

**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<br>88235WOP00                                                                              | <b>FOR FURTHER ACTION</b>                                                        |                                                                      | See item 4 below |
| International application No.<br>PCT/AU2016/000235                                                                               | International filing date ( <i>day/month/year</i> )<br>30 June 2016 (30.06.2016) | Priority date ( <i>day/month/year</i> )<br>30 June 2015 (30.06.2015) |                  |
| International Patent Classification (8th edition unless older edition indicated)<br>See relevant information in Form PCT/ISA/237 |                                                                                  |                                                                      |                  |
| Applicant<br>HEALTH LANGUAGE ANALYTICS PTY LTD                                                                                   |                                                                                  |                                                                      |                  |

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| <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 7 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 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 checked="" 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 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 checked="" 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 |
| <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 type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Box No. IV                          | Lack of unity of invention                                                                                                                                      |                     |                          |            |          |                          |             |                                                                                                  |                          |            |                            |                                     |           |                                                                                                                                                                 |                                     |            |                         |                          |             |                                                  |                          |              |                                                       |
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| <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Box No. VII                         | Certain defects in the international application                                                                                                                |                     |                          |            |          |                          |             |                                                                                                  |                          |            |                            |                                     |           |                                                                                                                                                                 |                                     |            |                         |                          |             |                                                  |                          |              |                                                       |
| <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Box No. VIII                        | Certain observations on the international application                                                                                                           |                     |                          |            |          |                          |             |                                                                                                  |                          |            |                            |                                     |           |                                                                                                                                                                 |                                     |            |                         |                          |             |                                                  |                          |              |                                                       |

|                                                                                               |                                                                 |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
|                                                                                               | Date of issuance of this report<br>02 January 2018 (02.01.2018) |
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Authorized officer<br><br>Athina Nickitas-Etienne               |
| Facsimile No. +41 22 338 82 70                                                                | e-mail: pct.team4@wipo.int                                      |

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL SEARCHING AUTHORITY

To:

SHELSTON IP PTY I,TD  
60 Margaret Street  
Sydney NSW 2000  
Australia

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing (*day/month/year*)  
02 August 2016

**FOR FURTHER ACTION**  
See paragraph 2 below

Applicant's or agent's file reference  
88235WOP00

International application No.  
**PCT/AU2016/000235**

International filing date (*day/month/year*)  
30 June 2016

Priority date (*day/month/year*)  
30 June 2015

International Patent Classification (IPC) or both national classification and IPC  
**G06F 19/24 (2011.01) G06Q 50/24 (2012.01) G06F 17/22 (2006.01)**

Applicant  
HEALTH LANGUAGE ANALYTICS PTY 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 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.

|                                                                                                                                                                           |                                                             |                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Name and mailing address of the ISA</b></p> <p>AUSTRALIAN PATENT OFFICE<br/>PO BOX 200, WODEN ACT 2606,<br/>AUSTRALIA<br/>Email address: pct@ipaustralia.gov.au</p> | <p>Date of completion of this opinion<br/>2 August 2016</p> | <p><b>Authorised Officer</b></p> <p>Adrian Gillmore<br/>AUSTRALIAN PATENT OFFICE<br/>(ISO 9001 Quality Certified Service)<br/>Telephone No. 0262832125</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/AU2016/000235

**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 (under 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. (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:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International Application No.

**PCT/AU2016/000235**

**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 <b>NONE</b> | <b>YES</b> |
|                               | Claims <b>1-19</b> | <b>NO</b>  |
| Inventive step (IS)           | Claims <b>NONE</b> | <b>YES</b> |
|                               | Claims <b>1-19</b> | <b>NO</b>  |
| Industrial applicability (IA) | Claims <b>1-19</b> | <b>YES</b> |
|                               | Claims <b>NONE</b> | <b>NO</b>  |

**2. CITATIONS AND EXPLANATIONS:**

**CITATIONS**

D1: US 2009/0299977 A1 (ROSALES) 03 December 2009  
D2: US 2015/0178874 A1 (3M INNOVATIVE PROPERTIES COMPANY) 25 June 2015  
D3: WO 2015/077898 A1 (PLEXINA INC) 04 June 2015  
D4: US 2005/0240439 A1 (COVIT et al.) 27 October 2005

**NOVELTY (N)**

D1 discloses a system which automatically assigns labels to unstructured data in medical records by searching the records for data patterns and applying medical codes. See figure 1 and paragraphs [0010]-[0024]. The system searches and applies codes to text based unstructured data fragments (such as passages and sentences). An expert user can then browse through the automatically applied labels to correct or edit them. See paragraphs [0058]-[0061]. The system can apply ICD codes to the record which is a system which includes hierarchical code structures with sub-trees and disease stages. Therefore claims 1-19 are not novel over D1.

Similar arguments apply to D2-D4 (see relevant sections as listed below).

D2: Figure 4, paragraphs [0022]-[0037]

D3: Page 6 line 24 - page 8 line 23, page 13 line 12-page 14 line 10

D4: Figures 6-12, paragraphs [0005]-[0007], paragraphs [0133]-[0155]

Therefore claims 1-19 are not novel and do not meet the requirements of Article 33(2) of the PCT with regard to novelty.

**INVENTIVE STEP (IS)**

Claims 1-19 are not novel over D1-D4 and therefore also lack an inventive step. Therefore claims 1-19 do not involve an inventive step and do not comply with the requirements of Article 33(3) of the PCT.

**INDUSTRIAL APPLICABILITY (IA)**

The invention defined in the claims is considered to meet the requirements of Industrial Applicability under Article 33(4) of the PCT because it can be made by, or used in, industry.

**P Category Document/s listed in Box VI:**

There is a document(s) listed as a P category document in Box VI because it:

- discloses subject matter that is of particular relevance to this application and
- is published before the international filing date but after the priority date of this application.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International Application No.

**PCT/AU2016/000235**

Under the PCT, only documents published before the priority date of the instant application can deprive the claims of that application of novelty or inventive step.

However, the relevance of a document published after the priority date of the application under consideration is dependent on national law in individual countries.

P category document/s may become significant in the National Phase.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International Application No.

**Box No. VI**      **Certain documents cited**

**PCT/AU2016/000235**

1. Certain published documents (Rules 43*bis*.1 and 70.10)

| Application No.<br>Patent No. | Publication date<br><i>(day/month/year)</i> | Filing date<br><i>(day/month/year)</i> | Priority date (valid claim)<br><i>(day/month/year)</i> |
|-------------------------------|---------------------------------------------|----------------------------------------|--------------------------------------------------------|
| P,X : US 2015/0379241 A1      | 31 December 2015                            | 01 June 2015                           | 27 June 2014                                           |

**See Supplemental Box for Details**

2. Non-written disclosures (Rules 43*bis*.1 and 70.9)

| Kind of non-written disclosure<br>_____ | Date of non-written disclosure<br><i>(day/month/year)</i><br>_____ | Date of written disclosure<br>referring to non-written disclosure<br><i>(day/month/year)</i><br>_____ |
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International Application No.

Supplemental Box

**PCT/AU2016/000235**

Continuation of: **Box VI**

US 2015/0379241 discloses a system for automatically applying medical codes to patient records including a parser, mapper and optionally a scorer by accessing the records and various medical databases. See figures 1-2 and paragraphs [0005]-[0007]. The codes can include ICD codes which is a system which includes hierarchical code structures with sub-trees and disease stages. A user can be presented with the applied codes for approval. See paragraph [0033].