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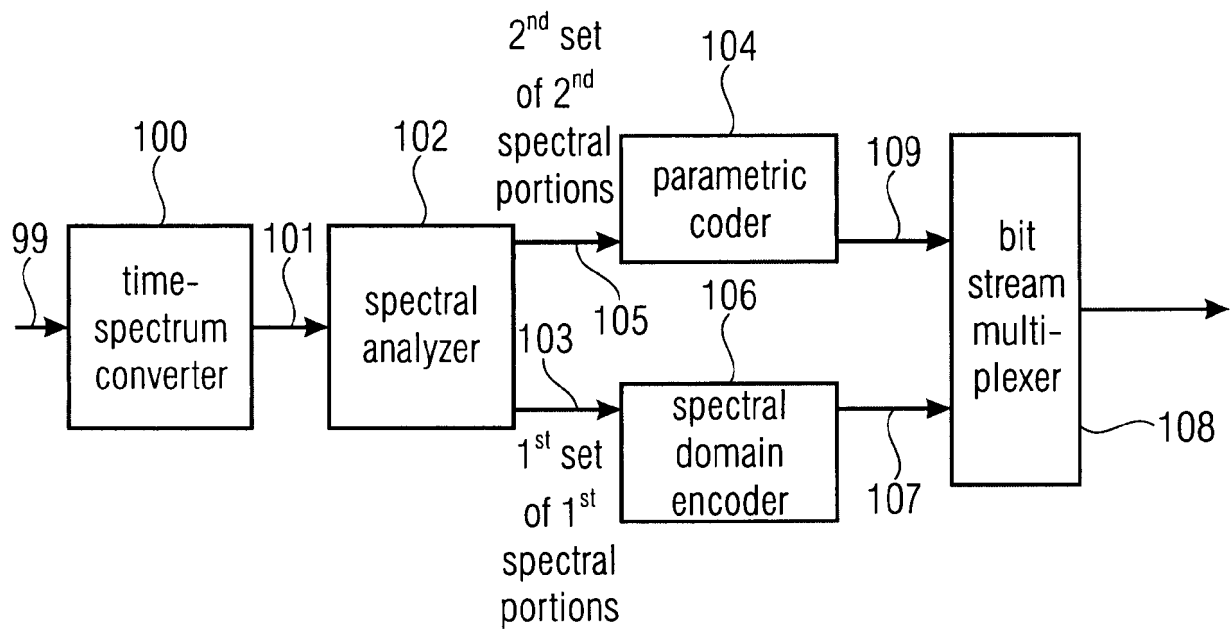


