United States Patent [19]

Carter et al.

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[54] **REPEATERS FOR SECURE LOCAL AREA NETWORKS**

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[*] Notice: The portion of the term of this patent subsequent to Nov. 3, 2009, has been disclaimed.

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Related U.S. Application Data

[63] Continuation of Ser. No. 913,475, Jul. 15, 1992, abandoned, which is a continuation of Ser. No. 609,791, Nov. 7, 1990, Pat. No. 5,161,192.

[30] **Foreign Application Priority Data**

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[51] Int. Cl.^{6} H04B 3/36; H04B 3/58; H04L 25/20; H04L 25/52

[52] U.S. Cl. 380/48; 380/9; 380/23; 380/49; 375/3; 375/4; 379/338; 379/339; 455/7; 455/14; 455/15; 340/825.54

[58] Field of Search 380/2, 4, 23, 25, 48, 380/49, 50; 340/825.54, 35, 75, 97; 375/3, 4; 379/338, 339; 455/7, 9, 14, 15

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[57] **ABSTRACT**

A multiport repeater for a local area network installation has (in addition to its conventional functions) means for storing access rules for the items of equipment connected to it. It reads a portion of each frame, which may be all or part of the destination address segment and/or of the source address segment and/or of the control segment of each incoming data frame, or it could be a frame or protocol identifier incorporated in opening bytes of the data segment. It compares the data that it reads with the stored access rules to determine whether the frame is permitted or not. If not, the repeater modifies the frame which it is in the course of re-transmitting, for example by overwriting it with meaningless digits or by encrypting it. It may also report the source address, destination address and reason for deciding to modify the frame to the network controller.
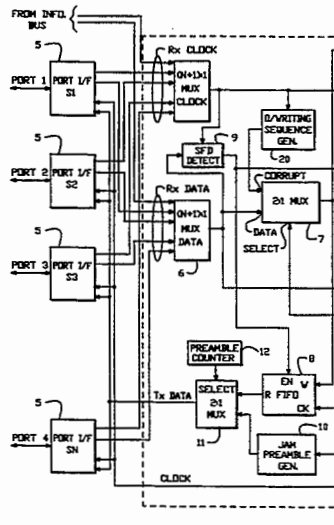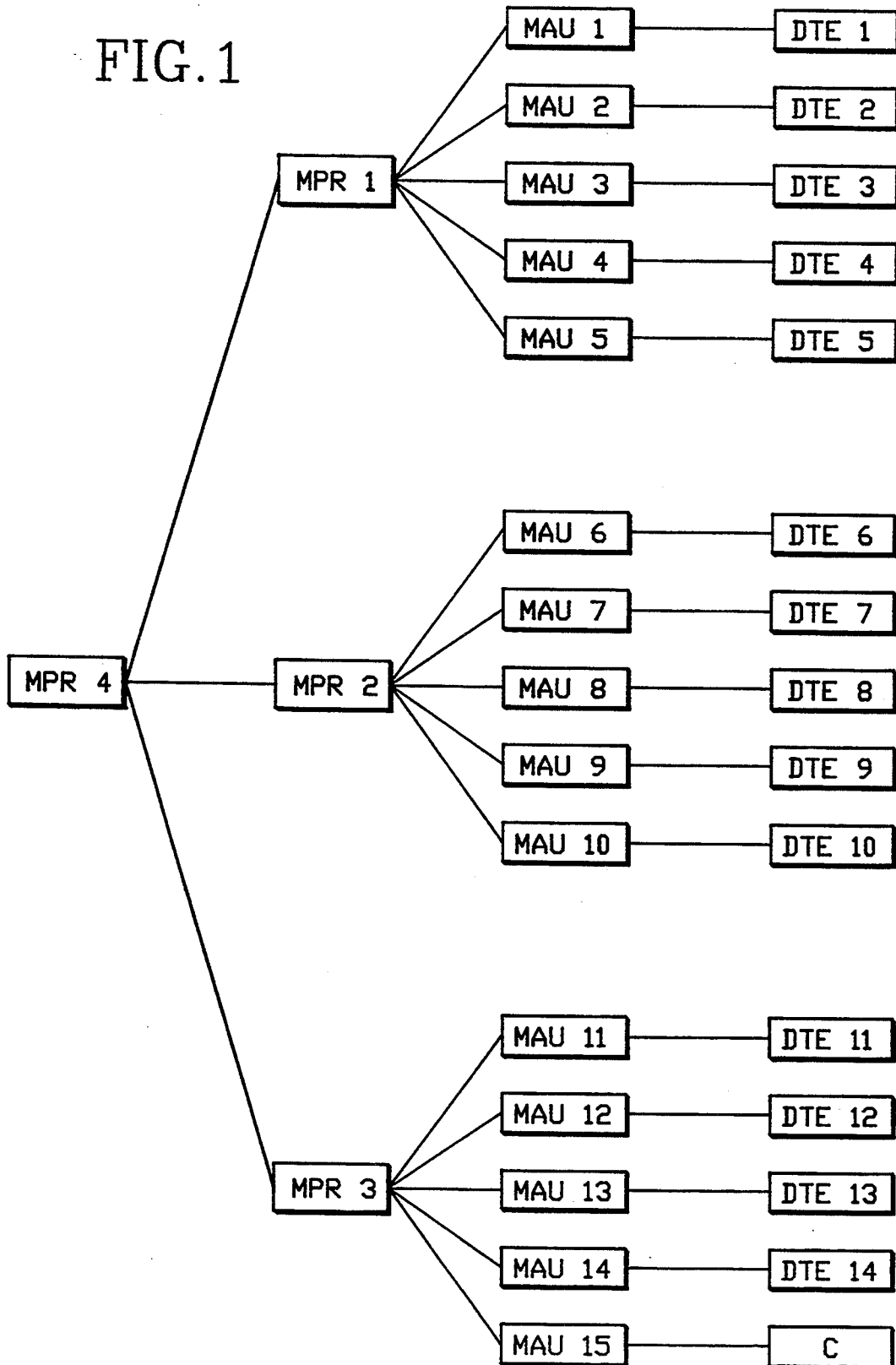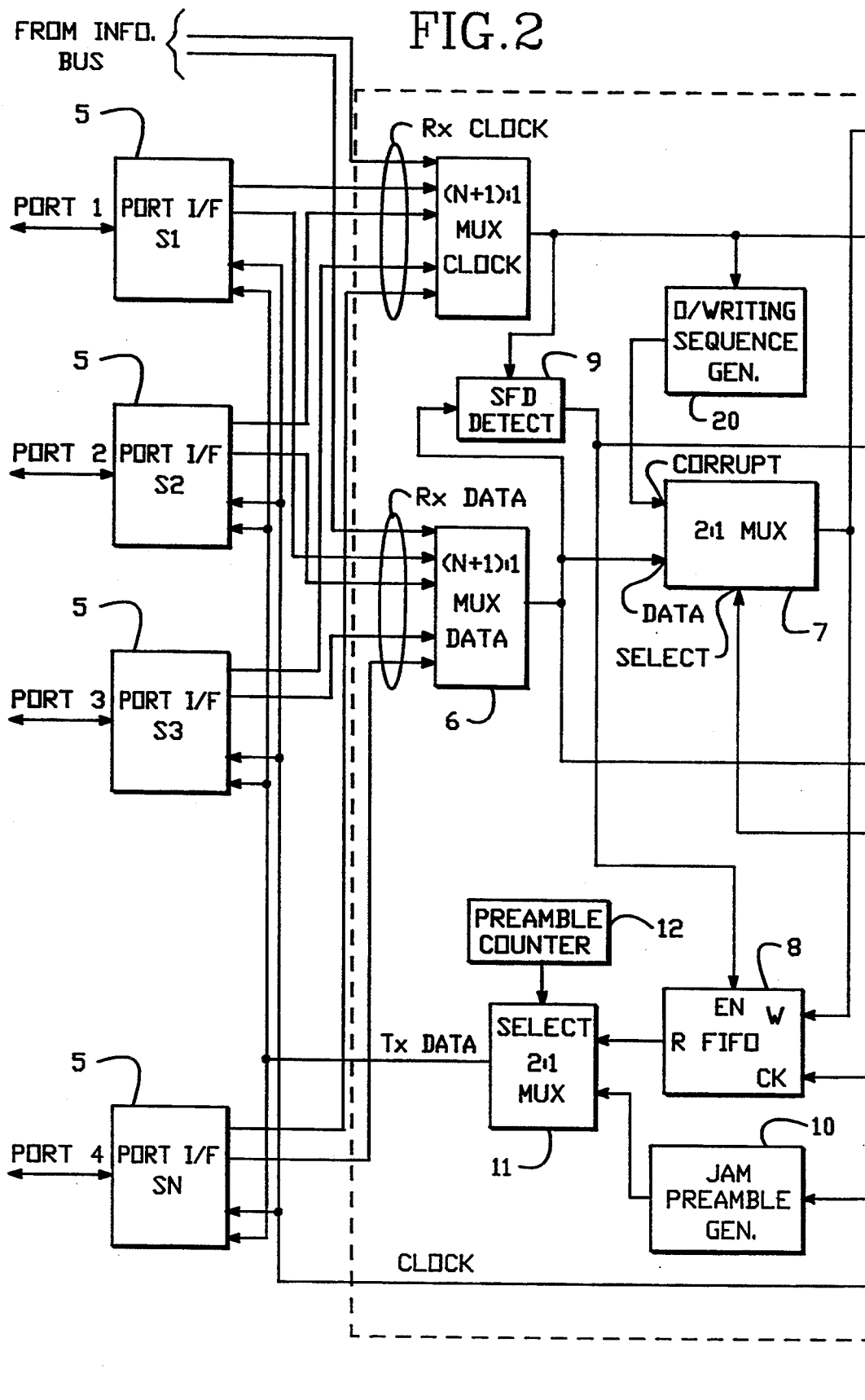
53 Claims, 5 Drawing Sheets

