CLAIMS

~~What is claimed is:~~

1. An information exchange method, performed by a terminal, the method comprising:

displaying a game picture, the game picture comprising a candidate skill region;

determining a target skill based on a skill selection operation for the candidate skill region;

displaying a virtual joystick object on the game picture, wherein the virtual joystick object comprises a virtual joystick control and a preset joystick movement range;

determining a skill casting object and a preset skill casting range of the target skill;

obtaining a current position of the skill casting object in the game picture;

obtaining a joystick position of the virtual joystick control in the preset joystick movement range when the movement operation for the virtual joystick object is detected;

calculating a relative position, based on the preset joystick movement range, the joystick position and the preset skill casting range, wherein the relative position is a relative position between the skill generation position and the skill casting object;

determining a quantity of the at least one skill generation position of the target skill;

calculating a skill effect model distribution radius of the target skill according to the relative position;

determining a skill effect model distribution trajectory of the target skill based on the skill effect model distribution radius by using the relative position as a center of a circle;

determining a plurality of skill effect model distribution points on the skill effect model distribution trajectory based on the quantity of the at least one skill generation position;

determining positions of the skill effect model distribution points in the game picture as the at least one skill generation position according to the current position of the skill casting object in the game picture;

~~calculating, when a movement operation for the virtual joystick object is detected, at least one skill generation position of the target skill based on the movement operation;~~ and

generating a skill effect model of the target skill at the at least one skill generation position when a cast operation for the virtual joystick object is detected.

~~2. The information exchange method according to claim 1, wherein the virtual joystick object comprises a virtual joystick control and a preset joystick movement range, and the calculating, when a movement operation for the virtual joystick object is detected, at least one skill generation position of the target skill based on the movement operation comprises:~~

~~determining a skill casting object and a preset skill casting range of the target skill;~~

~~obtaining a current position of the skill casting object in the game picture;~~

~~obtaining a joystick position of the virtual joystick control in the preset joystick movement range when the movement operation for the virtual joystick object is detected; and~~

~~calculating at least one skill generation position of the target skill based on the preset joystick movement range, the joystick position, the preset skill casting range, and the current position.~~

~~3~~2. The information exchange method according to claim ~~2~~1, wherein after the determining a skill casting object of the target skill and a preset skill casting range, and obtaining a current position of the skill casting object in the game picture, the method further comprises:

determining a skill generation region of the target skill in the game picture based on the preset skill casting range by using the current position of the skill casting object as a center; and

displaying the skill generation region on the game picture;

wherein the generating a skill effect model of the target skill at the at least one skill generation position comprises:

generating the skill effect model of the target skill at the at least one skill generation position when the at least one skill generation position is in the skill generation region.

~~4~~3. The information exchange method according to claim ~~2~~1, wherein the calculating ~~at least one skill generation~~ the relative position of the target skill based on the preset joystick movement range, the joystick position~~,~~ and the preset skill casting range~~, and the current position~~ comprises:

determining an interaction range ratio between the preset joystick movement range and the preset skill casting range;

determining ~~a~~ the relative position according to the interaction range ratio and the joystick position~~, the relative position being a relative position between the skill generation position and the skill casting object; and~~

~~determining a skill generation position of the relative position in the game picture according to the current position of the skill casting object in the game picture~~.

~~5~~4. The information exchange method according to claim 4~~3~~, wherein after the determining a relative position according to the interaction range ratio and the joystick position, the method further comprises:

calculating a relative direction of the skill effect model relative to the skill casting object according to the relative position; and

wherein the generating a skill effect model of the target skill at the at least one skill generation position comprises:

modifying a skill effect model direction of the target skill based on the relative direction, to obtain a target skill whose direction is modified; and

generating a skill effect model of the target skill whose direction is modified at the at least one skill generation position.

~~6. The information exchange method according to claim 4, wherein the determining a skill generation position of the relative position in the game picture according to the current position of the skill casting object in the game picture comprises:~~

~~determining a quantity of the at least one skill generation position of the target skill;~~

~~calculating a skill effect model distribution radius of the target skill according to the relative position;~~

~~determining a skill effect model distribution trajectory of the target skill based on the skill effect model distribution radius by using the relative position as a center of a circle;~~

~~determining a plurality of skill effect model distribution points on the skill effect model distribution trajectory based on the quantity of the at least one skill generation position; and~~

~~determining positions of the skill effect model distribution points in the game picture as the at least one skill generation position according to the current position of the skill casting object in the game picture.~~

~~7~~5. The information exchange method according to claim ~~6~~1, wherein after the determining a plurality of skill effect model distribution points on the skill effect model distribution trajectory based on the quantity of the at least one skill generation position, the method further comprises:

determining a vertical direction of the skill effect model distribution points based on the skill effect model distribution radius; and

the generating a skill effect model of the target skill at the at least one skill generation position

comprises:

modifying a skill effect model direction of the target skill based on the vertical direction, to obtain a target skill whose direction is modified; and

generating a skill effect model of the target skill whose direction is modified at the at least one skill generation position.

