US009275169B2

(12) **United States Patent**
Bonnet et al.

(10) **Patent No.: US 9,275,169 B2**
(45) **Date of Patent: *Mar. 1, 2016**

(54) **DATA DETECTION**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 421 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **13/670,052**

(22) Filed: **Nov. 6, 2012**

(65) **Prior Publication Data**

US 2013/0091174 A1 Apr. 11, 2013

Related U.S. Application Data

(63) Continuation of application No. 12/240,671, filed on Sep. 29, 2008, now Pat. No. 8,311,806.

(60) Provisional application No. 61/059,722, filed on Jun. 6, 2008.

(51) **Int. Cl.**
G06F 17/27 (2006.01)
G06F 17/30 (2006.01)

(52) **U.S. Cl.**
CPC ***G06F 17/30961*** (2013.01); ***G06F 17/27*** (2013.01); ***G06F 17/271*** (2013.01); *G06F 17/2705* (2013.01)

(58) **Field of Classification Search**
CPC ... G06F 17/27; G06F 17/2705; G06F 17/271; G06F 17/30961
See application file for complete search history.

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(57) **ABSTRACT**

An apparatus for processing a sequence of tokens to detect predetermined data, wherein each said token has a token type, and the predetermined data has a structure that comprises a predetermined sequence of token types, including at least one optional token type. The apparatus comprises a processor arranged to: provide a tree for detecting the predetermined data, the tree comprising a plurality of states, each said state being linked with at least one other state by a respective condition, the arrangement of linked states forming a plurality of paths; and compare the token types of the sequence of tokens to respective conditions in the tree to match the sequence of tokens to one or more paths in the tree, wherein the predetermined data can be detected without using an epsilon reduction to take account of said at least one optional token type.

14 Claims, 8 Drawing Sheets