FIG.1

FIG.2

FIG.2 (cont.)

FIG.3

DOCKET ALARM
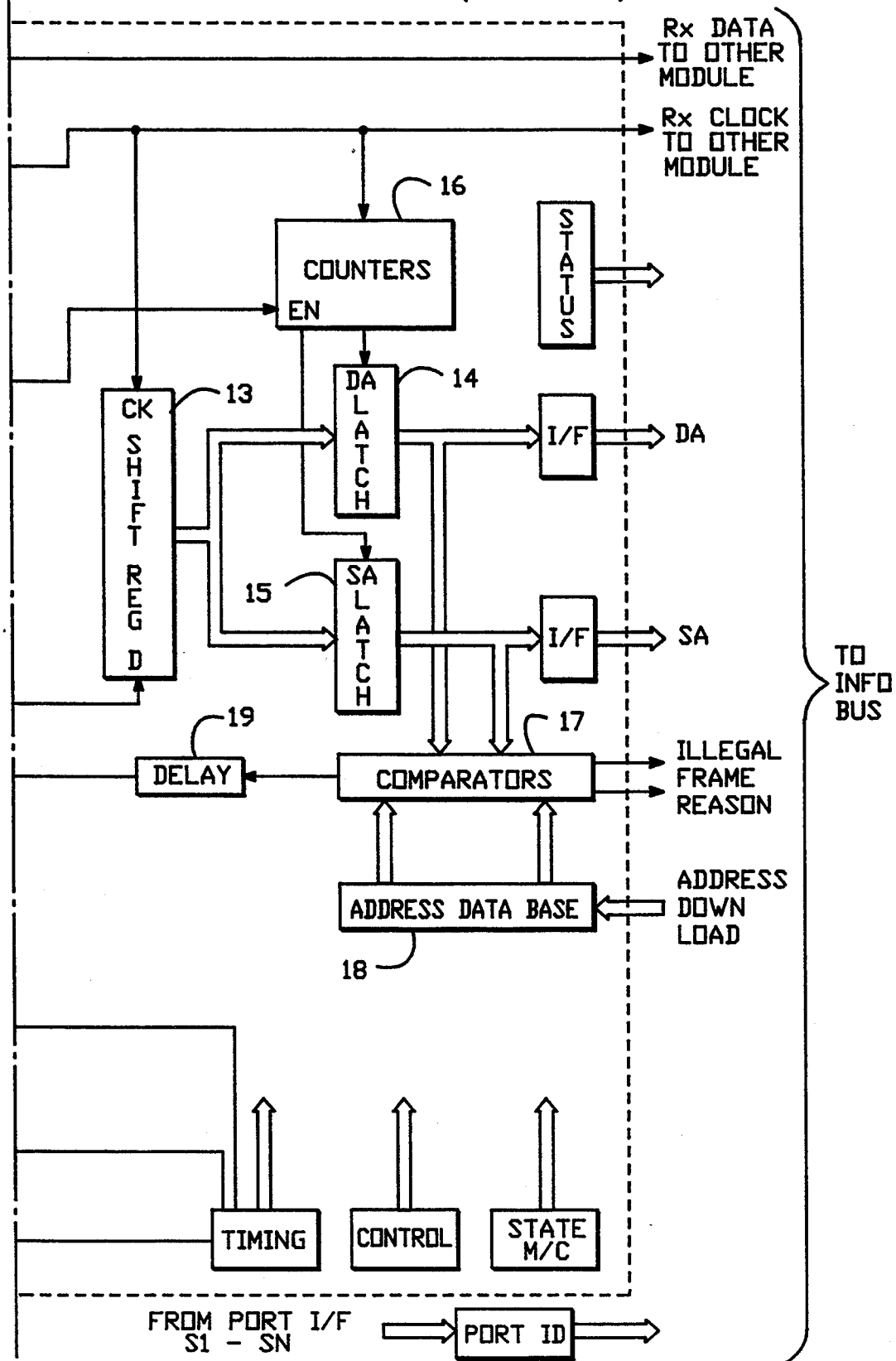