FIG 1A

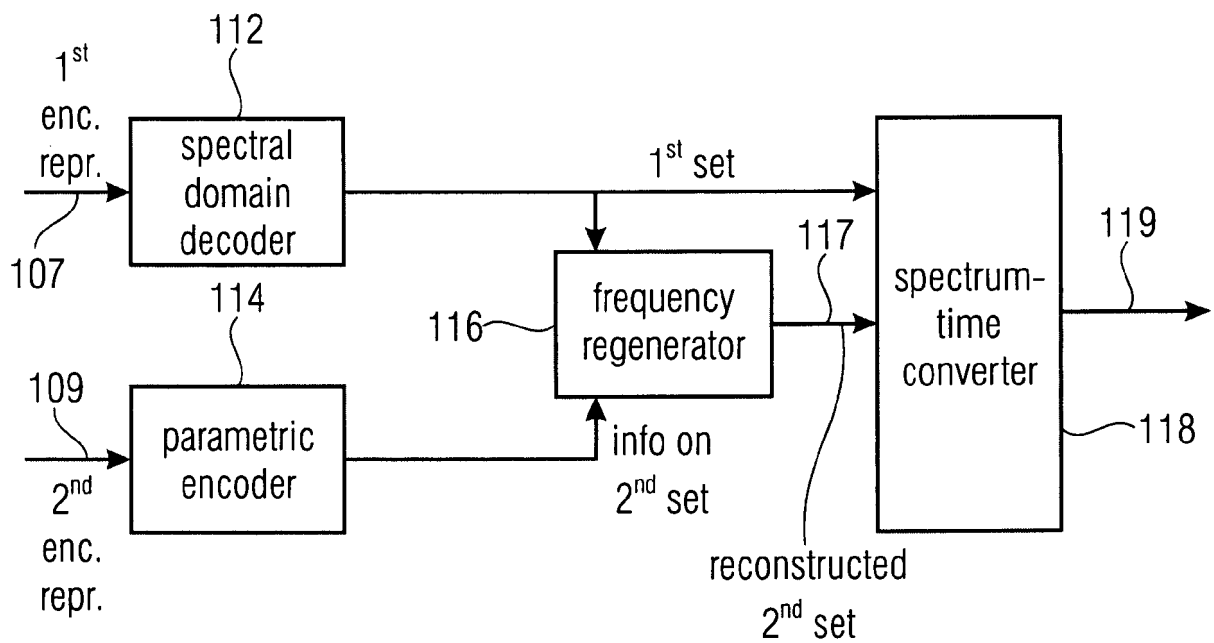


FIG 1B

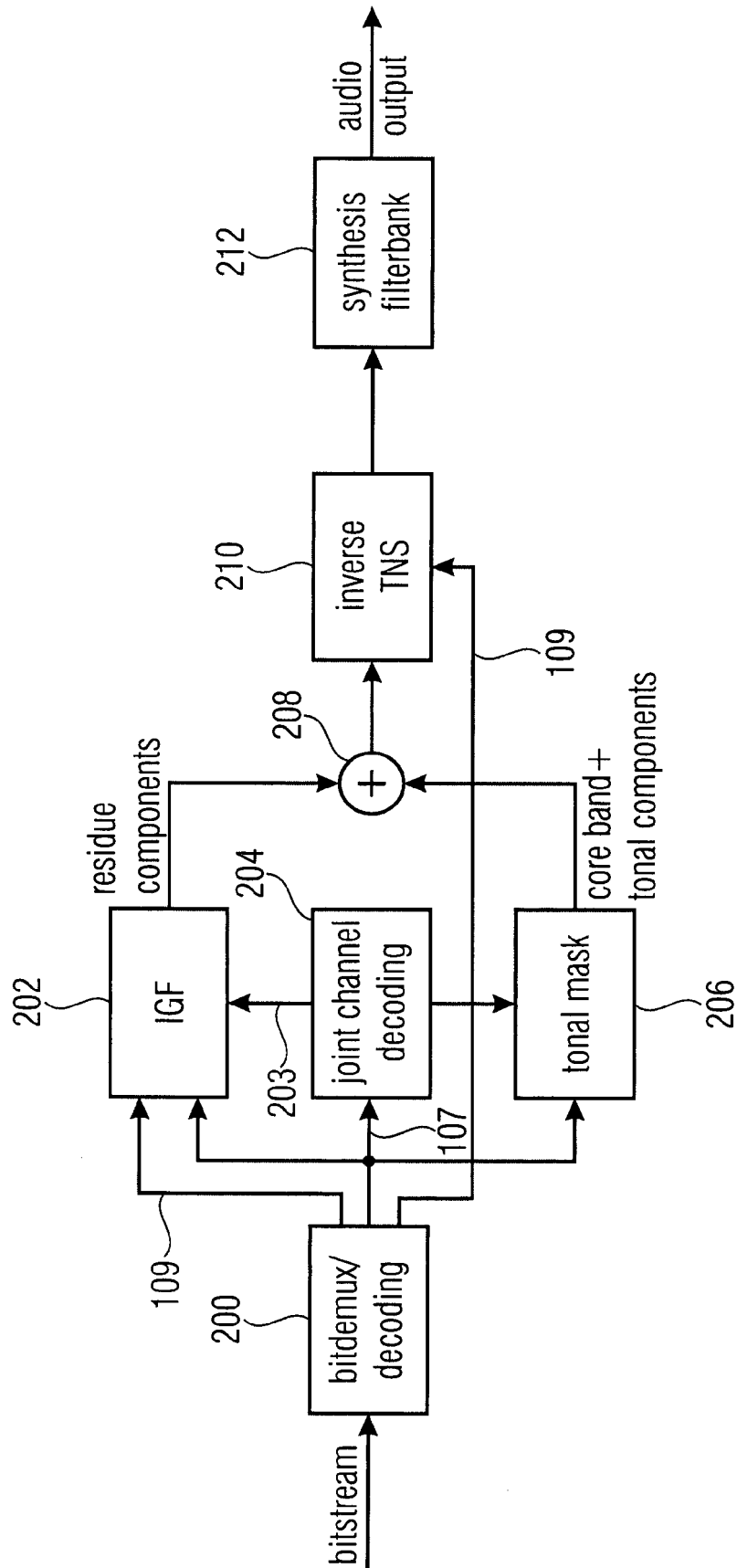


FIG 2A

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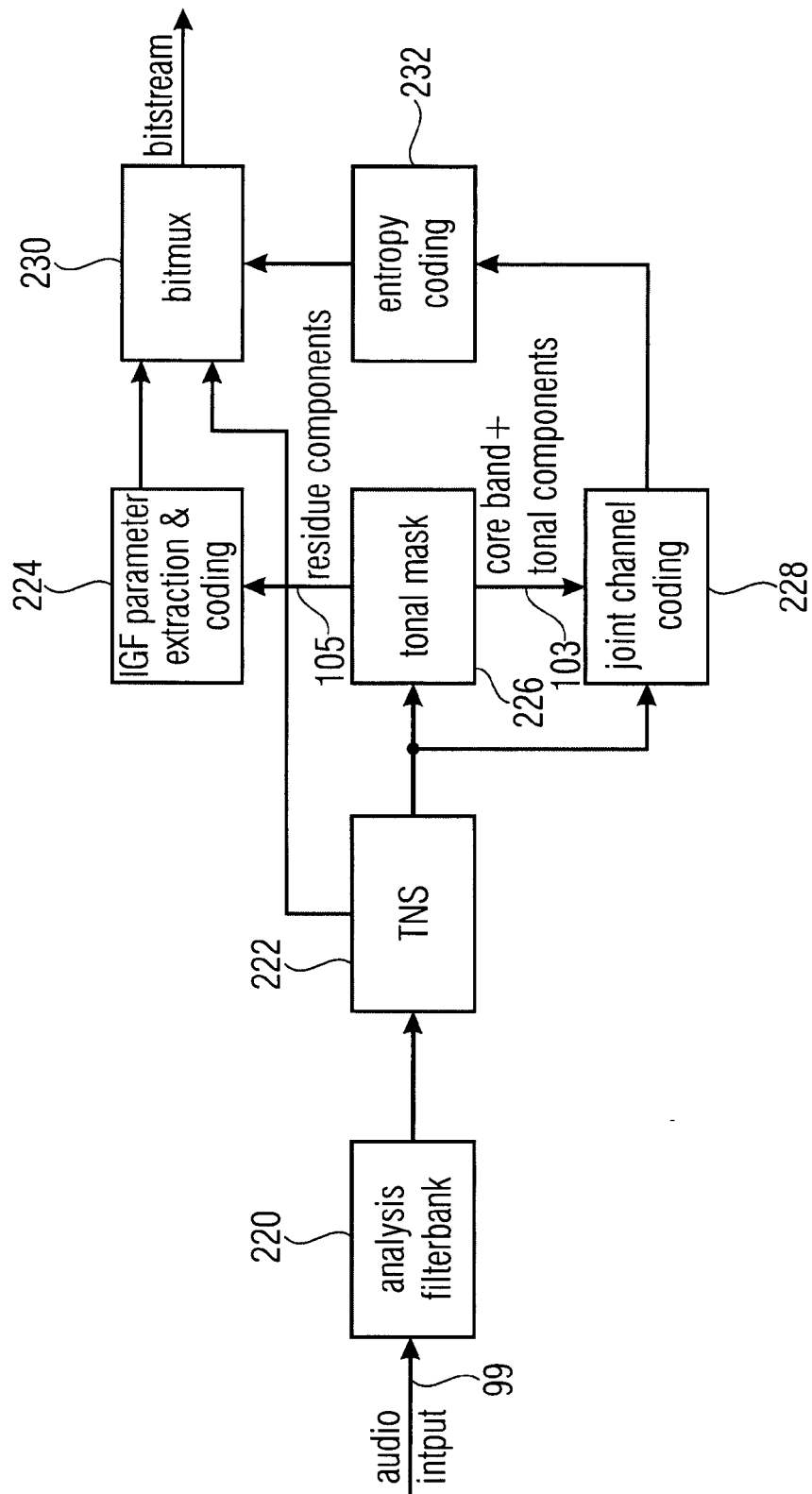


FIG 2B

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- 1<sup>st</sup> resolution (high resolution) for „envelope“ of the 1<sup>st</sup> set (line-wise coding);
- 2<sup>nd</sup> resolution (low resolution) for „envelope“ of the 2<sup>nd</sup> set (scale factor per SCB);

