

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)	27.09.2016
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Applicant's or agent's file reference PCTI17116	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/CN2016/086481	International filing date (day/month/year) 20.06.2016	Priority date (day/month/year) 30.06.2015
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International Patent Classification (IPC) or both national classification and IPC
G06K9/00 (2006.01) i

Applicant
YUTOU TECHNOLOGY (HANGZHOU) CO., LTD.

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. 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)	Claims	1-7	YES
	Claims	None	NO
Inventive step (IS)	Claims	1-7	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims	None	NO

2. Citations and explanations:	
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[1] The opinion refers to the following documents:

[2] D1: CN 102811286 A (05 December 2012)

[3] D2: CN 102637255 A (15 August 2012)

[5] D1 is considered to be the closest prior art.

[6] D1 discloses a method for creating an address list group; an address list is stored in a mobile terminal, and contact field information in an address list database comprises a contact head shot in an image format; on the basis of face recognition technology, the method for creating an address list group comprises the following steps: step 1, selecting a group photo from images stored in the mobile terminal, separating individual head shots from the group photo, and extracting features to generate face feature templates; step 2, taking the separated individual head shots as the identities of group members, and creating a

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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

group in the address list; step 3, with reference to the face feature templates generated in step 1, respectively searching, comparing and matching with the contact head shots in the address list, and adding the successfully matched contacts into the group; and step 4, completing the creation of the group.

[7] D2 discloses a method for processing faces contained in images, comprising: for each one of at least one photo album of a social media network, detecting the faces contained in the images of the photo album; collecting the detected faces to generate at least one face data set; and selecting a face data set from the at least one face data sets to associate with an owner of the photo album. On the basis of the data set associated with the owner of the at least one photo album, a face classifier for facial recognition is established through machine learning.

[8] I. Novelty (PCT Article 33(2))

[9] Claim 1 sets forth a method for recognizing a facial image. D1 does not explicitly or implicitly disclose all the technical features of claim 1. Hence, claim 1 is novel, and accordingly dependent claims 2-7 thereof are also novel.

[10] II. Inventive Step (PCT Article 33(3))

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[11] Claim 1 differs from D1 by: utilizing a user photo album and an address list in a mobile terminal, and/or a friend list and a friends photo album corresponding to a social media network user account; matching facial images in the photo album with individual head shots; forming initial training samples, recognizing and confirming the initial training samples to form a facial image training sample set. On the basis of the above-described differences, the problem to be solved by the present application is how to quickly and effectively increase the number of facial recognition samples for use in facial recognition. D2 also neither discloses the above-described technical feature, nor teaches the utilization of head shots in an address list or in a friend list corresponding to a social media network user account to match with facial images in a user photo album or a friends photo album, forming initial training samples, recognizing and confirming the initial training samples to form a training sample set. Furthermore, the above-described technical features are also not common knowledge in the art. Therefore, on the basis of D1-D2 and common general knowledge, a person skilled in the art could not arrive at the technical solution of claim 1 without inventive effort, i.e. arriving at the technical solution of claim 1 according to D1-D2 and common general knowledge in the art is not obvious. Hence, claim 1 involves an inventive step, and accordingly dependent claims 2-7 thereof also involve an

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inventive step.

[12] III. Industrial Applicability (PCT Article
33(4))

[13] Claims 1-7 are industrially applicable because the
technical solutions set forth thereby can be made
or used in industry.