(54) Title: METHOD AND APPARATUS FOR PROTECTING DATA USING LOCK VALUES IN A COMPUTER SYSTEM
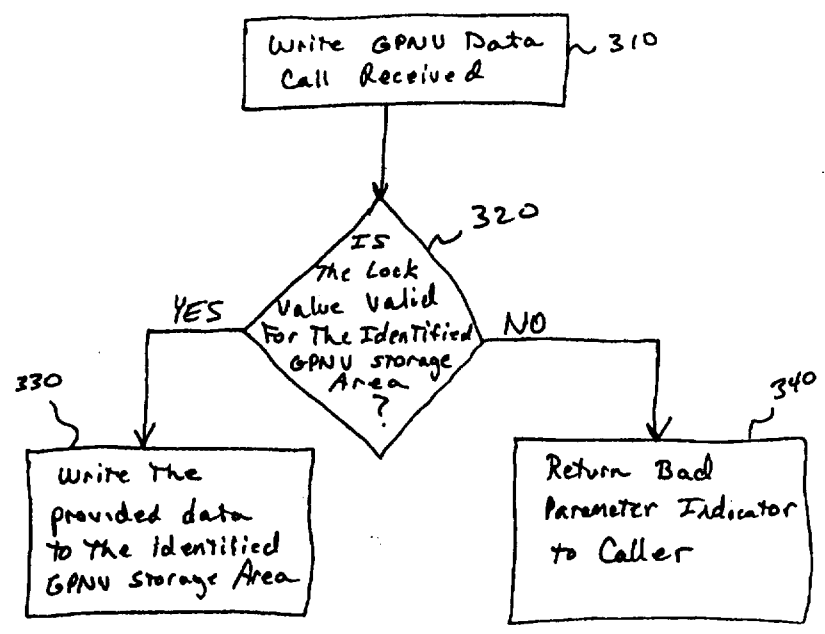
(57) Abstract

A method and apparatus for protecting data using lock values in a computer system includes indicating that the computer system does not support locked accesses to the data. However, upon receipt of a request (310) to write to a storage area where the data is contained, the present invention checks (320) whether a lock value corresponding to the request matches a predetermined lock value. If the lock value matches the predetermined lock value, then the data is written to the storage area (330); otherwise, the storage area is left unmodified (340).

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METHOD AND APPARATUS FOR PROTECTING DATA USING LOCK VALUES IN A COMPUTER SYSTEM

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention pertains to the field of data storage in a computer system. More particularly, this invention relates to protecting data stored in a computer system using lock values.

Background

Computer technology is continuously advancing, resulting in modern computer systems which provide ever-increasing performance. One result of this improved performance is an increased use of computer systems by individuals in a wide variety of business, academic and personal applications. With the increased use of and demand for computer systems, a large number of manufacturers, developers, and suppliers of computer systems, components, and software have come into existence to service the demand.

The large number of manufacturers, developers, and suppliers, combined with the flexibility afforded them due to the advances in technology, has resulted in a wide range of methods in which computer systems operate. Typically, in order for different components within a computer system to work together effectively, each must agree on certain specific operating parameters. Often, standards or specifications are adopted or agreed upon by various industries or groups of companies which define certain operating parameters. Thus, if two components comply with the same standard(s) or specification(s), then the

two components should be able to work together effectively in the same system.

For example, one such standard is the Plug and Play Specification. A component which conforms to the Plug and Play Specification should work properly in a system which also complies with the Plug and Play Specification by simply connecting the component to the system. Components which do not comply with the Plug and Play Specification may require additional configuration steps to be taken by the user before they function properly.

Another current specification is the Desktop Management Interface (DMI) Specification. The DMI Specification provides, among other advantages, general purpose nonvolatile data areas which can be accessed to store various data by applications executing on the system. The DMI Specification, however, does not provide a mechanism to prevent an application from updating data stored in one of these general purpose nonvolatile data areas by another application. Thus, it would be beneficial to provide a mechanism for preventing unwanted updates to these general purpose nonvolatile data areas.

Additionally, in order to maintain compliance with the DMI Specification, any protection against unwanted updates to general purpose nonvolatile data areas must not violate the DMI Specification. Thus, it would be advantageous to provide a mechanism for preventing unwanted updates to the general purpose nonvolatile data areas which maintains compliance with the Desktop Management Interface Specification.

As will be described in more detail below, the present invention provides a mechanism for protecting data using lock values in a computer system that achieves these and other

desired results which will be apparent to those skilled in the art from the description to follow.

SUMMARY OF THE INVENTION

A method and apparatus for protecting data using lock values in a computer system is described herein. The present invention includes indicating that the computer system does not support locked accesses to the data. However, upon receipt of a request to write to the storage area where the data is contained, the present invention checks whether a lock value corresponding to the request matches a predetermined lock value. If the lock value matches the predetermined lock value, then the data is written to the storage area; otherwise, the storage area is left unmodified.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is illustrated by way of example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements and in which:

Figure 1 is a block diagram showing a portion of a computer system in accordance with one embodiment of the present invention;

Figure 2 is a flowchart showing the steps used to read data from a storage area according to one embodiment of the present invention;

Figure 3 is a flowchart showing the steps used to write data to a storage area according to one embodiment of the present invention; and

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