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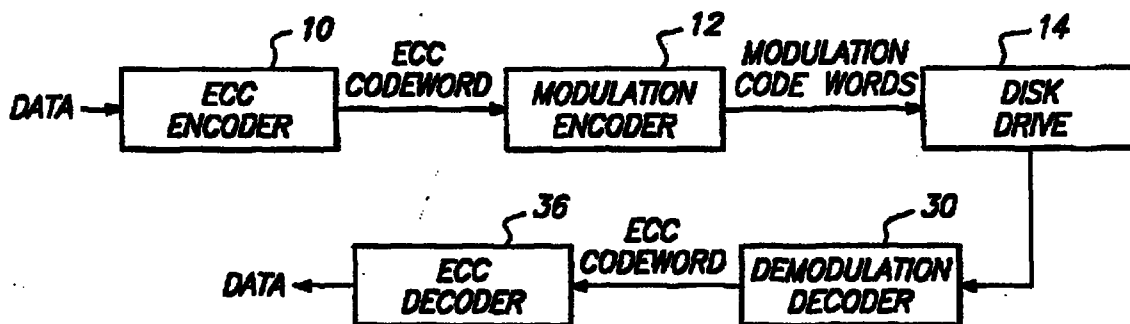
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(54) Title: **ENCODING DATA WITH VARIABLE BLOCK LENGTHS**



(57) Abstract

An encoding system uses a modified 8/9 rate modulation code to encode 8-bit data symbols into 9-bit cells in a conventional manner in accordance with the modified code and 9-bit ECC symbols into 10-bit cells by (i) encoding 8 bits of the symbol into a 9-bit cell in accordance with the modified code, and (ii) inserting into the 9-bit cell the remaining that is, the non-encoded, bit of the ECC symbol. The system reproduces the 8-bit data symbols by decoding the 9-bit cells in a conventional manner in accordance with the modified code, and the 9-bit ECC symbols by (i) removing from the associated 10-bit cell the bit inserted during encoding, (ii) decoding the remaining 9 bits to reproduce 8 bits of the symbol, and (iii) inserting into the 8 bits the bit that was earlier removed. In an exemplary embodiment, the 8 least significant bits of the ECC symbol are encoded using the modified 8/9 rate code. The 9 bits produced by the code are used essentially as the first "c" and last "10-c" bits of a 10-bit cell.