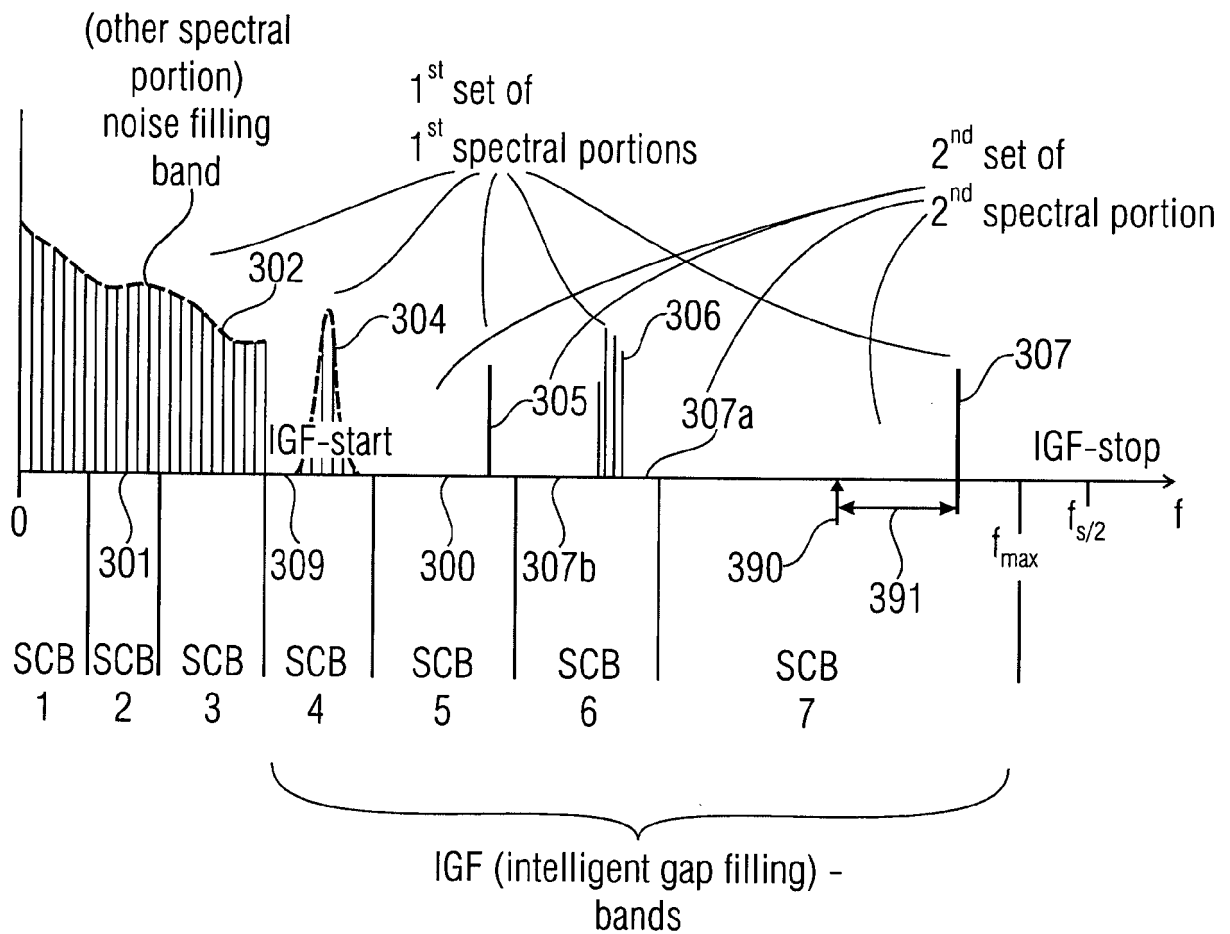


FIG 3A

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|      |                 |      |                |                |                |                |
|------|-----------------|------|----------------|----------------|----------------|----------------|
| SCB1 | SCB2            | SCB3 | SCB4           | SCB5           | SCB6           | SCB7           |
| SF1  | SF2             | SF3  | SF4            | SF5            | SF6            | SF7            |
|      |                 |      | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | E <sub>4</sub> |
|      | NF <sub>2</sub> |      |                |                |                |                |

