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(54) Title: AGGREGATING SEARCH RESULTS BASED ON ASSOCIATING DATA INSTANCES WITH KNOWLEDGE BASE ENTITIES

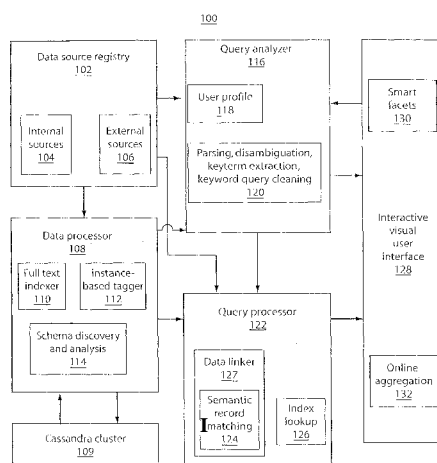


FIG. 1

(57) Abstract: Methods and systems for aggregating search query results include receiving (202) search query results and schema information for the query results from multiple heterogeneous sources (102), determining types (116) for elements of the query results based on the schema information, determining potential aggregations (204) for the query results based on the types, which are based on accumulated information from the plurality of heterogeneous resources (102), and aggregating (220) the query results according to one or more of the potential aggregations.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 12/29607

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(8) - G06F 7/00 (201 2.01 )

USPC - 707/726

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)

USPC: 707/726

IPC(8): G06F 7/00 (201 2.01 )

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC: 707/722; 707/758

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

PUBWEST (PGPB, USPT, EPAB, JPAB), Google Scholar, Google Patents;

Search Terms: aggregation, heterogeneous, schema, information, aggregate, consolidate, "search result" OR "query result", "search response" OR "query response", element, type, range, values, threshold

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2009/0234799 A1 (Betawadkar-Norwood et al.) 17 September 2009 (17.09.2009) entire document especially Abstract, para [0012], para [0032]-[0037]	1-25
Y	US 2007/0061335 A1 (RAMER et al.) 15 March 2007 (15.03.2007) especially Abstract, para [0044], para [0058], para [0163]-[0165], para [0613], para [0620]-[0629], para [0870], para [0875]-[0876].	1-25
A	US 2006/0253428 A1 (Katariya et al.) 09 November 2006 (09.11.2006) entire document	1-25
A	US 2008/0071742 A1 (YANG et al.) 20 March 2008 (20.03.2008) entire document	1-25



Further documents are listed in the continuation of Box C.

**\* 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 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

"&amp;" document member of the same patent family

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