

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference C23W7813Z		Date of mailing (day/month/year) 22 March 2024
International application No. PCT/IB2023/000640		FOR FURTHER ACTION See paragraph 2 below
International filing date (day/month/year) 20 October 2023	Priority date (day/month/year) 21 October 2022	
International Patent Classification (IPC) or both national classification and IPC H04N 21/4782(2011.01)i; H04N 21/2187(2011.01)i; H04N 21/478(2011.01)i; H04N 21/442(2011.01)i; H04N 21/422(2011.01)i		
Applicant HYTTO PTE. LTD. et al.		

1. This opinion contains indications relating to the following items:

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|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the opinion |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

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Box No. I

Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b)).
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),
☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

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Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-21	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims	NONE	NO

2. Citations and explanations:

Reference is made to the following documents:

D1: KR 10-2316072 B1 (JUNG, GYU YONG) 21 October 2021

D2: US 2020-0099960 A1 (GUANGZHOU HUYA INFORMATION TECHNOLOGY CO., LTD.) 26 March 2020

I. Novelty and Inventive Step (PCT Article 33(2) and (3))

1. Claims 1-12

1.1. Claim 1

D1, which is considered to be the closest prior art to the subject matter of claim 1, discloses a method for providing a broadcast service, the method comprising: providing, from a broadcasting device, a broadcast content to a viewer device; playing, at the viewer device, the broadcast content by using a broadcast screen; monitoring an event in a chat window or the broadcast screen; transmitting an event signal for the event to the broadcasting device; determining the event of the event signal; controlling a remote operating device based on the determined event; and providing a broadcast content including an operation of the remote operation device corresponding to the event to the viewer device (see paragraphs [0090]-[0095]; and figure 6).

Claim 1 differs from D1 in an operation of an interactive element being observable only to at least one participant of a broadcast room. However, the different feature would be easily derived from the disclosure of D2 (see claim 1: “executing the response instruction to send feedback information to at least one user in a live streaming room in response to the action event”).

It would have been obvious to a person skilled in the art to arrive at the matter defined in claim 1 by combining the teachings of D1 and D2. Therefore, claim 1 lacks an inventive step.

1.2. Claims 2-12

The additional features of claims 2-5, 10 are merely variations of the disclosure of D1 (see paragraphs [0092]-[0095]; and figure 6: the remote operating device provides action effects, sound effects, and display effects in response to the event).

The additional feature of claim 6 is merely a variation of the disclosure of D2 (see claim 1: “executing the response instruction to send feedback information to at least one user in a live streaming room in response to the action event”).

The additional feature of claim 7 is merely a variation of the disclosure of D1 (see paragraph [0092]; and figure 6: monitoring the event in the chat window or the broadcast screen).

The additional feature of claim 8 is merely a variation of the disclosure of D1 (see paragraph [0093]; and figure 6: determining whether the event signal is caused by entering a specific word in the chat window, selecting a specific menu icon, or receiving a paid item as a gift).

The additional feature of claim 9 is merely a variation of the disclosure of D1 (see paragraph [0094]; and figure 6: controlling, by the broadcast device, the remote operating device based on the determined event).

The additional feature of claim 11 is merely a variation of the disclosure of D2 (see paragraph [0081]; and figure 4: “the featured objects listed on the list are displayed as thumbnails corresponding to the featured objects in the video stream”).

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

The additional feature of claim 12 is merely a variation of the disclosure of D1 (see paragraph [0079]; and figure 4: the broadcasting device includes a first communication module connected to a communication network and a second communication module connected to a wireless communication network).

Therefore, claims 2-12 lack an inventive step as being obvious over D1 in view of D2.

2. Claim 13

D1, which is considered to be the closest prior art to the subject matter of claim 13, discloses a method for providing a broadcast service, the method comprising: providing, from a broadcasting device, a broadcast content to a viewer device; playing, at the viewer device, the broadcast content by using a broadcast screen; monitoring an event in a chat window or the broadcast screen; transmitting an event signal for the event to the broadcasting device; determining the event of the event signal; controlling a remote operating device based on the determined event; and providing a broadcast content including an operation of the remote operation device corresponding to the event to the viewer device (see paragraphs [0090]-[0095]; and figure 6).

