



[54] SPEECH ENCODING/DECODING APPARATUS HAVING SELECTED ENCODERS

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[52] U.S. Cl. 381/36; 381/34

[58] Field of Search 381/29-40; 364/513.5; 375/22-24, 34, 122

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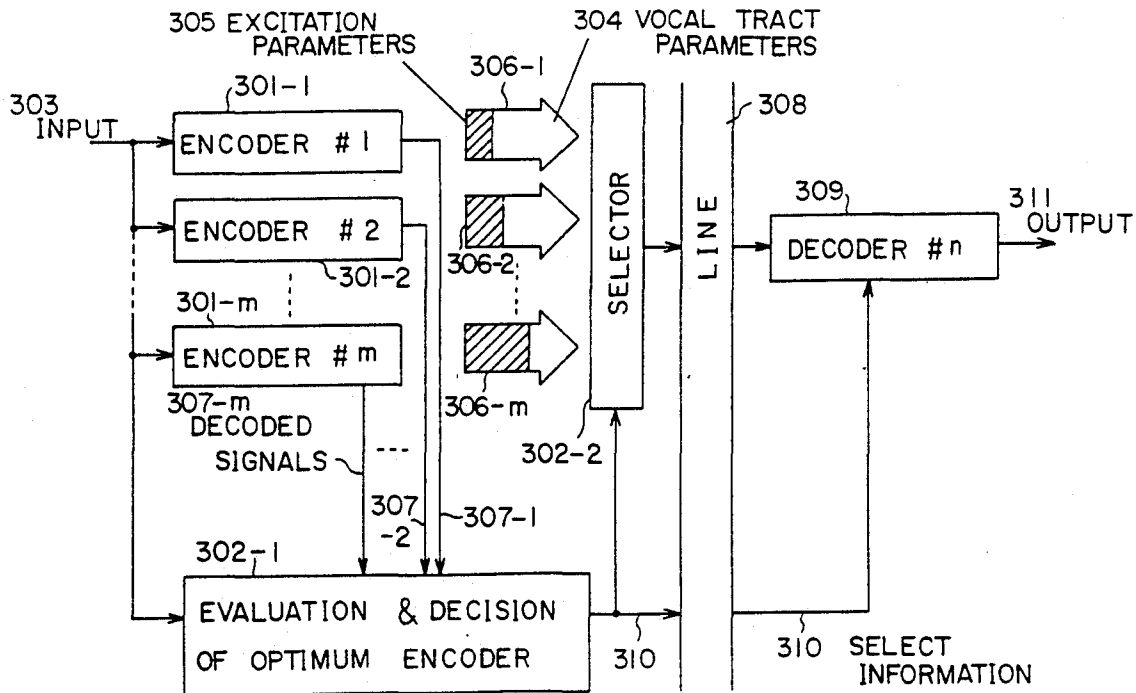
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[57] ABSTRACT

Several encoders perform a local decoding of a speech signal and extract excitation information and vocal tract information from a speech signal for an encoding operation. The transmission rate ratio between the excitation information and the vocal tract information are different for each encoder. An evaluation/selection unit evaluates the quality of decoded signals subjected to a local decoding in each of the encoders, determines the most suitable encoders from among the several encoders based on the result of the evaluation, and selects the most suitable encoder, thereby outputting the selection result as selection information. The decoder decodes a speech signal based on selection information, vocal tract information and excitation information. The evaluation/selection unit selects the output from the encoder in which the quality of a locally decoded signal is the most preferable. When vocal tract information changes little, the vocal tract information is not output, thereby allowing for increased quality of information. As much of the surplus of unused vocal tract information as possible is assigned to a residual signal. Thus, the quality of a decoded speech signal is improved.

