Title: Compatibility Scoring of Users in a Social Network

Abstract: The compatibility score of individuals in a social network is computed based on the compatibility of interests expressed by these individuals. The compatibility score between any two interests is calculated as the log of estimated probability that a member of the social network will express both interests as his interests divided by the product of: (i) estimated probability that a member of the social network will express the first of the two interests as his interest and (ii) estimated probability that a member of the social network will express the second of the two interests as his interest. The compatibility score between two individuals is calculated as the sum of compatibility scores between each interest appearing in a set of interests expressed by the first individual and each interest appearing in a set of interests expressed by the second individual.

Published:
— with international search report

(88) Date of publication of the international search report:
16 April 2009
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC: G06F 17/30 (2006.01)

   USPC: 707/104.1
   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)
   U.S.: 707/3, 10, 104.1

   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 practicable, search terms used)
   Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 20040215793 A1 (RYAN et al) 28 October 2004 (28.10.2004), paragraphs 0311, 0313, 0322.</td>
<td>6-12 and 15</td>
</tr>
</tbody>
</table>

☐ Further documents are listed in the continuation of Box C.  ☐ 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 application or patent 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
04 January 2008 (04.01.2008)

Date of mailing of the international search report
17 JAN 2008

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Form PCT/ISA/210 (second sheet) (April 2005)
### Box No. II  Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

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.  
   - **Claims Nos.:**
   - 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:

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).

### Box No. III  Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

- **Group I**, claims 1-15, drawn to compatibility scores between members of a social network, classified in class 707, subclass 104 1.

- **Group II**, claims 16-20 drawn to quantifying compatibility between interests using multiple sets of interest data stored in the database, classified in class 707, subclass 6.

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 additional fees, this Authority did not invite payment of any 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.: 1-15**

**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 B. FIELDS SEARCHED Item 3:
East Search:
social, human, network$3, interest$1, compatibility$3, score$3, rank$3, weight$3, probability$3, degree$1, separation$1, add$3, sum$4, dating service$3, statistic$4, predict$3, calculate$3, dating near systems, member$1, user$1, adjust$3, hyperlink$1, link$1, hyper-link$1, sort$3