

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 355153-02	FOR FURTHER ACTION		See item 4 below
International application No. PCT/US2015/045779	International filing date (<i>day/month/year</i>) 19 August 2015 (19.08.2015)	Priority date (<i>day/month/year</i>) 21 August 2014 (21.08.2014)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant MICROSOFT TECHNOLOGY LICENSING, LLC			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 18 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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<p align="center">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 21 February 2017 (21.02.2017)</p>
	<p>Authorized officer</p> <p align="center">Athina Nickitas-Etienne</p> <p>e-mail: pct.team4@wipo.int</p>

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)**

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2015/045779

International filing date (day/month/year)
19.08.2015

Priority date (day/month/year)
21.08.2014

International Patent Classification (IPC) or both national classification and IPC
INV. G02B27/01 G02F1/15

Applicant
MICROSOFT TECHNOLOGY LICENSING, LLC

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 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 usually 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.

Name and mailing address of the ISA:



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D-80298 Munich
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Date of completion of this opinion

see form PCT/ISA/210

Authorized Officer

Kentischer, Florian

Telephone No. +49 89 2399-0



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 43bis.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:
 - 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 13ter.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 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.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 forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. IV Lack of unity of invention

1. In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has, within the applicable time limit:
- paid additional fees
 - paid additional fees under protest and, where applicable, the protest fee
 - paid additional fees under protest but the applicable protest fee was not paid
 - not paid additional fees
2. This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- complied with
 - not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- all parts.
 - the parts relating to claims Nos.

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

1. Statement

Novelty (N)	Yes: Claims	<u>6, 9, 14</u>
	No: Claims	<u>1-5, 7, 8, 10-13, 15</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-15</u>
Industrial applicability (IA)	Yes: Claims	<u>1-15</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item IV

- 1 This Authority considers that the application does not meet the requirements of unity of invention and that there are **3 inventions** covered by the claims indicated as follows:

First invention: claims 1-10, 14, 15

Head-mounted display apparatus including an electrochromic dimming module, and method of displaying an augmented reality with said head-mounted display apparatus involving dimming ambient light passing through the display apparatus depending on the ambient light level detected by a sensor.

Second invention: claim 11

Method of displaying an augmented reality with a head-mounted display apparatus involving dimming ambient light passing through the display apparatus depending on a received user preference.

Third invention: claims 12, 13

Method of displaying an augmented reality with a head-mounted display apparatus involving dimming ambient light passing through the display apparatus depending on a type of application.

- 2 The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by **Rule 13.1 PCT**, are as follows:

- 2.1 The **first invention** is represented by independent method **claim 10**, which is considered to represent a method of displaying an augmented reality using a head-mounted display apparatus according to **claim 1**.

The **second invention** is represented by dependent method **claim 11**. It is emphasised that **claim 11**, although drafted as a claim dependent on **claim 10**, is considered as an independent claim, since the features of **claim 10** related to the ambient light and near-eye brightness (first seven lines of the claim) are replaced by the additionally features of **claim 11** ("rather than in

response to the ambient light value and near-eye display brightness value"). This is also in compliance with the description of the corresponding method 850 of **Figure 8B** in **paragraph [0089]** reading that steps 801-805 of **Figure 8A**, which shows a method corresponding to **claim 10**, are replaced by steps 851-853 of **Figure 8B**. In other words, **claim 11** is considered as defining a method of displaying an augmented reality using a head-mounted display apparatus according to **claim 1**, the method comprising the steps of receiving a value that indicates a user preference as to the amount of ambient light that passes through the dimming module, determining a dimming value based on the value that indicates the user preference, and limiting the amount of ambient light that passes through the dimming module in response to the dimming value.

The **third invention** is represented by dependent method **claim 12**. It is emphasised that **claim 12**, although drafted as a claim dependent on **claim 10**, is considered as an independent claim, since the features of **claim 10** related to the ambient light and near-eye brightness (first seven lines of the claim) are replaced by the additionally features of **claim 12** ("rather than in response to the ambient light value and near-eye display brightness value"). This is also in compliance with the description of the corresponding method 860 of **Figure 8C** in **paragraph [0092]** reading that steps 801-805 of **Figure 8A**, which shows a method corresponding to **claim 10**, are replaced by steps 861-862 of **Figure 8C**. In other words, **claim 12** is considered as defining a method of displaying an augmented reality using a head-mounted display apparatus according to **claim 1**, the method comprising the steps of determining a type of the application, determining a dimming value based on the type of the application, and limiting the amount of ambient light that passes through the dimming module in response to the dimming value.

