

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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| To:<br>GOULD, Weston R.<br><br>Dinsmore & Shohl LLP 900 Wilshire Drive Suite 300 Troy,<br>Michigan 48084 USA |
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|---|
| Date of mailing<br>(day/month/year) <b>28 April 2020 (28.04.2020)</b> |
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| Applicant's or agent's file reference<br>16ECC12452WO2 | <b>FOR FURTHER ACTION</b><br>See paragraph 2 below |
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|---|--|--|
| International application No.<br><b>PCT/US2019/063215</b> | International filing date (day/month/year)<br><b>26 November 2019 (26.11.2019)</b> | Priority date(day/month/year)<br>26 November 2018 (26.11.2018) |
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| International Patent Classification (IPC) or both national classification and IPC<br><b>B44C 1/175(2006.01)i, B44C 1/24(2006.01)i, C09B 67/38(2006.01)i, C09D 11/037(2014.01)i</b> |
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| Applicant<br><b>ESPRIX TECHNOLOGIES, LP.</b> |
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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 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.

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| Name and mailing address of the ISA/KR<br>International Application Division<br>Korean Intellectual Property Office<br>189 Cheongsa-ro, Seo-gu, Daejeon,<br>35208, Republic of Korea<br>Facsimile No. +82-42-481-8578 | Date of completion of this opinion<br><br>28 April 2020 (28.04.2020) | Authorized officer<br><br>KANG, Min Jeong<br><br>Telephone No. +82-42-481-8131 |
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/US2019/063215**

**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(b))
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 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 forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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International application No.  
**PCT/US2019/063215**

**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. 31-35

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. 33-35  
are so unclear that no meaningful opinion could be formed (*specify*):

Claims 33-35 lack clarity to the extent that no meaningful search can be made.

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. 31-35

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/US2019/063215**

**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)                   | Claims | <u>1-30</u> | YES |
|                               | Claims | <u>NONE</u> | NO  |
| Inventive step (IS)           | Claims | <u>NONE</u> | YES |
|                               | Claims | <u>1-30</u> | NO  |
| Industrial applicability (IA) | Claims | <u>1-30</u> | YES |
|                               | Claims | <u>NONE</u> | NO  |

2. Citations and explanations :

Reference is made to the following documents:

D1: KR 10-2006-0080830 A (KIM, KYUNG TAE) 11 July 2006

D2: CN 102127333 A (HONGSAM DIGITAL SCIENCE & TECHNOLOGY CO., LTD.) 20 July 2011

D3: KR 10-2016-0102310 A (ZHEJIANG RUNTU CO., LTD.) 29 August 2016

D4: CN 103232749 A (HANGZHOU ZHEDA HIWETECH CHEMICAL TECHNOLOGY CO., LTD.) 07 August 2013

I. Novelty and Inventive Step (PCT Article 33(2) and (3))

1. Claims 1, 11, 21

D1 discloses a decorative imaging process comprising: providing a stamp pad comprising ink for dyeing cloth; inking a stamp with the ink; and transferring the ink from the stamp to a cloth using the stamp (see paragraphs [0008], [0012]; and figure 1).

Claims 1, 11, 21 differ from D1 in that a decorative imaging process comprises the steps of: providing a stamp pad comprising a child and environmentally friendly disperse dye composition ('feature 1'); and transferring an image to a dye receptive object ('feature 2'). However, feature 1 is merely a design option in light of the feature of D2 (direct ink-jet printed dispersed dye ink (see claim 1)) and the feature of D3 (environmentally friendly disperse dye (see paragraph [0003])). And feature 2 falls under general knowledge in the relevant field of the art, so it can be easily derived by a person skilled in the art.

Accordingly, claims 1, 11, 21 would have been obvious over a combination of D1-D3 and lack an inventive step.

Continued on Supplemental Box

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
**PCT/US2019/063215**

**Box No. VII Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

Claims 31-32, which are multiple dependent claims, do not comply with PCT Rule 6.4(a), because the claims refer to other multiple dependent claims.

**WRITTEN OPINION OF THE  
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International application No.

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**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In claim 11, "the rubber stamp" has not been previously defined. Therefore, claim 11 does not clearly define the matter for which protection is sought (PCT Article 6).

**Supplemental Box**

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

Continuation of : Box No. V

2. Claims 2-4, 7-10, 12-14, 17-20, 22-24, 27-30

The additional features of claims 2, 12, 22 are merely design options in light of the feature of D2 (viscosity modifier 2-30% (see claim 1)).

The additional features of claims 3, 13, 23 can be easily derived from the feature of D2 (median size of dispersed dye is 50-200nm (see claim 2)).

The additional features of claims 4, 14, 24 can be easily derived from the feature of D2 (direct ink-jet printed dispersed dye ink comprises dispersed dye, dispersion agent, surface tension modifier, sterilant, viscosity modifier, PH value conditioning agent, and its surplus of deionized water (see claim 1)).

The additional features of claims 7, 17, 27 can be easily derived from the feature of D2 (dispersed dye is one or more mixtures of C.I. Disperse Blue-60, Disperse Blue-79, Disperse Blue 284, Disperse Blue 359, Disperse Yellow 54, Disperse Violet 26, Disperse Red 177, Disperse Red 167, Disperse Red 92, Disperse Red 179, Disperse Orange 73, Disperse Orange 30, Disperse Orange 76, Disperse Yellow 114 (see paragraph [0018])).

The additional features of claims 8-9, 18-19, 28-29 are merely design options in light of the feature of D3 (environmentally friendly disperse dye (see paragraph [0003])).

The additional features of claims 10, 20, 30 can be easily derived from the feature of D2 (direct ink-jet printed dispersed dye ink is characterized in that: it is composed of the following components by weight percentage: dispersed dye 1.0-14%; dispersion agent 0.5-20%; surface tension modifier 0.2-2.0%; sterilant 0.1-1.0%; viscosity modifier 2-30%; PH value conditioning agent 0.1-2%; and its surplus of deionized water (see claim 1)).

Accordingly, claims 2-4, 7-10, 12-14, 17-20, 22-24, 27-30 would have been obvious over a combination of D1-D3 and lack an inventive step.

3. Claims 5-6, 15-16, 25-26

The additional features of claims 5-6, 15-16, 25-26 can be easily derived from the feature

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**Supplemental Box**

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

Continuation of : Previous Page

of D4 (solubility promoter is the mixing of one or both arbitrary proportions in ethanol, virahol, propylene glycol, glycerine, ethylene glycol, diethylene glycol, glycol ether, triglycol, ethylene glycol monomethyl ether, butyl glycol ether, diethylene glycol dimethyl ether or the diethylene glycol ether (see claim 1)).

Accordingly, claims 5-6, 15-16, 25-26 would have been obvious over a combination of D1-D4 and lack an inventive step.

**II. Industrial Applicability (PCT Article 33(4))**

Claims 1-30 are industrially applicable.