

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

To:

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Date of mailing (<i>day/month/year</i>) 27 December 2018 (27.12.2018)		FOR FURTHER ACTION See paragraph 2 below	
Applicant's or agent's file reference GEN010997AWO			
International application No. PCT/IB 2018/057517	International filing date (<i>day/month/year</i>) 27 September 2018 (27.09.2018)	Priority date (<i>day/month/year</i>) 27 September 2017 (27.09.2017)	
International Patent Classification (IPC) or both national classification and IPC B60R 1/12 (2006.01) G02B 15/00 (2006.01) H04N 7/18 (2006.01)			
Applicant GENTEX CORPORATION			

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

- 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 43*bis*.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 66.1*bis*(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.

Name and mailing address of the ISA/RU: Federal Institute of Industrial Property, Berezhkovskaya nab., 30-1, Moscow, G-59, GSP-3, Russia, 125993 Facsimile No: (8-495) 531-63-18, (8-499) 243-33-37	Date of completion of this opinion 12 December 2018 (12.12.2018)	Authorized officer N. Bedretdinov Telephone No. (495) 531-64-81
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/IB 2018/057517

Box No. I Basis of this 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(a))
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 filed or furnished:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

the entire international application.

claims Nos. 4-8, 12-18

because:

the said international application, or the said claims Nos. _____ relate to the following subject matter which does not require an international search (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____ are so unclear that no meaningful opinion could be formed (*specify*):

the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

no international search report has been established for said claims Nos. 4-8, 12-18

a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

furnish a sequence listing in the form of an Annex C/ST.25 text file, and such listing was not available to the International Searching Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.

furnish a sequence listing on paper or in the form of an image file complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.

pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13ter.1(a) or (b).

See Supplemental Box for further details.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB 2018/057517

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	1-3, 9-11, 19-20	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-3, 9-11, 19-20	NO
Industrial applicability (IA)	Claims	1-3, 9-11, 19-20	YES
	Claims		NO

2. Citations and explanations:

D1: US 2014/0114534 A1

D2: CN 105549315 A

D3: US 2017/0240112 A1

D4: EP 2251227 A2

D1 ([0036]-[0045], [0087], fig. 1-2, 15-17) discloses a display apparatus for a vehicle for displaying images captured by image sensor to a driver of the vehicle, the display apparatus comprising: a display screen configured to emit the images in an emission direction; a mirror apparatus configured to reflect the images from the display screen towards a viewing direction.

The inventions of claims 1, 9, 19 differ from the ones known from D1 in that a lens apparatus configured to receive the images from the mirror, and that the lens apparatus is configured to project the images to a focal distance substantially opposite the viewing direction,

The invention of claim 1 additionally differs from the one known from D1 in that the focal distance is positioned at least about 750 mm from eyes of the driver.

The invention of claim 19 additionally differs from the one known from D1 in that the focal distance is positioned at least about 115 mm from the lens apparatus.

The invention of claim 9 additionally differs from the one known from D1 in that the display apparatus also comprises a first display screen configured to emit first images in a first emission direction; a second display screen configured to emit second images in a second emission direction; and a lens comprises a first lens apparatus and a second lens apparatus.

Therefore the inventions of claims 1, 9, 19 and dependent claims 2-3, 10-11, 20 meet the criterion of novelty.

D2 (abstract, [0005]-[0066], fig. 1-13) discloses a lens apparatus configured to receive the images from the mirror, wherein the lens apparatus is configured to project the images to a focal distance substantially opposite the viewing direction.

D3 ([0037]-[0057], fig. 1-5) discloses a projection display apparatus, wherein the focal distance is positioned at the distance from eyes of the driver (fig. 4, [0058]) it is obvious to a person skilled in the art that the desired distance (from 750 mm or 115 mm) for projecting an image from the driver's eyes can be selected based on the desired image magnification to make it easier for the driver to show.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of V:

D4 ([0018]-[0044], [0064]-[0074], fig.1,4-5) discloses a projection display apparatus comprising a first display screen configured to emit first images in a first emission direction; a second display screen configured to emit second images in a second emission direction; and a lens comprises a first lens apparatus and a second lens apparatus.

The invention of claim 1, 9, 19 do not meet the criterion of inventive step.

The features of claims 2, 10, 11, concerning the focal distance represent the selection of optimal working parameters and can be determined by experiment that is obvious to a person skilled in the art.

The features of claim 3, concerning that the display apparatus corresponds to a rearview video display apparatus, are known from D1 ([0036]-[0045])

The features of claim 20, concerning that the optical path length from the display screen to the lens apparatus is substantially the same from each pixel of the display screen, are known from D1 ([0036]-[0045]).

Therefore the inventions of claims 2, 3, 10, 11, 20 do not meet the criterion of inventive step.

The inventions of claims 1-3, 9-11, 19-20 meet the criterion of industrial applicability.