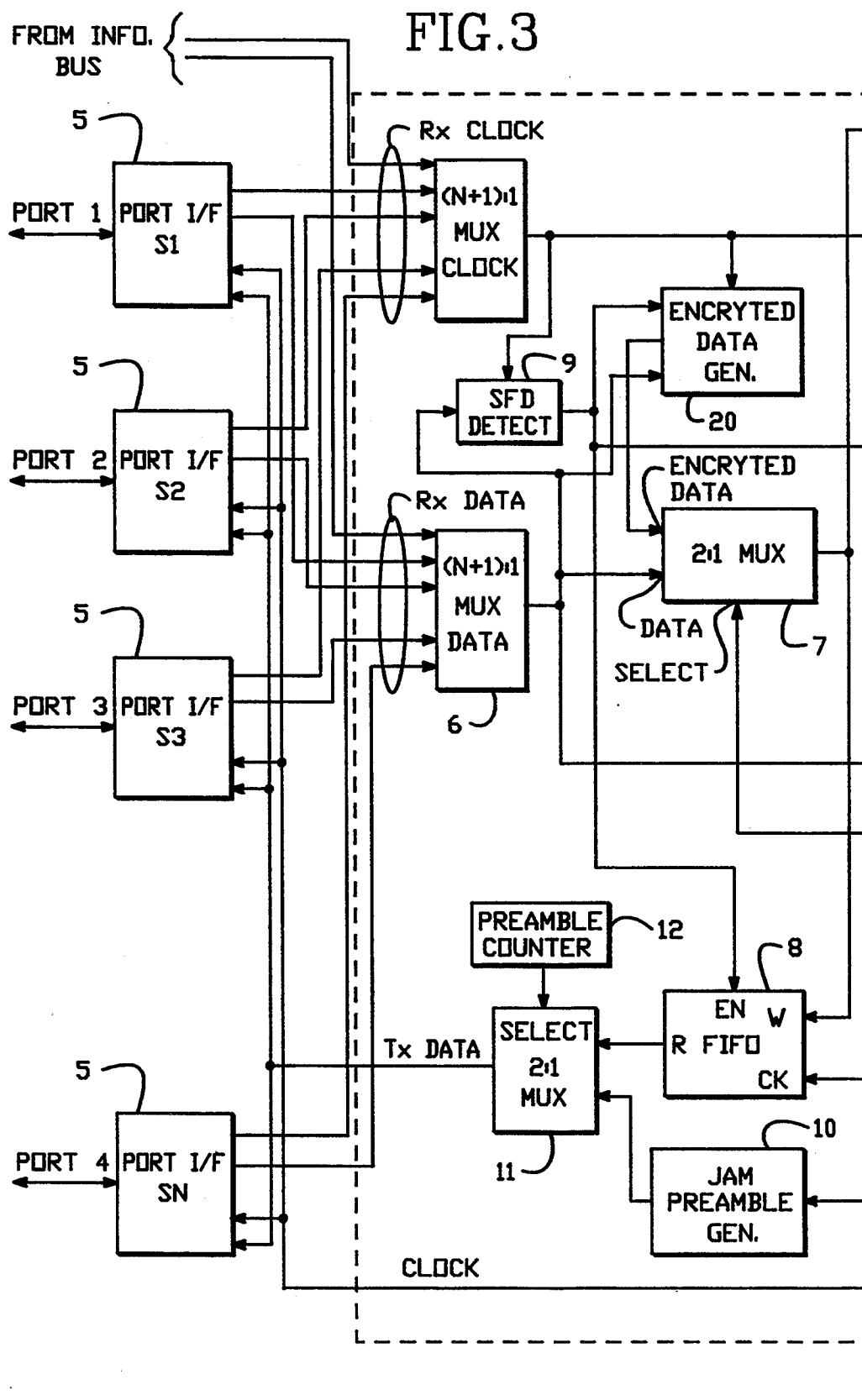
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