CLAIMS

1. A data processing method, comprising:

extracting speech data of a first user from live stream data;

recognizing the speech data to determine characteristic information corresponding to a target object;

determining the target object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises permission conditions; ~~and~~

determining presentation information of the target object based on the target object and the descriptive information~~.~~, and

adding the presentation information to the live stream data for display, wherein adding the presentation information to the live stream data for display comprises:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the presentation information to live stream data related to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.

2. The method according to claim 1, wherein recognizing the speech data to determine characteristic information corresponding to a target object comprises:

performing a speech recognition on the speech data to determine corresponding text information;

performing a semantic analysis on the text information to determine the characteristic information corresponding to the target object.

3. The method according to claim 1, wherein determining the target object and corresponding descriptive information based on the characteristic information comprises:

recognizing a first characteristic word in the characteristic information to determine the target object;

recognizing a second characteristic word in the characteristic information to determine the descriptive information corresponding to the target object.

4. The method according to claim 1, wherein determining presentation information of the target object based on the target object and the descriptive information comprises:

setting attribute information of the target object based on the descriptive information;

determining the presentation information of the target object based on the target object and the attribute information.

~~5. The method according to claim 1, further comprising:~~

~~adding the presentation information to the live stream data for display.~~

~~6. The method according to claim 5, wherein adding the presentation information to the live stream data for display comprises:~~

~~acquiring permission levels of second users;~~

~~determining a second user meeting a permission condition; and~~

~~adding the presentation information to live stream data related to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.~~

~~7~~5. The method according to claim 1, further comprising:

receiving operation data for the presentation information from the second user;

analyzing the operation data to determine a target user; and

assigning a target object corresponding to the presentation information to the target user.

~~8~~6. A data processing method, comprising:

extracting speech data of a first user from live stream data;

recognizing the speech data to determine characteristic information corresponding to a virtual interaction object;

determining descriptive information corresponding to the virtual interaction object based on the characteristic information, wherein the descriptive information comprises an object quantity, ~~and~~ an object resource and permission conditions;

calling a virtual interactive plug-in, and configuring attribute information of the virtual interaction object based on the descriptive information; and

adding the virtual interaction object to the live stream data for display, wherein adding the virtual interaction object to the live stream data for display comprises:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the virtual interaction object to live stream data related to the second user meeting the permission condition, so as to present the virtual interaction object to the second user meeting the permission condition.

~~9~~7. The method according to claim ~~8~~6, wherein the virtual interaction object comprises

at least one of a virtual red envelope, a virtual coupon and a virtual gold coin.

~~10~~8. A data processing method, comprising:

extracting speech data of a first user from live stream data;

recognizing the speech data to determine characteristic information corresponding to a commodity object;

determining a target commodity object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises price information ~~and~~, quantity information of the target commodity object and permission conditions;

determining link information of the target commodity object based on the target commodity object and the descriptive information; and

adding the link information of the target commodity object to the live stream data for display, wherein adding the link information of the target commodity object to the live stream data for display comprises:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the link information of the target commodity object to live stream data related to the second user meeting the permission condition, so as to present the link information of the target commodity object to the second user meeting the permission condition.

~~11~~9. A data processing method, comprising:

extracting speech data of a target user from data of a video conference;

recognizing the speech data to determine characteristic information corresponding to a target object;

determining the target object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises permission conditions;

determining presentation information of the target object based on the target object and the descriptive information; and

adding the presentation information to the data of the video conference for display, wherein adding the presentation information to the data of the video conference for display comprises:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the presentation information to data of the video conference related to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.

~~12~~10. A data processing method, comprising:

extracting speech data of a target user from data of a live stream teaching activity;

recognizing the speech data to determine characteristic information corresponding to a target object;

determining the target object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises permission conditions;

determining presentation information of the target object based on the target object and the descriptive information; and

adding the presentation information to the data of the live stream teaching activity, wherein adding the presentation information to the data of the live stream teaching activity comprises:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the presentation information to data of the live stream teaching activity related to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.

