

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	25.08.2016
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Applicant's or agent's file reference PIOE1162527P	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/CN2016/087490	International filing date (day/month/year) 28.06.2016	Priority date (day/month/year) 08.12.2015
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International Patent Classification (IPC) or both national classification and IPC
H04N5/232 (2006.01) i

Applicant
XIAOMI INC.

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 or 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.

Name and mailing address of the ISA/CN	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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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 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 filed or furnished:
 - a. (means)
 - on paper
 - in electronic form
 - b. (time)
 - in the international application as filed
 - together with the international application in electronic form
 - subsequently to this Authority for the purposes of search
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:

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Box No. II

Priority

1. The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*.1 and 64.1) is the claimed priority date.
2. This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
[1] Upon verification, the right of priority is valid.

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International application No. PCT/CN2016/087490
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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
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1. Statement									
Novelty (N)		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-13</td> <td style="width: 10%; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">None</td> <td style="padding: 2px;">NO</td> </tr> </table>	Claims	1-13	YES	Claims	None	NO	
Claims	1-13	YES							
Claims	None	NO							
Inventive step (IS)		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">None</td> <td style="width: 10%; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-13</td> <td style="padding: 2px;">NO</td> </tr> </table>	Claims	None	YES	Claims	1-13	NO	
Claims	None	YES							
Claims	1-13	NO							
Industrial applicability (IA)		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-13</td> <td style="width: 10%; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">None</td> <td style="padding: 2px;">NO</td> </tr> </table>	Claims	1-13	YES	Claims	None	NO	
Claims	1-13	YES							
Claims	None	NO							

2. Citations and explanations:	
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[1]	2.1 In this written opinion, the following reference documents are cited:
[2]	D1: CN 102970477 A, 13 March 2013 (13.03.2013)
[3]	D2: US 2004012682 A1, 22 January 2004 (22.01.2004)
[4]	2.2 Novelty and Inventive step
[5]	<p>Claims 1, 7 and 13 respectively set forth a method and apparatus for preventing blocking camera view during photographing. D1, as the closest prior art, discloses an image photographing apparatus and a control method thereof, and specifically discloses (see the description, paragraphs [0098] - [0102] and [0136]): an image processing unit acquires an image which is input by a lens unit; a colour information calculation unit calculates colour information about various window regions which are displayed by a display unit; and a colour information analysis unit determines</p>

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

whether or not regions, from among the window regions, have predetermined colour information, and if regions, from among the window regions and the number of which is a predetermined value (or a larger value), have the predetermined colour information, determining that blocking has occurred (equivalent to an image feature including an image colour and an image area with the same image colour, and when the image feature satisfies a pre-set image feature condition, determining that a blocking object is in a picture captured by a camera). The apparatus comprises a processor and a memory for storing program data which is to be executed by the processor.

- [6] Comparing claims 1, 7 and 13 with D1, the distinguishing features lie in: detecting continuous areas with the same image colour in an edge region of a picture and sending prompt information. Therefore, claims 1-13 are novel under PCT Article 33(2). In order to solve the same problem of sending a prompt when camera view blocking occurs during photographing, D2 discloses (see the description, paragraphs [0072] - [0094], and figures 6A and 9): an image capturing apparatus acquires an image and calculates a brightness value thereof; with reference to an image which has been stored, it is determined whether or not a moving low-brightness area and a non-moving low-brightness area exist, and if yes, it is determined that a finger image is included in a photographing picture and prompt information

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is sent out by sound or characters; and it can be seen from figure 6A that camera view blocking by fingers happens at continuous regions at the edge of of an image. Hence, detecting whether or not continuous finger regions exist at an edge region of an image is a customary means in the art. Therefore, claims 1, 7 and 13 do not involve an inventive step under PCT Article 33(3).

[7] With the inspiration that D1 discloses that when a predetermined number of regions have predetermined colour information, it is determined that camera view blocking has occurred (see the description, paragraph [0100]), the additional features of claims 2 and 8 are customary means to determine whether or not a lens is blocked. The additional features of claims 3, 6, 9 and 12 are customary means to determine whether or not a finger image is included in an image.

[8] D2 discloses that the position of a finger in an image does not change with the shake of a camera; and the low-brightness area may be determined as a finger area (see the description, paragraphs [0076] and [0080]). With the inspiration of above-mentioned information, the additional features of claims 4, 5, 10 and 11, i.e. determining whether a lens is blocked according to motion consistency between a blocking object such as a finger and a terminal and depending on the fact that the brightness of a blocking object image region is lower than that of other image regions, are

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	<p>customary means in the art. Therefore, claims 2-6 and 8-12 do not involve an inventive step under PCT Article 33(3).</p> <p>[9] 2.3 Industrial applicability</p> <p>[10] Claims 1-13 can be made or used, and are therefore industrially applicable under PCT Article 33(4).</p>