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Shapira et al.

(54) ACCESSING SOFTWARE APPLICATION FUNCTIONALITY IN SEARCH

(71) Applicant: Samsung Electronics Co., Ltd., Suwon-si, Gyeonggi-do (KR)

Inventors: Liron Shapira, Mountain View, CA

(US); Eric J. Glover, Palo Alto, CA (US); Shravan Sogani, San Ramon, CA

Assignee: Samsung Electronics Co., Ltd.,

Suwon-si (KR)

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(58) Field of Classification Search

See application file for complete search history.

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US 9,940,400 B2

(56)References Cited

(10) **Patent No.:**

U.S. PATENT DOCUMENTS

8,924,958 B1* 12/2014 Bangur G06F 8/61 9,589,033 B1* 3/2017 Kuscher G06F 17/30864 (Continued)

OTHER PUBLICATIONS

App Indexing: https://web.archive.org/web/20140225132807/ https://developers.google.com/app-indexing/webmasters/>, Dec. 4, 2013.

(Continued)

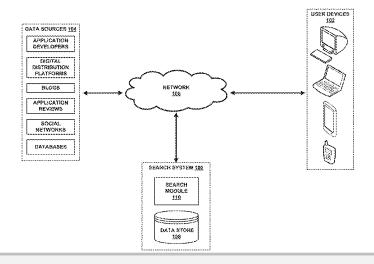
Primary Examiner — Kim Nguyen

(74) Attorney, Agent, or Firm — Jefferson IP Law, LLP

ABSTRACT (57)

A method includes transmitting a search query from a computing device to a search system configured to generate search results in response to a received search query, and receiving search results from the search system in response to transmitting the search query. The search results include an application access mechanism that references a native application and indicates one or more operations for the application to perform. The application performing the operations sets the application into an application state. The search results also include an application download address that indicates a location for downloading the application. The method also includes generating a user selectable link that includes the application access mechanism and the application download address, and displaying the user link. In response to receiving a user selection of the selectable link, the method also includes downloading, installing, launching, and causing the native application to perform the one or more operations.

20 Claims, 16 Drawing Sheets





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		(2013.01); H04W 4/20 (2013.01)	wel	
(56)	References Cited		Ind blo Oct	

U.S. PATENT DOCUMENTS

2007/0211871 A1	9/2007	Sjolander et al.
2011/0072001 A1	3/2011	Basu et al.
2012/0109944 A1	5/2012	Hao
2012/0197765 A1*	8/2012	Kim G06Q 30/0601
		705/27.1
2012/0316955 A1	12/2012	Panguluri et al.
2013/0132896 A1	5/2013	Lee et al.
2013/0290344 A1	10/2013	Glover et al.
2013/0337873 A1*	12/2013	Yang G06F 9/4443
		455/566
2014/0052683 A1	2/2014	Kirkham et al.
2014/0250106 A1	9/2014	Shapira et al.
2014/0330769 A1*		Nguyen G06Q 10/10
		707/609

OTHER PUBLICATIONS

App Indexing Technical Details: https://developers.google.com/app-indexing/webmasters/details, Feb. 1, 2014.

Indexing Apps Just Like Websites: http://googlewebmastercentral.blogspot.com/2013/10/indexing-apps-just-like-websites.html, Oct. 31, 2013.

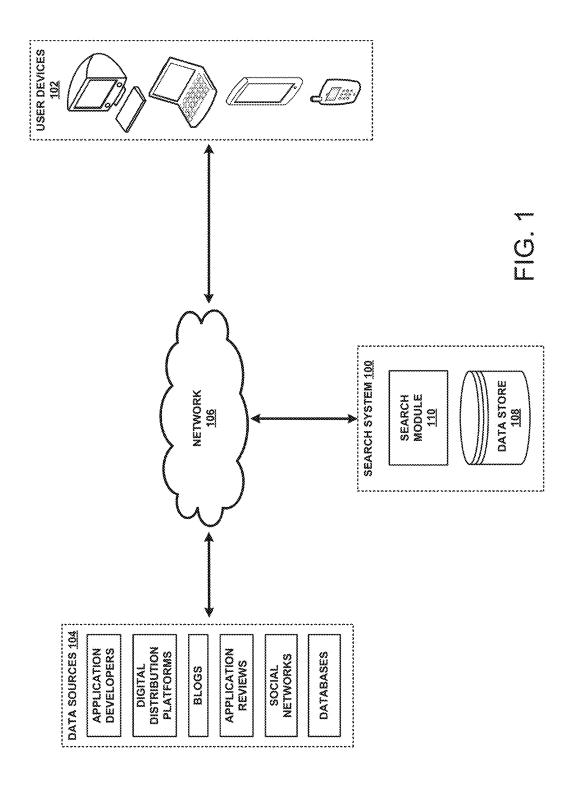
Google Search Now Discovers Content Within Android Apps: http://searchengineland.com/google-search-now-discovers-content-within-android-apps-178960, Dec. 4, 2013.