2.2 The **first invention**, the **second invention** and the **third invention**, respectively represented by **claims 10, 11** and **12** share the common features of a method of displaying an augmented reality using a head-mounted display apparatus according to **claim 1**, the method comprising the steps of determining a dimming value, and limiting the amount of ambient light that passes through the dimming module in response to the dimming value.

Such a method is however known from **US 2014/111838 A1** [= document **D1**] (**figure 10**). Said common features can therefore not form the single general inventive concept, as required by **Rule 13.1 PCT**, linking said **first to third inventions**.

2.3 The additional features of the **first invention**, represented by **claim 10**, are the steps of sensing an ambient light value associated with an amount of ambient light received by a transmissive near-eye display, executing an application to provide image light to the transmissive near-eye display, retrieving a near-eye display brightness value associated with the application and determining said dimming value for the dimming module in response to the ambient light value and the near-eye display brightness value.

The **first invention** thus allows to optimise the visibility of the displayed augmented reality dependent on the ambient light conditions.

The additional features of the **second invention**, represented by **claim 11**, are the steps of receiving a value that indicates a user preference as to the amount of ambient light that passes through the dimming module, and determining said dimming value based on the value that indicates the user preference.

The **second invention** thus allows to optimise the visibility of the displayed augmented reality dependent on supplied user preferences.

The additional features of the **third invention**, represented by **claim 12**, are the steps of determining a type of the application, and determining said dimming value based on the type of the application.

The **third invention** thus allows to optimise the visibility of the displayed augmented reality dependent on the type of the application.

2.4 As shown above, the additional features of **claims 10, 11, 12** are neither the same nor corresponding, i.e. do not provide the same technical effect.

Therefore, there is also no technical relationship among said three inventions involving one or more of the same or corresponding special technical features. In accordance with **Rule 13(2) PCT**, the requirement of unity of invention referred to in **Rule 13.1 PCT** is thus not fulfilled.

Re Item V

3 Reference is made to the following documents:

D1 US 2014/111838 A1 (HAN SOON-SEOB [KR] ET AL) 24
April 2014 (2014-04-24)

D2 US 2012/105473 A1 (BAR-ZEEV AVI [US] ET AL) 3 May
2012 (2012-05-03)

D3 JP S56 146123 A (ASAHI GLASS CO LTD) 13 November
1981 (1981-11-13)

D4 JP 2014 021452 A (RICOH CO LTD) 3 February 2014
(2014-02-03)

D5 DE 20 2010 013016 U1 (LOEWE OPTA GMBH [DE]) 17
February 2011 (2011-02-17)

First Invention

4 The subject-matter of **claims 1-10 and 14, 15** of the **first invention** appears to be not new in the sense of **Article 33(2) PCT** and/or appears not to involve an inventive step in the sense of **Article 33(3) PCT**. The reasons for this preliminary and non-binding opinion are as follows.

4.1 Independent claim 1

4.1.1 Document **D1** discloses an apparatus (**figures 1-6: "head mounted display, HDM, device 100"**) comprising:
a support structure ("**HMD housing**");
a near-eye display ("**projectors 270, 275; figure 4**"),
disposed on the support structure (**paragraph [0033]: HMD circuit, shown in figure 3, is mounted in the HMD housing 110, and projectors 270, 275 form part of said HMD circuit, see figure 3, i.e. are also mounted in the HMD housing 110**), to provide image light (**310**); and,
a dimming module (**figure 5: first substrate 281; figure 6 and paragraphs [0090]-[0100]**) comprising:
a first transparent conductor (**620**) (**paragraph [0096]**),
a monochrome electrochromic compound (**640**) (**paragraph**

[0100]),
an insulator (650) (paragraph [0099]: **solid high polymer electrolyte**), and
a second transparent conductor (625) (paragraph [0097]),
wherein the dimming module (281) controls light passing
through the dimming module in response to a current
applied between the first and second transparent
conductors (paragraph [0090]).

The subject-matter of independent **claim 1** therefore
appears to be not new in the sense of **Article 33(2) PCT**.

4.1.2 For the sake of completeness, it is added that the
subject-matter of **claim 1** furthermore appears to be
rendered obvious by the obvious combination of **D2** with
D3, and that for the following reasons.

