

EXHIBIT 4



US008099420B2

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

(10) **Patent No.:** **US 8,099,420 B2**
(45) **Date of Patent:** ***Jan. 17, 2012**

(54) **ACCESSING DATA IN A DATA PROCESSING SYSTEM**

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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 1312 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/017,650**

(22) Filed: **Dec. 22, 2004**

(65) **Prior Publication Data**

US 2005/0114296 A1 May 26, 2005

Related U.S. Application Data

(60) Continuation of application No. 09/987,723, filed on Nov. 15, 2001, now Pat. No. 6,928,442, which is a continuation of application No. 09/283,160, filed on Apr. 1, 1999, now Pat. No. 6,415,280, which is a division of application No. 08/960,079, filed on Oct. 24, 1997, now Pat. No. 5,978,791, which is a continuation of application No. 08/425,160, filed on Apr. 11, 1995, now abandoned.

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

(52) **U.S. Cl.** **707/758; 707/781; 707/821**

(58) **Field of Classification Search** **707/758, 707/781, 821**

See application file for complete search history.

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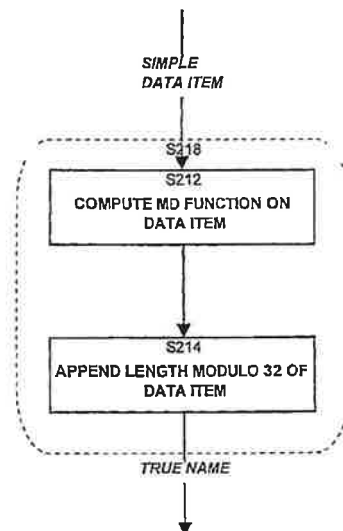
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(57) **ABSTRACT**

Access to data items uses names based on the data in the data items; the name of a data item may be based, at least in part, on a function of some or all of the bits that comprise the data item. A data item may comprise an arbitrary sequence of bits. The function may include a hash function or a message digest function. The name of a data item may be compared to a list of names of other data items.

178 Claims, 31 Drawing Sheets



US 8,099,420 B2

Page 2

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