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[54] **METHODS AND APPARATUS FOR PROVIDING TRANSPARENT PERSISTENCE IN A DISTRIBUTED OBJECT OPERATING ENVIRONMENT**

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[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,692,183.

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Related U.S. Application Data

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[51] **Int. Cl.**[6] **G06F 17/30**

[52] **U.S. Cl.** **707/103**; 707/100; 707/513; 395/500; 395/701

[58] **Field of Search** 707/200, 103, 707/100, 513; 395/500, 701

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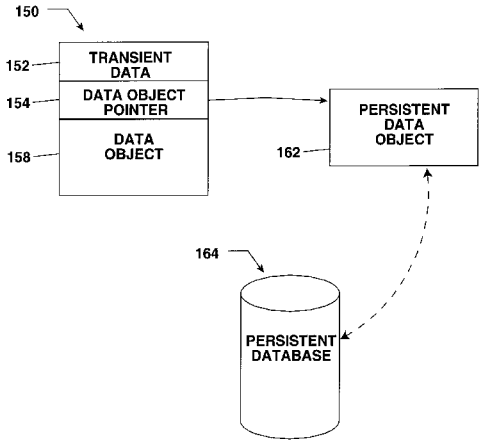
[57] **ABSTRACT**

A number of methods and apparatus are disclosed for providing transparent persistence in a distributed object operating environment are disclosed. In general, the present invention teaches replacing the value in the object's data pointer (addressing information which points to the objects limited persistent memory) with a pointer value which points out to another persistent storage device. In preferred embodiments, a persistent storage manager (external and transparent to the distributed object) maintains the object data. In a specific embodiment, a distributed object framework is provided which has the mechanism for providing the transparent persistent strategy of the present invention. An object developer develops object implementations which the distributed object generates distributed objects with, in the process automatically providing transparent persistence.

20 Claims, 7 Drawing Sheets