Document **D2** discloses an apparatus (**figures 2-3**)
comprising:

a support structure (**temple 102, nose bridge 104**);
a near-eye display (**micro display 120, light guide 115,
lens 122, reflecting surfaces 124, 126**), disposed on the
support structure (**102, 104**), to provide image light;
and,
a dimming module (**opacity filter 114**), which might be an
electrochromic filter (paragraph [0039]), wherein the
dimming module (114) controls light passing through the
dimming module (paragraph [0039]: "**selectively blocks
light, either uniformly or on a per-pixel basis, from
passing through the light guide 115**"; paragraph [0033]:
"**to enhance the contrast of the virtual imagery**").

The subject-matter of **claim 1** therefore differs from the
apparatus of **D2** in that, according to **claim 1**:

the dimming module comprises a first transparent
conductor, a monochrome electrochromic compound, an
insulator, and a second transparent conductor, and is
adapted to response to a current applied between the
first and second transparent conductors.

The problem to be solved by the present invention may therefore be regarded as how to implement the electrochromic dimming module (**114**) of **D2**.

The very simple and basic layout of the electrochromic dimming module defined in **claim 1** is very well known in the art. For instance, document **D3** discloses such an electrochromic dimming module (see **abstract**), said electrochromic dimming module comprising a first transparent conductor, a monochrome electrochromic compound, an insulator, and a second transparent conductor, and is adapted to response to a current applied between the first and second transparent conductors (**abstract**).

The subject-matter of **claim 1** therefore also appears to be rendered obvious (within the sense of **Article 33(3) PCT**) by the obvious combination of **D2** and **D3**.

4.1.3 For the sake of completeness, it is added that the subject-matter of **claim 1** furthermore appears to be rendered obvious by the obvious combination of **D5** with **D3**, and that for the following reasons.

Document **D5** discloses an apparatus (**figures 1, 2**) comprising:

a support structure (**paragraph [0038]: "Brillengestell"**);
a near-eye display (**1**), disposed on the support structure (**paragraph [0038]**), to provide image light (**paragraph [0022]**); and,
a dimming module (**3**), which might be an electrochromic filter (**paragraph [0025]**), wherein the dimming module (**3**) controls light passing through the dimming module (**paragraph [0031]**).

The subject-matter of **claim 1** therefore differs from the apparatus of **D5** in that, according to **claim 1**:

the dimming module comprises a first transparent conductor, a monochrome electrochromic compound, an insulator, and a second transparent conductor, and is adapted to response to a current applied between the first and second transparent conductors.

The problem to be solved by the present invention may therefore be regarded as how to implement the electrochromic dimming module (3) of D5.

The very simple and basic layout of the electrochromic dimming module defined in **claim 1** is very well known in the art. For instance, document **D3** discloses such an electrochromic dimming module (see **abstract**), said electrochromic dimming module comprising a first transparent conductor, a monochrome electrochromic compound, an insulator, and a second transparent conductor, and is adapted to response to a current applied between the first and second transparent conductors (**abstract**).

The subject-matter of **claim 1** therefore also appears to be rendered obvious (within the sense of **Article 33(3) PCT**) by the obvious combination of **D5** and **D3**.

4.2 Independent claim 10

- 4.2.1 **D1** further discloses a method (**claim 1; paragraphs [0108]–[0124] and figures 8a, b, 9a, b, 10**) comprising: sensing (**figure 3: sensor unit 225 includes an illumination sensor for detecting ambient illumination, see paragraph [0051]; figure 10: S1010; paragraph [0119]**) an ambient light value associated with an amount of ambient light received by a transmissive near-eye display (**projectors 270, 275 and Holographic Optical Element, HOE, 282**) (**paragraph [0115]**); executing an application (**Figures 8, 9: application providing the GUI 820, 825**) to provide image light (**figure 5: 522**) to the transmissive near-eye display (**282**); retrieving a near-eye display brightness value associated with the application (**figure 3: controller 290, projectors 270, 275; paragraph [0109]; figure 10: S1040; paragraph [0122]: "configures a first GUI by using data stored in the memory 220"**); determining a dimming value for a dimming module (**281**) in response to the ambient light value and the near-eye display brightness value (**paragraphs [0115]–[0116]**);

figure 10: S1010, S1020; paragraphs [0119]–[0120]);
and limiting the amount of ambient light that passes
through the dimming module in response to the dimming
value (**figures 8, 9; paragraphs [0111], [0113]; figure
10: S1030; paragraph [0121]**).

