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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/025,943	**09/29/2025 05:52:15 PM Z ET**	**5386-0485PUS1**

Title of Invention

VIRTUAL REALITY CONTROL METHOD FOR AVOIDING MOTION SICKNESS

Application Information

APPLICATION TYPE	Utility - U.S. National Stage under 35 USC 371	PATENT #	-
CONFIRMATION #	9824	FILED BY	Candice Lee
PATENT CENTER #	72506661	FILING DATE	08/29/2023
CUSTOMER #	2292	FIRST NAMED INVENTOR	Ying-Chi Chen
INTL. APPLICATION #	-	INTL. FILING DATE	-
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	CHENG-KANG HSU

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1.pdf		9	-	236 KB
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1-LET..pdf	(1-1)	1	Miscellaneous Incoming Letter	174 KB
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1-A....pdf	(2-2)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	93 KB
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1-REM.pdf	(3-9)	7	Applicant Arguments/Remarks Made in an Amendment	134 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1.pdf	5DA741097031E2B37AD486FD8307748435ED22C5B30741B6E3C8C9BB7CC0525E05BD9A21680747EA6777E5B7F2BBCCF784A15FF491B03B15BE7D561E512E8793
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1-LET..pdf	E1975383D13C7EBAA7BF4E4C0CB006AF90E31DEBFC3FD8873FE0F6A1BEB10B33F22DD67608B23D8053B3C742D463A045EB2E1C9B445120B6BD7C9B3BF03A337A
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1-A....pdf	311033084AF4008FAEFDB5EBFD3BA31011FB091174ABCFA999F9DF326E35DCC263C80351AC80A8D1E8E76E10008385834C2A954B262EA7EF8EFE3B200D27C07F
2025-09-29_Reply_1.111_asfiled_5386-0485PUS1-REM.pdf	D24CA35FF2398405684EA9405D4355A72040C5B08C2522257B11AA4AB8492F558CEF10D79C275E2D2CA5C0717387C704742769921660DFD88E309485E5BAFBB4

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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AMENDMENT TRANSMITTAL LETTER

Docket No.
5386-0485PUS1

Application No.	Filing Date	Examiner	Art Unit
18/025,943 - Conf. #9824	August 29, 2023	CHOWDHURY, Afroza Y.	2628

Applicant(s): Ying-Chi CHEN

Invention: VIRTUAL REALITY CONTROL METHOD FOR AVOIDING MOTION SICKNESS

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Transmitted herewith is an amendment in the above-identified application.

The fee has been calculated and is transmitted as shown below.

CLAIMS AS AMENDED

	Claims Remaining After Amendment	Highest Number Previously Paid	Number Extra Claims Present	Rate	
Total Claims	18	- 20 =	0	x 80.00	0.00
Independent Claims	1	- 3 =	0	x 240.00	0.00
Multiple Dependent Claims (check if applicable)	☐			370.00	0.00
Other fee (please specify):					0.00
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:					0.00

☐ Large Entity ☒ Small Entity ☐ Micro Entity

☒ No additional fee is required for this amendment.

☐ Please charge Deposit Account No. 02-2448 in the amount of $ 0.00.

☐ A check in the amount of $ 0.00 is enclosed.

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☒ The Director is hereby authorized to charge and credit Deposit Account No. 02-2448 as described below.

☒ Credit any overpayment.

☒ Charge any additional filing or application processing fees required under 37 C.F.R. §§ 1.16 and 1.17.

/Greg (Cheng-Kang) HSU/ Dated: September 29, 2025

Greg (Cheng-Kang) Hsu
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Docket No.: 5386-0485PUS1
(Patent)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application of:	Ying-Chi CHEN		
Application No.:	18/025,943	Confirmation No.:	9824
Filed:	August 29, 2023	Art Unit:	2628
For:	VIRTUAL REALITY CONTROL METHOD FOR AVOIDING MOTION SICKNESS	Examiner:	CHOWDHURY, Afroza Y.