12 Claims, 7 Drawing Sheets



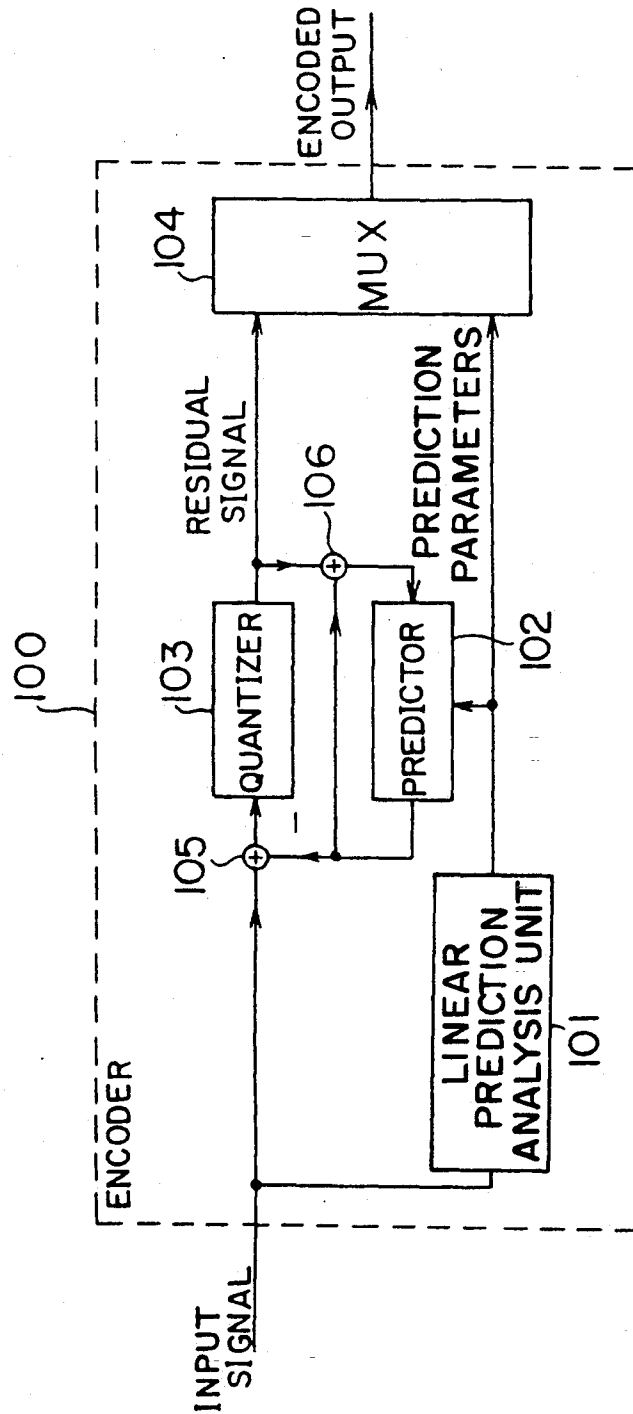


FIG. 1
PRIOR ART

