Abstract: A method for constructing an association map between imaging features and biological data is described. The method comprises combining one or more image features relating to a clinical subject with biological data and using an algorithm to make predictions based on the features and data.
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
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Previous Correction:
see Notice of 17 July 2008
INTERNATIONAL SEARCH REPORT

PCT/US2007/022973

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC.

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched.

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, COMPENDEX, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.

X US 2004/086873 A1 (JOHNSON PETER C [US] ET AL) 6 May 2004 (2004-05-06) page 1, paragraph 4 - paragraph 10 page 3, paragraph 33 - paragraph 35 page 8, paragraph 115 - page 9, paragraph 122 table 3 claim 1

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X Further documents are listed in the continuation of Box C.

X See patent family annex.

Special categories of cited documents:

A' document defining the general state of the art which is not considered to be of particular relevance
E' earlier document but published on or after the international filing date
L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
O' document referring to an oral disclosure, use, exhibition or other means
P' document published prior to the international filing date but later than the priority date claimed

T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

&' document member of the same patent family

Date of the actual completion of the international search

3 June 2008

Date of mailing of the international search report

17/06/2008

Name and mailing address of the ISA/

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Authorized officer

Kürtjen, Ivayla
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Form PCT/ISA/210 (continuation of second sheet) (April 2005)
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This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. □ Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. x Claims Nos.: 23, 24 because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

   see FURTHER INFORMATION sheet PCT/ISA/210

3. □ Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

This International Searching Authority found multiple inventions in this international application, as follows:

1. □ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. □ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. □ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. □ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

□ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

□ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

□ No protest accompanied the payment of additional search fees.
Continuation of Box II.2

Claims Nos.: 23, 24

Present claim 1 relates to a method of constructing an "association map" between imaging features and biological data. However, the description does not provide a definition of an "association map" and there is no common general knowledge of this kind available to the person skilled in the art. Consequently, the subject-matter of claim 1 is unclear, Article 6 PCT. Also, claim 16 refers to a method of predicting a gene or protein expression based on an "association map". The term "association map" renders the subject-matter of claim 16 unclear, Article 6 PCT. Finally, claims 23 and 24 are also unclear (Article 6 PCT) as said claims seek protection of "association maps". This non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search of the claim (PCT Guidelines 9.19 and 9.20).

The search of claim 1 was consequently restricted to the identification and validation of relationships between imaging features and biological data (e.g. paragraph 44 of the specification). The search of claim 16 was restricted to the prediction of gene or protein expression level based on identified relationships between imaging features and gene or protein expression levels. Considering the extent of the unclarity in the subject-matter of claims 23 and 24, said claims were not searched.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.
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