REPLY UNDER 37 C.F.R. § 1.111

MS AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In reply to the Office Action dated July 08, 2025, Applicant respectfully submits the following remarks in connection with the above-identified application.

This reply includes

Remarks.

REMARKS

Applicant appreciates the Examiner's thorough consideration provided in the present application. Claims 1-18 are now present in the application. Claim 1 is independent. No amendment was made to the claims by this Reply. Reconsideration of this application is respectfully requested.

Claim Rejections under 35 U.S.C. § 103

Claims 1-9, 11-14 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fujiwara et al. (US 20190018477) in view of Grizzel (US 10,692,489). Claims 10 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fujiwara in view of Grizzel, and further in view of Canberk, (US 11,995,774). Claims 17 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fujiwara in view of Grizzel, and further in view of Canberk and Ignakov, (US 2020/0055195). These rejections are respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Applicant respectfully **disagrees** with the Examiner's rejections and submits that independent claim 1 as originally filed clearly defines over the references relied on by the Examiner.

In particular, independent claim 1 recites a combination of elements including "receiving a displacement control instruction from a VR user, wherein the displacement control instruction is selected from a group consisting of moving forward, moving backward, moving leftward, moving rightward, stopping, moving upward, moving downward, and a combination thereof; detecting a shaking direction of a shake of a head of the VR user; and *determining, according to*

an instruction matching rule, whether the displacement control instruction matches the shaking direction of the shake, wherein when the displacement control instruction matches the shaking direction of the shake, the displacement control instruction is executed, and when the displacement control instruction does not match the shaking direction of the shake, the displacement control instruction is not executed" (emphasis added).

Applicant respectfully submits that the combination of elements set forth in claim 1 is not disclosed or suggested by the references relied on by the Examiner.

Specifically, referring to paragraph [0007] of the present application, some VR users may suffer motion sickness when experiencing VR technology. The reason is that when the movement felt by the human body is inconsistent with the visual picture, the determination of the body balance state and spatial orientation from the brain will have an error, and then the motion sickness is manifested.

Further, referring to paragraph [0030], in order to solve the problem of motion sickness, the present application involves a key technical means which is to determine, according to an instruction matching rule, whether the displacement control instruction sent by the VR user matches the shaking direction of the shake of the VR user's head. If the displacement control instruction matches the shaking direction, the displacement control instruction will be executed, and if the displacement control instruction does not match the shaking direction, the displacement control instruction won't be executed. The VR control method of the disclosure is combining a head shaking action configured to stimulate the vestibular system with an operation of the VR system based on a principle of the natural vestibular system of a human body, so as to perfectly achieve the effect of avoiding motion sickness. In other words, the key point of claim 1

is “the displacement control instruction is executed only when the displacement control instruction matches the shaking direction of the shake of the VR user’s head”.

In Fujiwara’s invention, Fujiwara only discloses an operating method for controlling display information in a handsfree manner when the virtual space is displayed using the HMD (head mount display), such as generating control instructions by shaking the head, inclining the head, and moving front and rear. This method of generating movement control commands based on the VR user's head or limb movements is often the cause of VR motion sickness. For example, the detection system detects the VR user's head shaking forward and generates a forward movement command, but the VR user is actually just bending forward and has no intention of moving. This kind of movement, not intentionally generated by the VR user, is often the cause of VR motion sickness. Fujiwara fails to teach that the displacement control instructions must be executed based on an instruction matching rule to avoid motion sickness.

It is pointed out in this office action that Grizzel in col. 29, lines 23-50 teaches “determining, according to an instruction matching rule, whether the displacement control instruction matches the shaking direction of the shake, wherein when the displacement control instruction matches the shaking direction of the shake”.

