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Hwang et al.

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(54) **CATEGORIZATION OF SEARCH RESULTS**

2004/0267717 A1* 12/2004 Slackman 707/3
2009/0254544 A1* 10/2009 Crosby et al. 707/5
2012/0209831 A1* 8/2012 Rehman 707/723

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OTHER PUBLICATIONS

Mika Kaki, "Findex: Search Result Categories Help Users When Document Ranking Fails", Apr. 2005.*
"Google Categories", Apr. 2007.*

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* cited by examiner

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(57) **ABSTRACT**

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A server is configured to receive a search query from a client device; identify documents as search results relevant to the search query, where each of the search results has a respective first score; rank the search results, based on the respective first scores, to form a ranked list of search results, where each of the search results has a respective position, within the ranked list, that is based on the ranking; determine a selection rate corresponding to each of the positions in the ranked list; identify categories with which the search results are associated; generate second scores for the categories based on the selection rates; select search results for the selected categories; generate a search result document that includes information regarding the selected categories and information regarding the selected search results; and provide the search result document for display on the client device.

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G06F 7/00 (2006.01)
G06F 17/30 (2006.01)

(52) **U.S. Cl.**
USPC **707/731; 707/723; 707/732**

(58) **Field of Classification Search**
USPC **707/731**
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,214,361 B1* 7/2012 Sandler et al. 707/732
8,224,857 B2* 7/2012 Doganata et al. 707/791
2002/0078045 A1* 6/2002 Dutta 707/7
2003/0195877 A1* 10/2003 Ford et al. 707/3

21 Claims, 9 Drawing Sheets

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