the corresponding area pixel data in the configuration file; and

a generating unit configured to:

if there exists the test data that doesn't match the corresponding area pixel data in the configuration file, determine that the control corresponding to the test data is a test-abnormal control; and

generate a corresponding test report for the determined test-abnormal controls, wherein the test report contains list information of these test-abnormal controls.

15. A test device, comprising a processing unit, as well as a test system, an input/output unit, a communication unit, and a storage unit that are coupled to the processing unit; wherein

the input/output unit is configured to input a user instruction and output response data of the test device to the input user instruction;

the communication unit is configured to communicatively connect with a predetermined terminal or background server;

the storage unit is configured to store the test system as well as operating data of the test system;

the processing unit is configured to invoke and execute the test system to perform the following operations:

setting parameters of a test grid used for grid testing, to obtain corresponding setting parameters;

simulating and generating a virtual test grid corresponding to the setting parameters for the uppermost layer surface of an operating interface of a tested application;

extracting a preset number of coordinate data from within the virtual test grid according to a preset coordinate extraction rule;

acquiring a configuration file of the tested application from terminal under test, and determining an area pixel data of various controls of the tested application from the acquired configuration file;

testing the various controls based on the acquired coordinate data and the area pixel data according to a preset test rule, to obtain a test data of the various controls, wherein the various controls are tested based on the acquired coordinate data and the area pixel data according to the preset test rule by performing steps of: grouping the extracted coordinate data by the area pixel data to which the extracted coordinate data belongs; sorting test priorities of the various controls according to a preset sorting rule, to obtain the various controls that have been ordered according to the test priorities; and testing the various sorted controls one by one according to a preset test rule, to obtain the test data of the various controls; and

generating a corresponding test report for the tested application based on the obtained test data.

16. The test device of claim 15, wherein the extracting the preset number of coordinate data from within the virtual test grid according to the preset coordinate extraction rule comprises:

extracting coordinates from one or more preset positions on each of various grid blocks in the virtual test grid, so as to obtain the preset number of coordinate data, where the preset number is an integral multiple of the number of grid blocks in the virtual test grid;

or determining the grid blocks of the virtual test grid that fall in [X, Y] pixel area range, where both X and Y are positive integers; and extracting coordinates from one or more preset positions on each of the determined grid blocks to obtain the preset number of coordinate data.

17. The test device of claim 15, wherein the testing the various sorted controls one by one according to the preset test rule to obtain the test data of the various controls comprises:

sending corresponding test prompt messages for the various controls to the terminal under test in an one-by-one manner according to the test priority order, and identifying whether the test data of the corresponding control has been acquired from the terminal under test;

if identifying the test data of the corresponding control has been acquired from the terminal under test, continuing to send the test prompt message for the control ordered after the corresponding control according to the test priority order; and

otherwise if identifying no test data of the corresponding control has been acquired from the terminal under test, continuing to acquire the test data of the corresponding control from the terminal under test.