It is noted that in step S1020 of **D1**, the controller
(**290**) calculates a target transmissivity using a data
table (**paragraph [0120]**) that includes ambient
illumination values and corresponding transmissivities
stored in the memory. Said look-up data table must have
taken into account the near-eye display brightness of the
projectors (**270, 275**), since otherwise it would have not
been possible to reduce the output of the projectors
(**270, 275**) by adjusting the transmissivity of the dimming
module (**281**), as explicitly stated in **paragraph [0109]** of
D1.

The subject-matter of independent **claim 10** therefore
appears to be not new in the sense of **Article 33(2) PCT**.

- 4.2.2 Also document **D5** discloses a method (**figure 1; paragraphs
[0031]–[0034]**) comprising:
sensing an ambient light value associated with an amount
of ambient light received by a transmissive near-eye
display (**1**) (**paragraph [0031]**);
executing an application to provide image light to the
transmissive near-eye display (**1**) (**paragraph [0022]**);
retrieving a near-eye display brightness value associated
with the application (**paragraph [0022]: "Bildinforma-
tionen"**);
determining a dimming value for a dimming module (**3**)
(**paragraph [0025]**) in response to the ambient light value
and the near-eye display brightness value (**paragraph
[0031]**); and
limiting the amount of ambient light that passes through
the dimming module (**3**) in response to the dimming value
(**paragraph [0031]**).

The subject-matter of independent **claim 10** therefore
appears to be not new in the sense of **Article 33(2) PCT**.

4.3 Dependent claims 2-9, 14 and 15

Dependent **claims 2-9, 14 and 15** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

4.3.1 The dimming apparatus (**281**) (**figure 6**) of the apparatus of **D1** further includes a first transparent substrate (**610**), a second transparent substrate (**615**), and the insulator (**650**) and monochrome electrochromic compound (**640**) are disposed at least partially between the first transparent conductor (**620**) and the second transparent conductor (**625**). The subject-matter of dependent **claim 2** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.

4.3.2 According to the apparatus of **D1**, the first transparent conductor (**620**) is disposed at least partially adjacent the monochrome electrochromic compound (**640**), and the insulator (**650**) is disposed at least partially adjacent the monochrome electrochromic compound (**640**). The subject-matter of dependent **claim 3** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.

4.3.3 According to the apparatus of **D1**, the first transparent conductor (**620**) is disposed at least partially between the first transparent substrate (**610**) and the electrochromic compound (**640**), and the second transparent conductor (**625**) is disposed at least partially between the insulator (**650**) and the second transparent substrate (**615**). The subject-matter of dependent **claim 4** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.

4.3.4 According to the apparatus of **D1**, the dimming module (**281**) is disposed adjacent the near-eye display (**282**), and the near-eye display (**282**) provides image light (**522**) in response to a signal from a display engine (**290**). The subject-matter of dependent **claim 5** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.

- 4.3.5 According to the apparatus of **D1**, the first and second transparent substrates (**610, 615**) includes a material selected from the group consisting of Poly methyl methacrylate, polycarbonate and glass (**paragraph [0095]**). The subject-matter of dependent **claim 7** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.
- 4.3.6 According to the apparatus of **D1**, the first and second transparent conductors (**620, 625**) includes a material selected from a group consisting of Indium Tin Oxide, metal mesh, silver nanowires, carbon nanotubes, graphene and Poly(3,4-ethylenedioxythiophene) polystyrene sulfonate (**paragraphs [0096], [0097]**). The subject-matter of dependent **claim 8** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.
- 4.3.7 Stacking plural electrochromic cells to increase the extinction of the dark state is considered as being a straight forward measure which a skilled reader would take into account, given his common knowledge. The subject-matter of dependent **claim 6** does therefore not appear to involve an inventive step in the sense of **Article 33(3) PCT**.
- 4.3.8 Although the insulating layer (**650**) of **D1** referred to above is the solid electrolyte layer of the electrochromic dimming module (**281**) of **D1**, it would be obvious to provide further an electrode degradation prevention layer on each electrode of **D1**, such electrode degradation prevention layer typically being formed of SiO₂, as taught e.g. by **paragraph [0052]** of document **D4**. It is noted that the role of the insulating layer is not specified in the present application, while an additional electrolyte layer (which is electrically also insulating, i.e. not conducting electrons) is also foreseen according to **paragraph [0051]**, last sentence, of the present application. The subject-matter of dependent **claim 9** does therefore also not appear to involve an inventive step in the sense of **Article 33(3) PCT**.