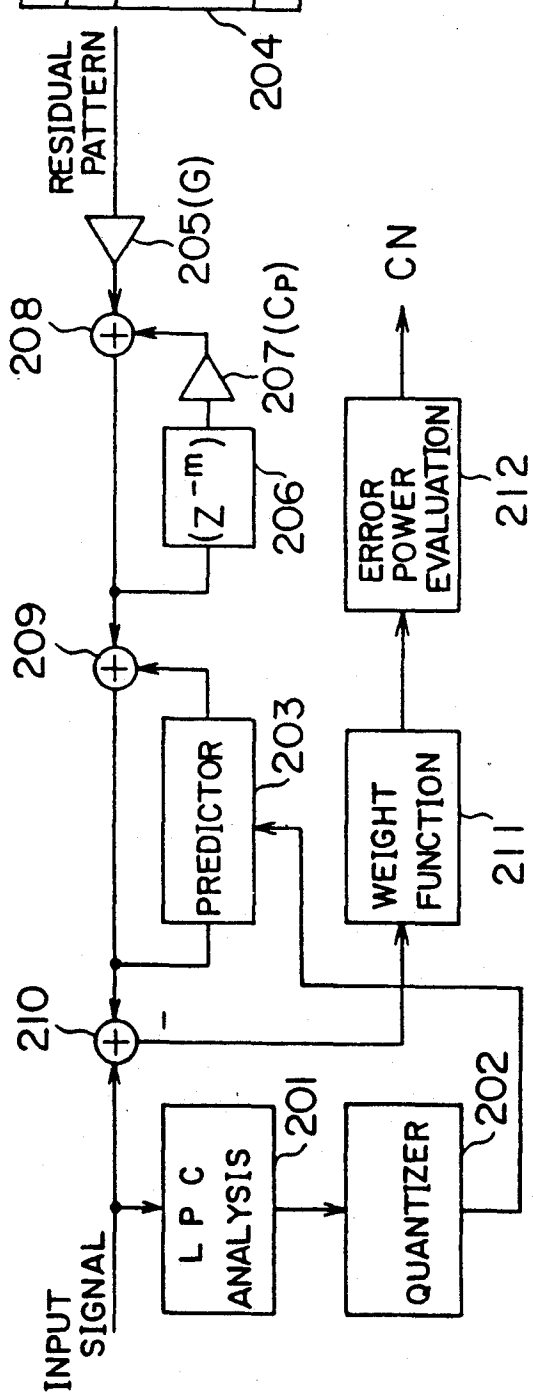


FIG. 2
PRIOR ART

FIG. 3

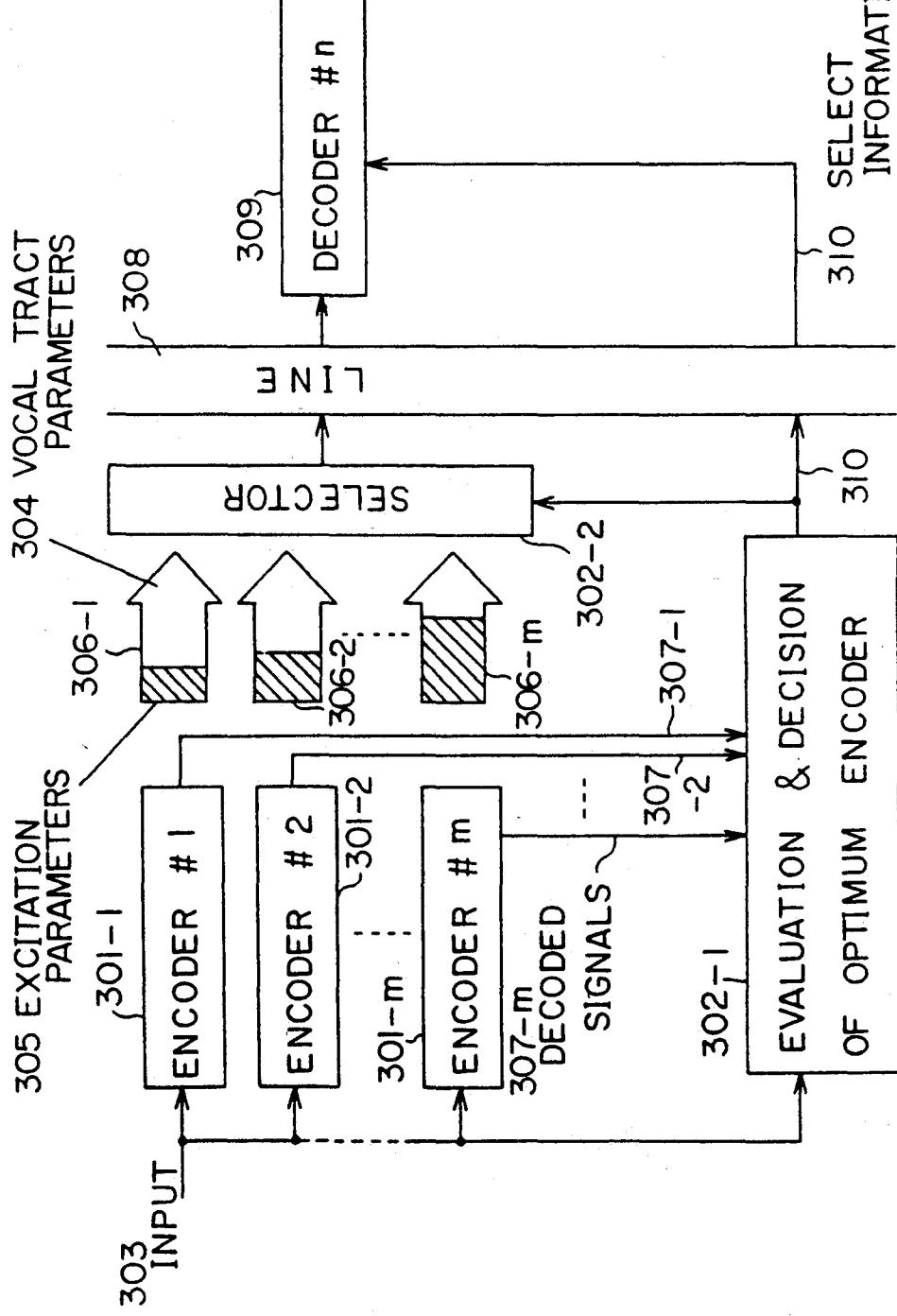
