

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2019/0108274 A1 DaBoll-Lavoie et al.

(43) **Pub. Date:**

Apr. 11, 2019

(54) AUTOMATED CONCEPTS FOR INTERROGATING A DOCUMENT STORAGE DATABASE

(71) Applicant: **Optum, Inc**, Minnetonka, MN (US)

(72) Inventors: Abigail DaBoll-Lavoie, Brookline, MA

(US); Deana Jagielo, Chaska, MN (US); Daniel George McCreary, St.

Louis Park, MN (US)

(21) Appl. No.: 16/151,092

(22) Filed: Oct. 3, 2018

Related U.S. Application Data

(60) Provisional application No. 62/568,847, filed on Oct. 6, 2017.

Publication Classification

Int. Cl. (51)G06F 17/30

(2006.01)

G06F 17/27

(2006.01)

(52) U.S. Cl. CPC .. G06F 17/30672 (2013.01); G06F 17/30696

(2013.01); G06F 17/278 (2013.01); G06F 17/30011 (2013.01); G06F 17/30722 (2013.01)

(57)**ABSTRACT**

Document retrieval from a large document storage database may be facilitated through the use of a search system configured for identifying concepts related to a specific search query provided by a user. Prior to retrieving documents for inclusion in a listing of search results, the terms included within a user-provided search query may be expanded based on relationships between terms represented within a Resource Description Framework (RDF) triplestore to generate a semantic search query. Documents linked with one or more of the terms included within the semantic search query are identified and included within the search results.