308      310                      312

FIG 3B

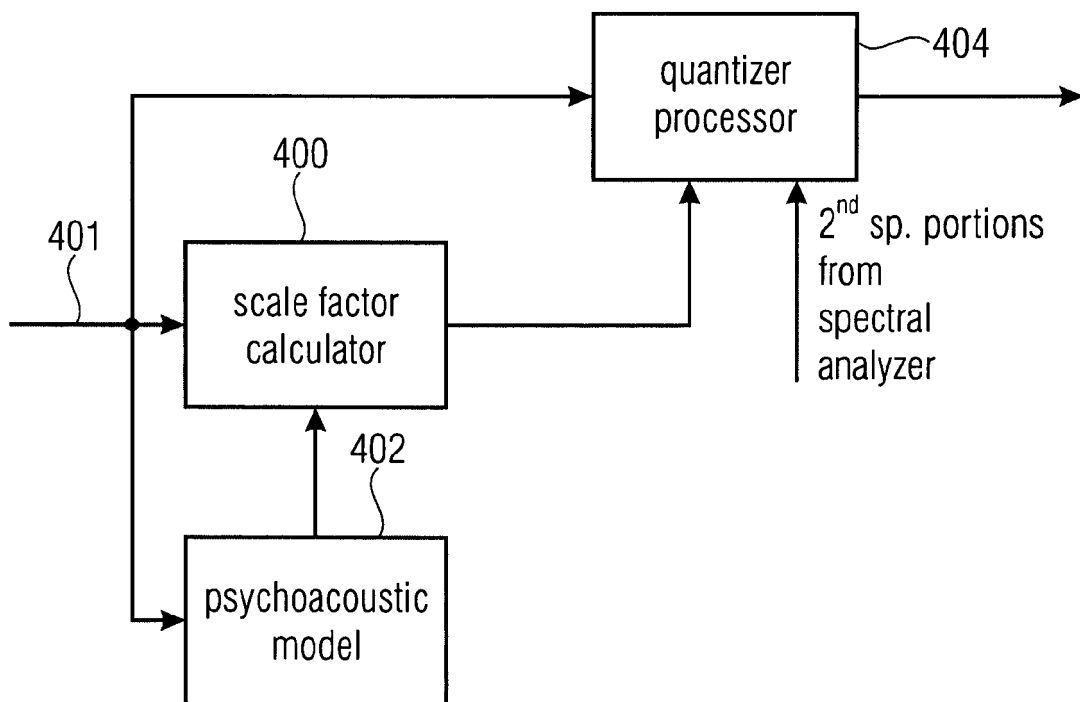


FIG 4A

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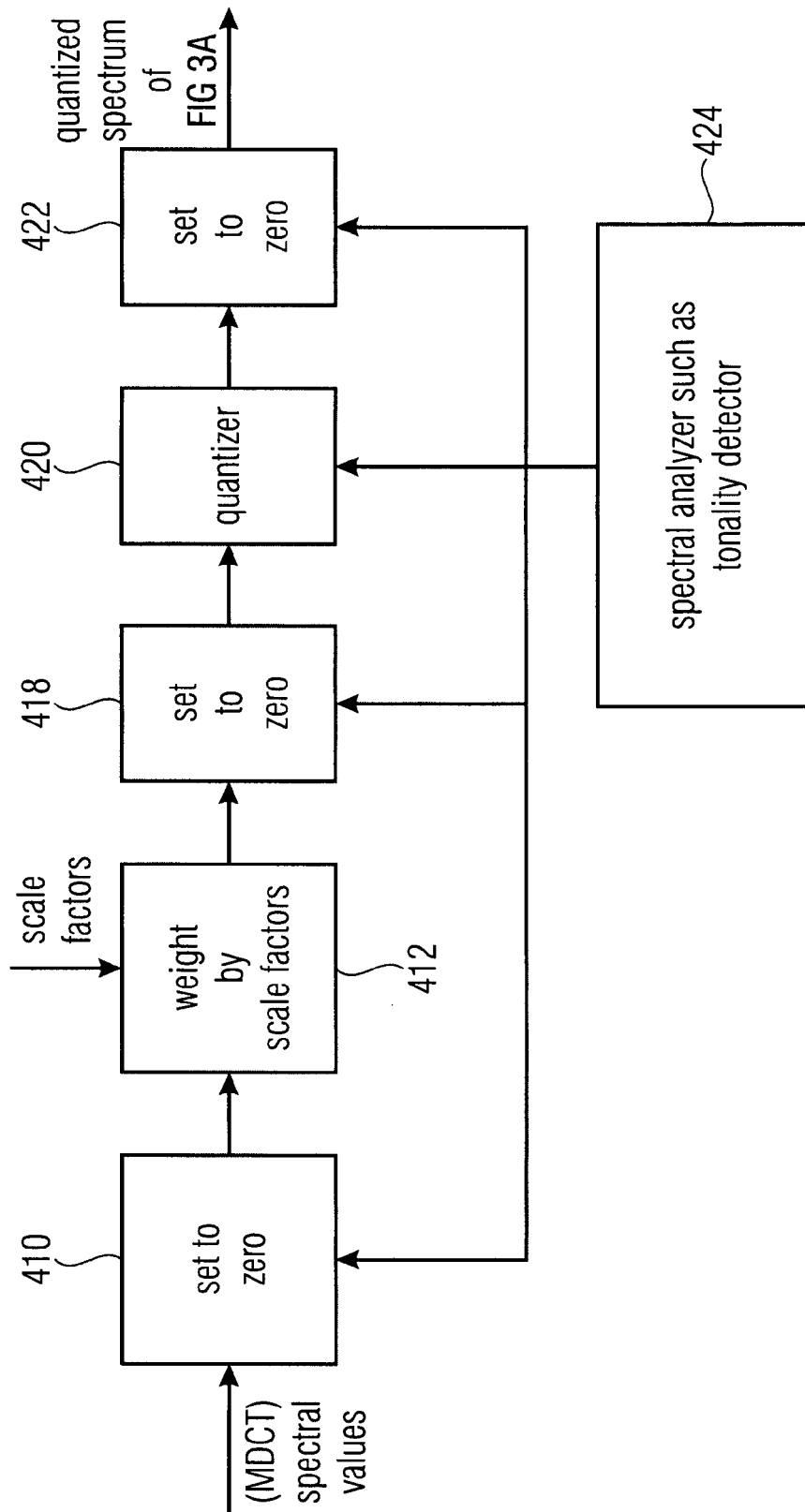