~~13~~11. A data processing apparatus, comprising:

a speech data extraction module configured to extract speech data of a first user from live stream data;

a characteristic information extraction module configured to recognize the speech data to determine characteristic information corresponding to a target object;

a characteristic information filtering module configured to determine the target object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises permission conditions; ~~and~~

a presentation information extraction module configured to determine presentation information of the target object based on the target object and the descriptive information,

and

a presentation information display module configured to add the presentation information to the live stream data for display, wherein the presentation information display module is configured to add the presentation information to the live stream data for display by:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the presentation information to live stream data related to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.

~~14~~12. A data processing apparatus, comprising:

a speech data acquisition module configured to extract speech data of a first user from live stream data;

a characteristic information acquisition module configured to recognize the speech data to determine characteristic information corresponding to a virtual interaction object;

a characteristic information processing module configured to determine descriptive information corresponding to the virtual interaction object based on the characteristic information, wherein the descriptive information comprises an object quantity ~~and~~, an object resource and permission conditions;

an interaction object generation module configured to call a virtual interactive plug-in and configure attribute information of the virtual interaction object based on the descriptive information; and

an interaction object display module configured to add the virtual interaction object to the live stream data for display, wherein the interaction object display module is configured to add the interaction object to the live stream data for display by:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the live stream data to live stream data related to the second user meeting the permission condition, so as to present the live stream data to the second user meeting the permission condition.

~~15~~13. A data processing apparatus, comprising:

a speech data determination module configured to extract speech data of a first user from live stream data;

a characteristic information determination module configured to recognize the speech data to determine characteristic information corresponding to a commodity object;

a commodity information filtering module configured to determine a target commodity object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises price information ~~and~~, quantity information of the target commodity object and permission conditions;

a link information determination module configured to determine link information of the target commodity object based on the target commodity object and the descriptive information; and

a link information presentation module configured to add the link information of the target commodity object to the live stream data for display, wherein the link information presentation module is configured to add the link information of the target commodity object to the live stream data for display by:

acquiring permission levels of second users according to the permission conditions;

determining a second user meeting a permission condition; and

adding the link information of the target commodity object to live stream data related to the second user meeting the permission condition, so as to present the link information of the target commodity object to the second user meeting the permission condition.

~~16~~14. A data processing apparatus, comprising:

a speech data acquisition module configured to extract speech data of a target user from data of a video conference;

a characteristic information acquisition module configured to recognize the speech data to determine characteristic information corresponding to a target object;

a characteristic information screening module configured to determine the target object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises permission conditions;

a presentation information acquisition module configured to determine presentation information of the target object based on the target object and the descriptive information; and

a presentation information output module configured to add the presentation information to the data of the video conference for display, wherein the presentation information output module is configured to add presentation information to the data of the video conference for display by:

acquiring permission levels of second users according to the permission conditions; determining a second user meeting a permission condition; and

adding the presentation information to data of the video conference related to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.

~~17~~15. A data processing apparatus, comprising:

a speech data filtering module configured to extract speech data of a target user from data of the live stream teaching activity;

a characteristic information recognition module configured to recognize the speech data to determine characteristic information corresponding to a target object;

an object information screening module configured to determine the target object and corresponding descriptive information based on the characteristic information, wherein the descriptive information comprises permission conditions;

an object information processing module configured to determine presentation information of the target object based on the target object and the descriptive information; and

a presentation information sending module configured to add the presentation information to the data of the live stream teaching activity for display, wherein the presentation information sending module is configured to add presentation information to the data of the live stream teaching activity for display by:

acquiring permission levels of second users according to the permission conditions; determining a second user meeting a permission condition; and

adding the presentation information to data of the live stream teaching activity related

to the second user meeting the permission condition, so as to present the presentation information to the second user meeting the permission condition.

~~18~~16. An electronic device comprising:

a processor; and

a memory storing executable codes which, when executed, enables the processor to perform the method according to any one of claims 1 to ~~12~~10.

~~19~~17. A machine-readable media storing executable codes which, when executed, enables a processor to perform the method according to any one of claims 1 to ~~12~~10.