DATA STORAGE ARRAY

ABSTRACT

The error tolerance of an array (300) of m storage units is increased by using a technique referred to a "dodging". A plurality of k stripes are stored across the array (300) of storage units (D1 – D9) in which each stripe has n+r elements that correspond to a symmetric code having a minimum Hamming distance d = r + 1. Each respective element of a stripe is stored on a different storage unit (D1 – D9). An element is selected when a difference between a minimum distance of the donor stripe and a minimum distance of a recipient stripe is greater or equal to 2. The selected element is also stored on a storage unit (D1 – D9) having no elements of the recipient stripe. A lost element of the recipient stripe is then rebuilt on the selected element.

Fig. 3