Claims:

1. A risk management and control method, comprising:

receiving, by a receiving module, an object event to be managed and controlled by a device that processes the object event;

determining, by a processing module, at least one event attribute weight according to the object event;

determining, by the processing module, a candidate verification mode set according to the object event, the candidate verification mode set comprising a plurality of candidate verification modes;

determining, by the processing module executing a genetic algorithm, based on a plurality of historical events, a plurality of management and control attribute groups, each comprising at least one management and control attribute weight and each corresponding to one of the plurality of candidate verification modes;

determining, by the processing module, based on each of the at least one event attribute weight and the management and control attribute groups, output weights for at least some candidate verification modes in the candidate verification mode set;

determining, by the processing module, a verification mode for risk management and control on the object event from the candidate verification mode set, the determined verification mode associated with the largest output weight among the determined output weights; and

outputting, by an output module, the verification mode for risk management and control on the object event by the device that processes the object event.

2. The risk management and control method according to claim 1, wherein the determining output weights for at least some candidate verification modes in the candidate verification mode set comprises:

determining the output weights for at least some candidate verification modes in the candidate verification mode set according to the event attribute weight and the at least one management and control attribute weight.

3. The risk management and control method according to claim 1, wherein the determining a candidate verification mode set comprises:

identifying a risk type corresponding to the object event, and determining a first verification mode set associated with the risk type according to the risk type;

identifying a device type of a device that initiates the object event and/or the device that processes the object event, and determining a second verification mode set associated with the device type according to the device type; and

performing an intersection process on the first verification mode set and the second verification mode set, and setting the candidate verification mode set as a result of the intersection process.

4. The risk management and control method according to claim 2, wherein the determining at least one event attribute weight according to the object event at least comprises one of the following:

identifying a user type corresponding to the object event, and determining a user type weight according to the user type;

identifying a scenario type corresponding to the object event, and determining a scenario type weight according to the scenario type; and

identifying a user preference corresponding to the object event, and determining a preference weight according to the user preference.

5. The risk management and control method according to claim 2, wherein the determining at least one management and control attribute weight comprises:

presetting at least one management and control attribute weight according to a recorded verification mode determined for each of the plurality of historical events.

6. The risk management and control method according to claim 5, wherein the presetting at least one management and control attribute weight according to a recorded verification mode determined for each of the plurality of historical events comprises:

determining an event attribute weight of each of the plurality of historical events; and

according to preset criteria and constrains, determining the at least one preset management and control attribute weight by optimizing the criteria based on the constraints and the event attribute weights.

7. The risk management and control method according to any one of claims 1, 2, 5, and 6, wherein the determining output weights for at least some candidate verification modes in the candidate verification mode set comprises:

using an equation $S_i=\sum_{j=1}^{n} w_{ij} \cdot K_j$ to determine an output weight S_i of the i^{th} verification mode,

where w_{ij} is the j^{th} management and control attribute weight in the i^{th} management and control attribute group, K_j is the j^{th} event attribute weight, and n represents a total number of event attribute weights.

8. The risk management and control method according to claim 6, further comprising:

obtaining, by the processing module, testing events for testing from the plurality of historical events;

according to a recorded verification mode for each testing event, determining, by the processing module, a first quantity of the testing events that satisfies a designated condition;

determining, by the processing module, a testing verification mode for each testing event based on the management and control attribute weight;

according to the testing verification mode, determining, by the processing module, a second quantity of the testing events that satisfies the designated condition; and

comparing, by the processing module, the first quantity and the second quantity, and adjusting the management and control attribute weight according to a comparison result.

9. The risk management and control method according to claim 8, wherein the testing events are secure historical events that have passed verification, and the designated condition is that the determined verification mode is direct pass; and/or

the testing events are secure historical events that fail to pass verification, and the designated condition is that the determined verification mode is direct pass or a verification mode different from the verification mode previously used; and/or

the testing events are risky historical events that have been directly passed, and the designated condition is that the determined verification mode is a verification mode other than a direct pass; and/or

the testing events are risky historical events that have passed verification, and the designated condition is that the determined verification mode is a verification mode different from the verification mode previously used.