- 4.3.9 Although not explicitly stated in **D1**, it is considered to be obvious to take into account the available brightness range of the projectors (**270, 275**) as well as the available neutral density range of the dimming module (**281**) when establishing said look-up data table of **D1** determining the dimming values dependent on the ambient light value. The subject-matter of dependent **claim 14** does therefore also not appear to involve an inventive step in the sense of **Article 33(3) PCT**.
- 4.3.10 The method described in **D1** further includes the following features: the employed dimming module (**figure 6: 281**) includes a monochrome electrochromic cell (**640**) (**paragraph [0100]**), and the limiting the amount of ambient light that passes through the dimming module (**281**) in response to the dimming value comprises (S1030) applying an amount of current to the monochrome electrochromic cell in response to the dimming value (**paragraph [0121]**). The subject-matter of dependent **claim 15** does therefore also not appear to be new in the sense of **Article 33(2) PCT**.

Second Invention

- 5 The subject-matter of **claim 11** representing the **second invention** appears to be not new in the sense of **Article 33(2) PCT**. The reasons for this preliminary and non-binding opinion are as follows.

Document **D5** discloses a method (**figure 1; paragraphs [0031]–[0034]**) comprising:

executing an application to provide image light to a transmissive near-eye display (**1**) (**paragraphs [0022], [0044]**); retrieving a near-eye display brightness value associated with the application (**paragraph [0022]: "Bildinformationen"; paragraph [0044]: "numerische Informationen"**);

receiving a value that indicates a user preference as to the amount of ambient light that passes through a dimming module (**3**) (**paragraph [0031]: "Drehregler zum manuellen**

Steuern des Filters 3"; paragraph [0044]: "Brille mit einer Vorrichtung zum stufenlosen Transparent- und Intransparentschalten der Anzeige versehen sein. Diese Vorrichtung kann beispielsweise durch ein Regelrad gebildet sein, das mit der Brille über ein elektrisches Kabel verbunden ist. Dadurch kann der Benutzer die Transparenz der Anzeige nach seinen Bedürfnissen derart einstellen, dass sowohl ein durch die Anzeige angezeigtes Bild sichtbar ist als auch die Umgebung der Brille."), determining a dimming value for the dimming module (3) based on the value that indicates the user preference (paragraphs [0031], [0044]); and limiting the amount of ambient light that passes through the dimming module (3) in response to the dimming value.

The subject-matter of **claim 11** therefore appears to be not new in the sense of **Article 33(2) PCT**.

Third Invention

6 The subject-matter of **claims 12 and 13** of the **third invention** appears to be not new in the sense of **Article 33(2) PCT**. The reasons for this preliminary and non-binding opinion are as follows.

6.1 Claim 12

Document **D5** discloses a method (**figure 1; paragraphs [0038]–[0042]**) comprising:

executing an application (**paragraph [0041]:**

"Fernsehprogramm") to provide image light to a

transmissive near-eye display (1) (**paragraph [0022]**);

retrieving a near-eye display brightness value associated with the application (**paragraphs [0022], [0041]:**

"Bildinformationen", "Fernsehprogramm");

determining the type of the application (**paragraph [0041]:**

TV) and determining a dimming value based on the type of

the application (**paragraphs [0041]–[0042]: during TV application, the dimming module is set in its**

intransparent state); and limiting the amount of ambient light that passes through the dimming module (3) in response to the dimming value (**paragraphs [0041]–[0042]**).

The subject-matter of **claim 12** therefore appears to be not new in the sense of **Article 33(2) PCT**.

6.2 Claim 13

According to **paragraphs [0039]–[0042]** of **D5**, the type of the application includes a movie type (**paragraph [0041]: "Fernsehprogramm"**), and the step of determining the dimming value includes setting the dimming value so that the ambient light that passes through the dimming module (3) is reduced to a minimum (**paragraph [0041]: "Will hingegen der Benutzer sein Fernsehprogramm fortsetzen, so schaltet er den Hintergrund der Brille wieder in den intransparenten Zustand und nimmt die außerhalb der Brille liegende Umgebung nicht mehr wahr."**).

The subject-matter of **claim 13** therefore appears to be also not new in the sense of **Article 33(2) PCT**.