Google's Search Results Can Deep-Link to Your Android Apps: http://techcrunch.com/2013/10/31/android-4-4-kitkat-app-indexing/, Oct. 31, 2013.

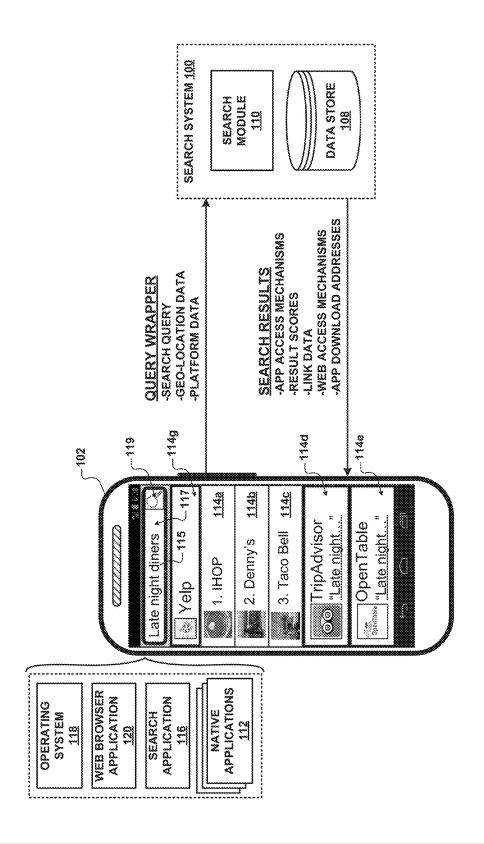
U.S. Appl. No. 14/572,249, filed Dec. 16, 2014, Julia Lipton. U.S. Appl. No. 14/586,104, filed Dec. 30, 2014, Eric Glover. U.S. Appl. No. 14/586,250, filed Dec. 30, 2014, Eric Glover. U.S. Appl. No. 14/588,195, filed Dec. 31, 2014, Liron Shapira. U.S. Appl. No. 14/588,268, filed Dec. 31, 2014, Liron Shapira. International Search Report and Written Opinion for related WO Application No. PCT/US2015/016866, dated May 26, 2015.



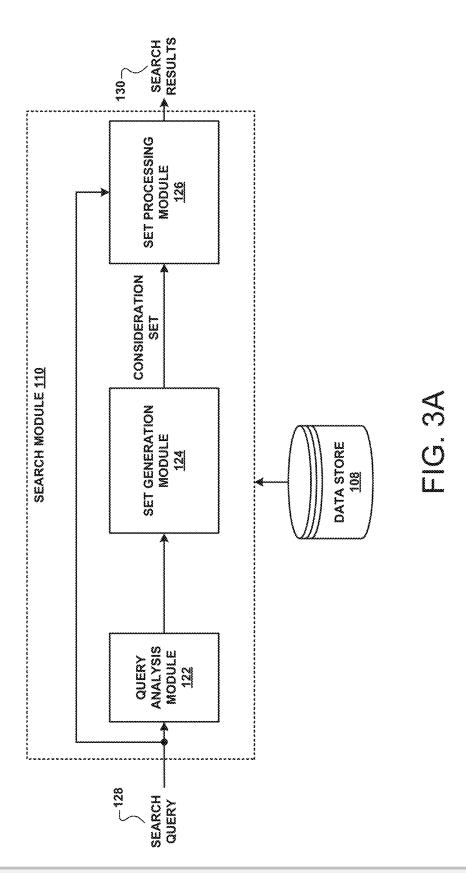
^{*} cited by examiner







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