The United States of America

The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

David J. Kappos

Director of the United States Patent and Trademark Office

(12) **United States Patent**
Navaro

(10) **Patent No.:** **US 7,827,525 B1**
(45) **Date of Patent:** **Nov. 2, 2010**

(54) **DATA OBJECT UTILIZATION IN SOFTWARE APPLICATIONS**

(76) Inventor: **Richard Paul Navaro**, 5160 Waterloo Rd., Burlington, KY (US) 41005

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1096 days.

(21) Appl. No.: **11/421,959**

(22) Filed: **Jun. 2, 2006**

(51) **Int. Cl.**
G06F 9/44 (2006.01)
G06F 9/45 (2006.01)

(52) **U.S. Cl.** **717/108**; 717/103; 717/116; 717/151; 717/165

(58) **Field of Classification Search** .... None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,960,438	A *	9/1999	Chang et al.	707/103 R
6,338,068	B1 *	1/2002	Moore et al.	707/102
6,529,914	B1 *	3/2003	Doan et al.	707/103 Y
6,985,912	B2 *	1/2006	Mullins et al.	707/103 R
7,111,005	B1 *	9/2006	Wessman	707/9
7,424,493	B2 *	9/2008	Gupta	707/201
2002/0147743	A1 *	10/2002	Le et al.	707/505
2003/0182307	A1 *	9/2003	Chen et al.	707/103 X
2005/0149907	A1 *	7/2005	Seitz et al.	717/108
2005/0154765	A1 *	7/2005	Seitz et al.	707/104.1

* cited by examiner

Primary Examiner—Tuan Q Dam
Assistant Examiner—Isaac T Tecklu
(74) *Attorney, Agent, or Firm*—Wood, Herron & Evans, LLP

(57) **ABSTRACT**

A data embodying object is programmed in accordance with object oriented techniques, and implements data retrieval methods without access to an external database, but rather using code in the object that includes immediate values which themselves embody the data to be retrieved in response to an invocation of the method. As a consequence, the data retrieval method is executed without external access to a DASD or other external data source and without the resulting delays or unavailabilities. The data-embodying object takes the form of a class, and can have one or more methods returning data. The class is automatically generated and can be compiled into its own library file, or added to an existing project and compiled into the executable file. Like a typical class and source code, the code and data of an object can be obfuscated, and/or the data encrypted, and afforded all the other protections available to program source code.

23 Claims, 1 Drawing Sheet