~~8~~6. The information exchange method according to claim ~~6~~1, wherein the calculating a skill effect model distribution radius of the target skill according to the relative position comprises:

obtaining a preset coefficient;

calculating a relative distance according to the relative position; and

performing weighted summation on the relative distance according to the preset coefficient, to obtain the skill effect model distribution radius of the target skill.

~~9~~7. The information exchange method according to claim ~~6~~1, wherein the determining a skill effect model distribution trajectory of the target skill based on the skill effect model distribution radius by using the relative position as a center of a circle comprises:

obtaining a preset distribution volume of the skill effect model of the target skill;

multiplying the preset distribution volume of the skill effect model and the quantity of the at least one skill generation position, to obtain a minimum skill effect model distribution radius;

determining the skill effect model distribution trajectory of the target skill based on the skill effect model distribution radius by using the relative position as the center of the circle when the skill effect model distribution radius of the target skill is not less than the minimum skill effect model distribution radius; and

determining the skill effect model distribution trajectory of the target skill based on the minimum skill effect model distribution radius by using the relative position as the center of the circle when the skill effect model distribution radius of the target skill is less than the minimum skill effect model distribution radius.

~~10~~8. The information exchange method according to claim 1, wherein after the calculating, when a movement operation for the virtual joystick object is detected, at least one skill generation position of the target skill based on the movement operation, the method further comprises:

generating a skill preview effect model of the target skill at the at least one skill generation position; and

the generating a skill effect model of the target skill at the at least one skill generation position when a cast operation for the virtual joystick object is detected comprises:

stopping generating the skill preview effect model of the target skill at the at least one skill generation position when the cast operation performed by a user for the virtual joystick object is detected, and generating the skill effect model of the target skill.

~~11~~9. The information exchange method according to claim 1, wherein the candidate skill region comprises a skill control of at least one candidate skill, and the determining a target skill based on a skill selection operation for the candidate skill region comprises:

determining the target skill in the at least one candidate skill based on a selection operation for the skill control; and

wherein the displaying a virtual joystick object on the game picture comprises:

overlay-displaying the virtual joystick object on the skill control of the target skill.

~~12~~10. The information exchange method according to claim 1, wherein the game picture further comprises a cast cancel control, and after the displaying a virtual joystick object on the game picture, the method further comprises:

stopping displaying the virtual joystick object in the game picture when a cast cancel operation for the cast cancel control is detected.

~~13~~11. An information exchange apparatus, comprising:

a picture unit, configured to display a game picture, the game picture comprising a candidate skill region;

a skill unit, configured to determine a target skill based on a skill selection operation for the candidate skill region;

a joystick unit, configured to display a virtual joystick object on the game picture, wherein the virtual joystick object comprises a virtual joystick control and a preset joystick movement range;

a position unit, configured to determine a skill casting object and a preset skill casting range of the target skill, obtain a current position of the skill casting object in the game picture, obtain a joystick position of the virtual joystick control in the preset joystick movement range when the movement operation for the virtual joystick object is detected; calculate a relative position, based on the preset joystick movement range, the joystick position and the preset skill casting range, wherein the relative position is a relative position between the skill generation position and the skill casting

object; determine a quantity of the at least one skill generation position of the target skill; calculate a skill effect model distribution radius of the target skill according to the relative position; determine a skill effect model distribution trajectory of the target skill based on the skill effect model distribution radius by using the relative position as a center of a circle; determine a plurality of skill effect model distribution points on the skill effect model distribution trajectory based on the quantity of the at least one skill generation position; determine positions of the skill effect model distribution points in the game picture as the at least one skill generation position according to the current position of the skill casting object in the game picture~~calculate, when a movement operation for the virtual joystick object is detected, at least one skill generation position of the target skill based on the movement operation~~; and

a generation unit, configured to generate a skill effect model of the target skill at the at least one skill generation position when a cast operation for the virtual joystick object is detected.

~~14~~12. A storage medium, the storage medium being configured to store a computer program, the computer program being configured to perform the information exchange method according to any one of claims 1 to ~~12~~10.

~~15~~13. A terminal, comprising a processor and a memory, the memory storing a plurality of instructions, and the processor loading the instructions from the memory, to perform the information exchange method according to any one of claims 1 to ~~12~~10.

~~16~~14. A computer program product comprising instructions, the computer program product, when run on a computer, causing the computer to perform the information exchange method according to any one of claims 1 to ~~12~~10.