

(12) **United States Patent**
Shiomoto

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(54) **METHOD FOR ADDING AND ENCODING ERROR CORRECTING CODES AND ITS DEVICE AND METHOD FOR TRANSMITTING DATA HAVING ERROR CORRECTING CODES ADDED**

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(73) Assignee: **Sony Corporation** (JP)

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(30) **Foreign Application Priority Data**

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(51) **Int. Cl.⁷** **H03M 13/00**

(52) **U.S. Cl.** **714/779**

(58) **Field of Search** 714/752, 779,
714/746; 375/240.03, 243, 240.16; 382/232,
240

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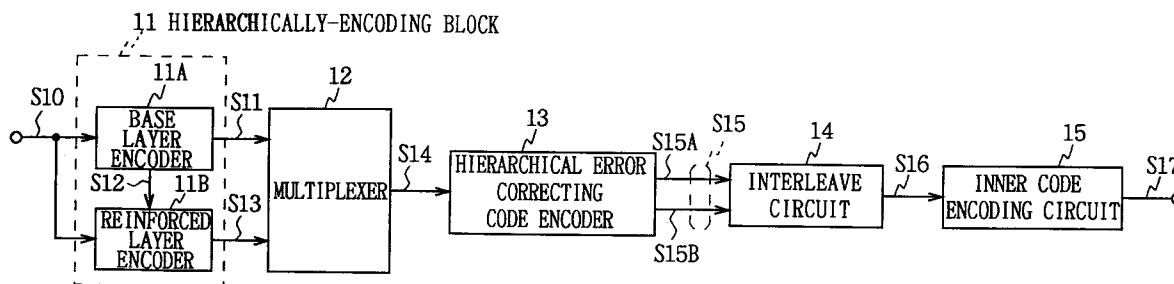
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(57) **ABSTRACT**

A method for encoding error correcting codes to generate plural coded data having different error correction ability according to significance. An error correcting code having different code length is added to a fixed length of input data according to the significance of the input data (S14). The error correcting codes added which have different error correction ability corresponding to its code length are encoded to generate coded data having different packet length according to the code length of the error correcting code. Thus, plural coded data (S15A and S15B) which have different error correction ability according to significance can be generated. Thereby, even if a quality of transmission system deteriorates when the above coded data is transmitted, the coded data having high error correction ability can be surely decoded.

26 Claims, 9 Drawing Sheets

10 IMAGE DATA ENCODING DEVICE



1 IMAGE DATA DECODING DEVICE

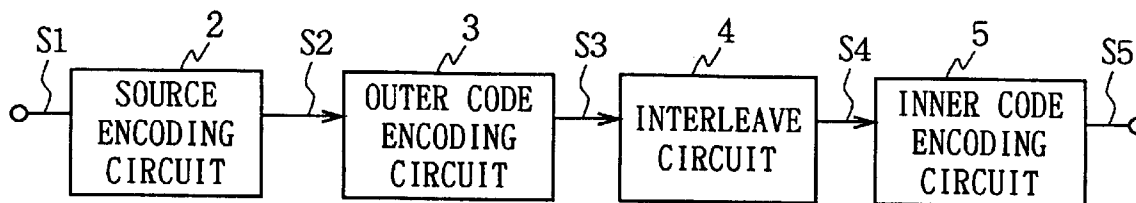


FIG. 1(PRIOR ART)

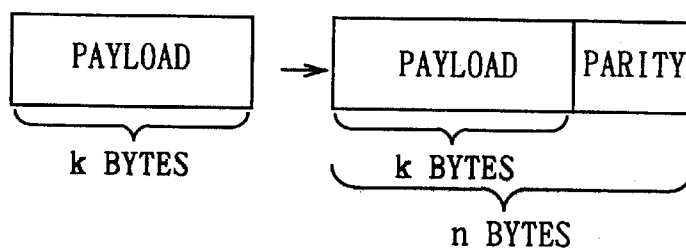


FIG. 2(RELATED ART)