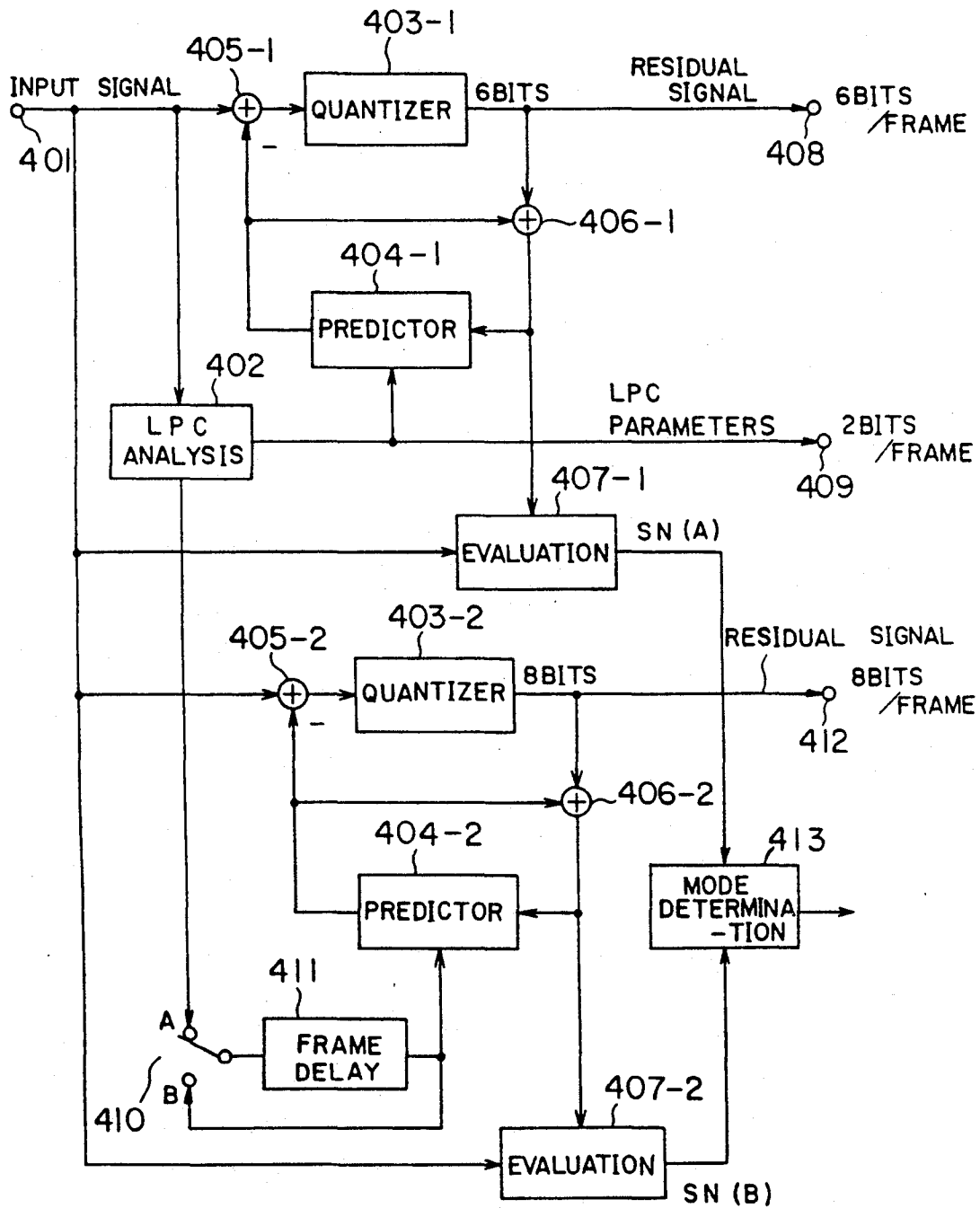


FIG. 4



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