10. A risk management and control device, comprising:

a receiving module configured to receive an object event to be managed and controlled by a device that processes the object event;

a processing module configured to:

determine at least one event attribute weight according to the object event,

determine, based on the object event, a candidate verification mode set and determine, the candidate verification mode set comprising a plurality of candidate verification modes,

determine, by executing a genetic algorithm, based on a plurality of historical events, a plurality of management and control attribute groups, each comprising at least one management and control attribute weight and each corresponding to one of the plurality of candidate verification modes, and

determine, based on each of the at least one event attribute weight and the management and control attribute groups, output weights for at least some candidate verification modes in the candidate verification mode set; and

an outputting module configured to output a verification mode for risk management and control on the object event by the device that processes the object event from the candidate verification mode set, the outputted verification mode associated with the largest output weight among the determined output weights.

11. The risk management and control device according to claim 10, wherein the processing module is further configured to:

obtain the at least one management and control attribute weight; and

determine the output weights for at least some candidate verification modes in the candidate verification mode set according to the event attribute weight and the at least one management and control attribute weight.

12. The risk management and control device according to claim 10, wherein the processing module is further configured to:

identify a risk type corresponding to the object event, and determine a first verification mode set associated with the risk type according to the risk type;

identify a device type of a device that initiates the object event and/or the device that processes the object event, and determine a second verification mode set associated with the device type according to the device type; and

perform an intersection process on the first verification mode set and the second verification mode set, and set the candidate verification mode set as a result of the intersection process.

13. The risk management and control device according to claim 11, wherein the processing module is further configured to:

identify a user type corresponding to the object event, and determine a user type weight according to the user type;

identify a scenario type corresponding to the object event, and determine a scenario type weight according to the scenario type; and

identify a user preference in the object event, and determine a preference weight according to the user preference.

14. The risk management and control device according to claim 11, wherein the processing module is further configured to:

preset at least one management and control attribute weight according to a recorded verification mode determined for each of the plurality of historical events.

15. The risk management and control device according to claim 14, wherein to preset at least one management and control attribute weight according to a recorded verification mode determined for each of the plurality of historical events, the processing module is further configured to:

determine an event attribute weight of each of the plurality of historical events; and

according to preset criteria and constrains, determine the at least one management and control attribute weight by optimizing the criteria based on the constraints and the event attribute weights.

16. The risk management and control device according to any one of claims 10, 11, 14, and 15, wherein the processing module is further configured to:

use an equation $S_i=\sum_{j=1}^{n} w_{ij} \cdot K_j$ to determine an output weight S_i of the i^{th} verification mode,

where w_{ij} is the j^{th} management and control attribute weight in the i^{th} management and control attribute group, K_j is the j^{th} event attribute weight, and n represents a total number of event attribute weights.

17. The risk management and control device according to claim 15, wherein the processing module is further configured to:

obtain testing events for testing from the plurality of historical events;

according to a recorded verification mode for each testing event, determine a first quantity of the testing events that satisfies a designated condition;

determine a testing verification mode for each testing event based on the management and control attribute weight;

according to the testing verification mode, determine a second quantity of the testing events that satisfies the designated condition; and

adjust the management and control attribute weight according to a comparison result of the first quantity and the second quantity.

18. The risk management and control device according to claim 17, wherein the processing module is further configured so that:

the testing events are secure historical events that have passed verification, and the designated condition is that the determined verification mode is direct pass; and/or

the testing events are secure historical events that fail to pass verification, and the designated condition is that the determined verification mode is direct pass or a verification mode different from the verification mode previously used; and/or

the testing events are risky historical events that have been directly passed, and the designated condition is that the determined verification mode is a verification mode other than a direct pass; and/or

the testing events are risky historical events that have passed verification, and the designated condition is that the determined verification mode is a verification mode different from the verification mode previously used.

19. A transaction management and control method, comprising the risk management and control method according to any one of claims 1-9.

20. A transaction management and control device, comprising the risk management and control device according to any one of claims 10-18.