However, col. 29, lines 23-50 of Grizzel merely describes that the movement signature can be customized, which means the user can create a movement signature as a displacement control instruction. For example, as Grizzel describes, “a head nod wherein the head only moves in one direction and not the other direction to complete a full head nod” may correspond to on of the plurality of movement signatures. That is to say, Grizzel only discloses that the VR user can create their own displacement control instructions. Grizzel uses a detection system to detect the VR user's body movements, determine whether the VR user's movements match the movements

stored in the database, and then determine whether to generate displacement control instructions. This method of using system detection to generate displacement instructions is more prone to unexpected movement. For example, the system detects that the VR user is shaking to the left and generates a command to move to the left. In fact, the VR user is just dodging an arrow or bullet to the left and is not moving. This kind of movement that VR users don't expect will cause more dizziness. Grizzel still fails to teach that the displacement control instructions must be executed based on an instruction matching rule to avoid motion sickness. Only when the VR user explicitly issues a displacement control command and the head shakes accordingly, this movement, which is expected by the VR user, stimulates the vestibular system in the ear, can reduces motion sickness. In Grizzel's invention, it only determines whether the VR user's movement corresponds to one of movement signature storing in the database rather than determining whether the displacement control instruction matches the shaking direction of the shake of VR user's head. In Grizzel's invention, if the VR user's movement corresponds to one of movement signature storing in the database, the displacement control instruction will be executed even though the displacement control instruction does not match the shaking direction of the shake of the VR user's head. Neither Fujiwara nor Grizzel take "avoiding motion sickness" into consideration when they conceive their invention.

Since both Fujiwara and Grizzel fail to teach "*determining, according to an instruction matching rule, whether the displacement control instruction matches the shaking direction of the shake, wherein when the displacement control instruction matches the shaking direction of the shake, the displacement control instruction is executed, and when the displacement control instruction does not match the shaking direction of the shake, the displacement control*

instruction is not executed", and both of them are silent on the issue of avoiding motion sickness, claim 1 is patentable over Fujiwara in view of Grizzel.

With regard to the Examiner's reliance on other secondary references, these references have only been relied on for their teachings against some dependent claims. It is submitted that these references also fail to disclose the above-mentioned features set forth in claim 1, and thus fail to cure the deficiencies of Fujiwara and Grizzel.

In particular, Canberk discloses augmented reality system and an augmented reality method for use with an eyewear device having a position detection system, an image capture system, a speech recognition system, and a display system. However, Canberk fails to teach "determining, according to an instruction matching rule, whether the displacement control instruction matches the shaking direction of the shake, wherein when the displacement control instruction matches the shaking direction of the shake, the displacement control instruction is executed, and when the displacement control instruction does not match the shaking direction of the shake, the displacement control instruction is not executed", and is silent on the issue of avoiding motion sickness. Thus, Canberk fails to cure the deficiencies of Fujiwara and Grizzel.

Ignakov discloses a control system for use with a robotic device having at least a first manipulator with at least a first end effector. However, Ignakov fails to teach "determining, according to an instruction matching rule, whether the displacement control instruction matches the shaking direction of the shake, wherein when the displacement control instruction matches the shaking direction of the shake, the displacement control instruction is executed, and when the displacement control instruction does not match the shaking direction of the shake, the displacement control instruction is not executed", and is silent on the issue of avoiding motion sickness. Thus, Ignakov fails to cure the deficiencies of Fujiwara and Grizzel.

Based on the above, Applicant respectfully submits that claim 1 clearly defines over the references relied on by the Examiner.

In addition, claims 2-18 depend, either directly or indirectly, from independent claim 1, and are therefore allowable based on their respective dependence from independent claim 1, which are believed to be allowable.

In view of the above remarks, Applicant respectfully submits that claims 1-18 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

For any outstanding matters in the present application, the Examiner is respectfully requested to contact Irene (Qing) Lin, Registration No. 76,455, at 703-205-8085 to discuss the present application. If unable to reach the above-identified contact, please call the general mailbox number 703-205-8007.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: September 29, 2025

Respectfully submitted,

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