10 IMAGE DATA ENCODING DEVICE

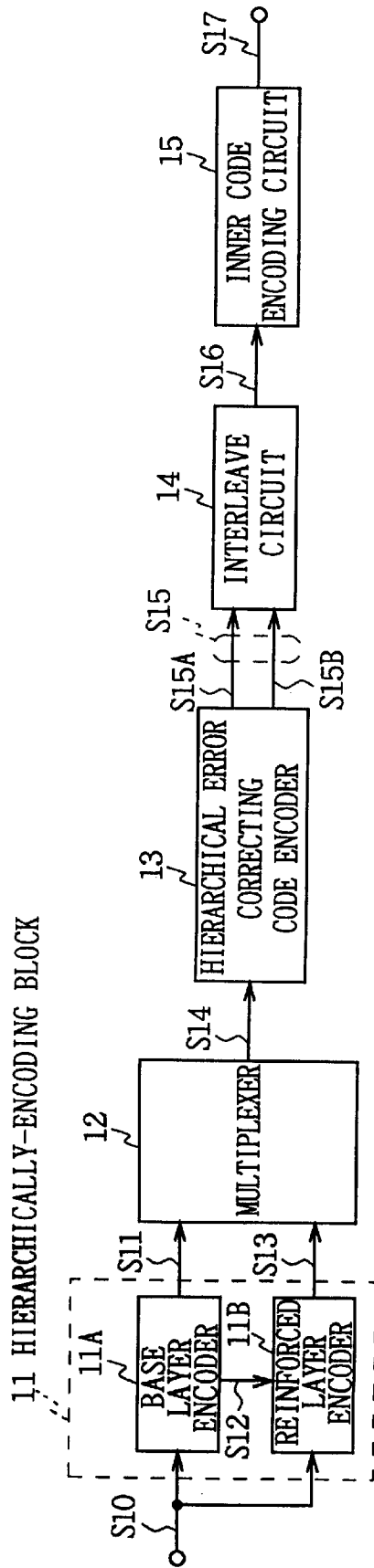
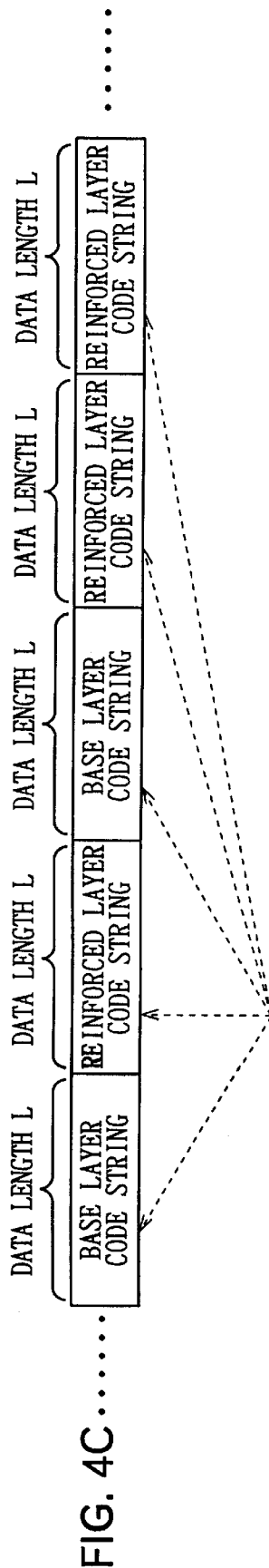
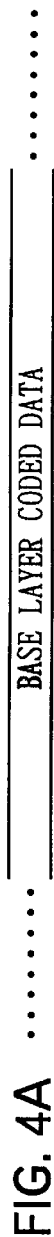


FIG. 3



SUPERIMPOSE CODE STRING IDENTIFICATION FLAG ON

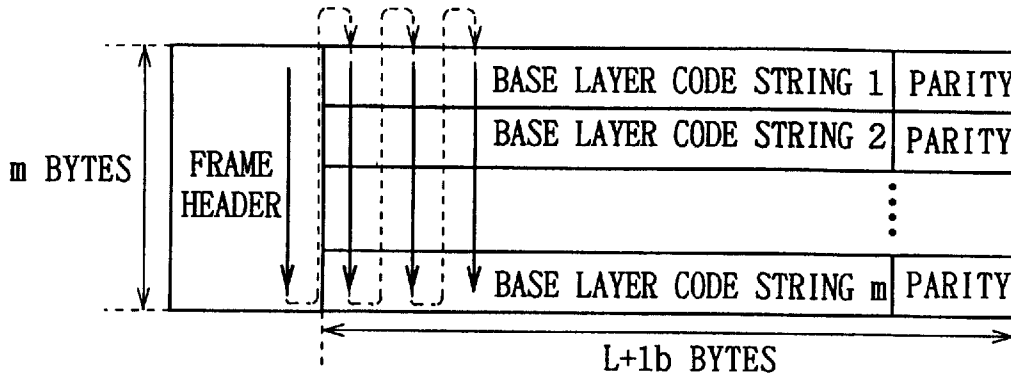


FIG. 5A

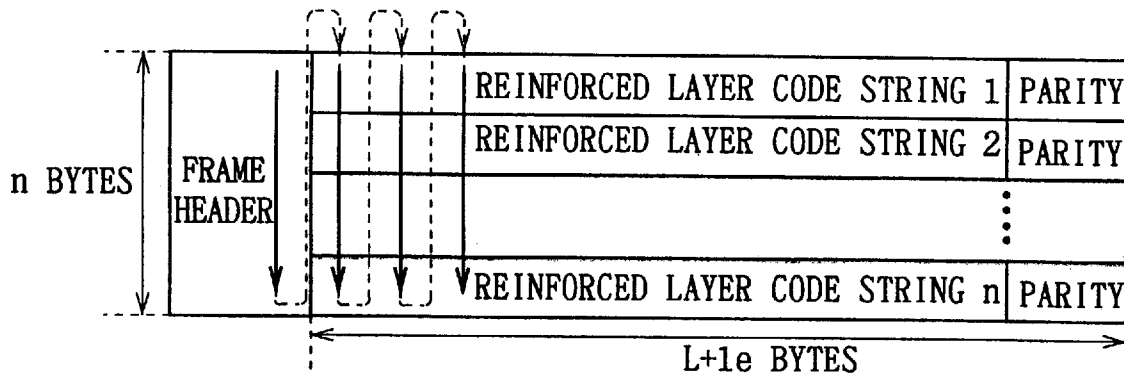


FIG. 5B

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