Claim 13 differs from D1 in that a broadcast content of each of one or more broadcast-room pages is created and streamed by at least one streamer device, and that an interactive operation instruction includes at least one of a viewer accessory control instruction, voice/text/video messaging instruction, game invitation or game interaction instruction. However, the different feature would be easily derived from the disclosure of D2 (see claim 1: “a live streaming room”), and the disclosure of D1 (see paragraphs [0092]-[0095]; and figure 6: the remote operating device provides action effects, sound effects, and display effects in response to the event).

It would have been obvious to a person skilled in the art to arrive at the matter defined in claim 13 by combining the teachings of D1 and D2. Therefore, claim 13 lacks an inventive step.

3. Claim 14

D1, which is considered to be the closest prior art to the subject matter of claim 14, discloses a method for providing a broadcast service, the method comprising: providing, from a broadcasting device, a broadcast content to a viewer device; playing, at the viewer device, the broadcast content by using a broadcast screen; monitoring an event in a chat window or the broadcast screen; transmitting an event signal for the event to the broadcasting device; determining the event of the event signal; controlling a remote operating device based on the determined event; and providing a broadcast content including an operation of the remote operation device corresponding to the event to the viewer device (see paragraphs [0090]-[0095]; and figure 6).

Claim 14 differs from D1 in online entertainment, which enables a first user to obtain feedback of an interactive operation while browsing at least one web-page. However, the different feature would be easily derived from the disclosure of D2 (see claim 1: “executing the response instruction to send feedback information to at least one user in a live streaming room in response to the action event”).

It would have been obvious to a person skilled in the art to arrive at the matter defined in claim 14 by combining the teachings of D1 and D2. Therefore, claim 14 lacks an inventive step.

4. Claims 15-21

4.1. Claim 15

D1, which is considered to be the closest prior art to the subject matter of claim 15, discloses a system for providing a broadcast service, the system comprising: a broadcasting device; a broadcast relay server; and a viewer device, wherein the viewer device connects to the broadcast relay server and receives the broadcast service of a broadcast channel selected by a user among broadcast channels provided by a plurality of broadcast devices, wherein the viewer device transmits an event signal, such as entering preset text, selecting an icon displayed on the broadcast screen, or providing a paid item as a gift, to the broadcast relay server, and receives a broadcast content for an operation of remote control devices corresponding to the event signal (see paragraphs [0055]-[0062]; and figure 2).

Claim 15 differs from D1 in a communication between an application and a streaming accessory managed by a third server that is not associated with a first streaming platform. However, the different feature would be easily derived from the disclosure of D1 (see paragraphs [0079]-[0080]; and figure 4: the broadcasting device includes a first communication module connected to a communication network and a second communication module connected to a wireless communication network, wherein the second communication module handles mutual data communication with the remote operation device).

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**Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability;
citations and explanations supporting such statement**

It would have been obvious to a person skilled in the art to arrive at the matter defined in claim 15 over D1. Therefore, claim 15 lacks an inventive step.

4.2. Claims 16-21

The additional feature of claim 16 is merely a variation of the disclosure of D1 (see paragraphs [0079]-[0080]; and figure 4: the broadcasting device includes the first communication module connected to the communication network and the second communication module connected to the wireless communication network, wherein the second communication module handles the mutual data communication with the remote operation device).

The additional features of claims 17-19 are merely variations of the disclosure of D1 (see paragraphs [0092]-[0095]; and figure 6: the remote control devices provide action effects, sound effects, and display effects in response to the event signal).

The additional feature of claim 20 is merely a variation of the disclosure of D1 (see paragraphs [0061]-[0062]; and figure 2: the viewer device receives the broadcast service of the broadcast channel selected by the user among the broadcast channels provided by the plurality of broadcast devices).

The additional feature of claim 21 is merely a variation of the disclosure of D1 (see paragraphs [0061]-[0062]; and figure 2: the viewer device transmits the event signal, such as entering the preset text, selecting the icon displayed on the broadcast screen, or providing the paid item as the gift, to the broadcast relay server).

Therefore, claims 16-21 lack an inventive step as being obvious over D1.

II. Industrial Applicability (PCT Article 33(4))

Claims 1-21 are industrially applicable.