FIG 4B  
(QUANTIZER PROCESSOR)

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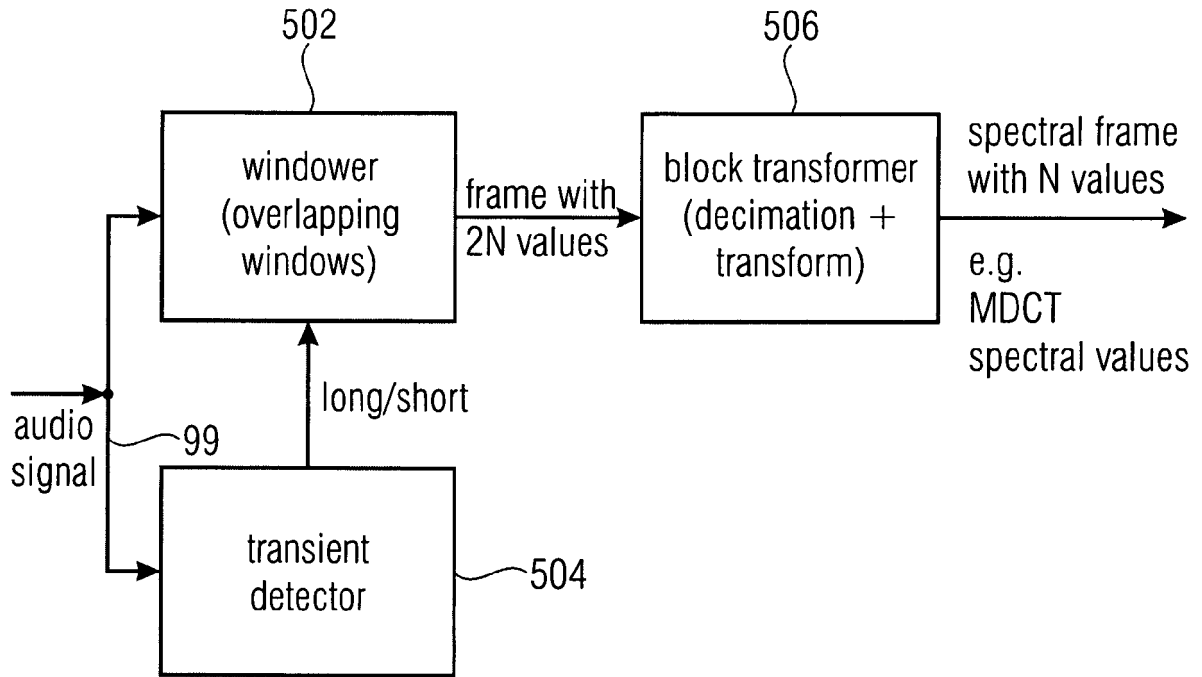


**FIG 5A**  
(OTHER SPECTRAL PORTIONS)

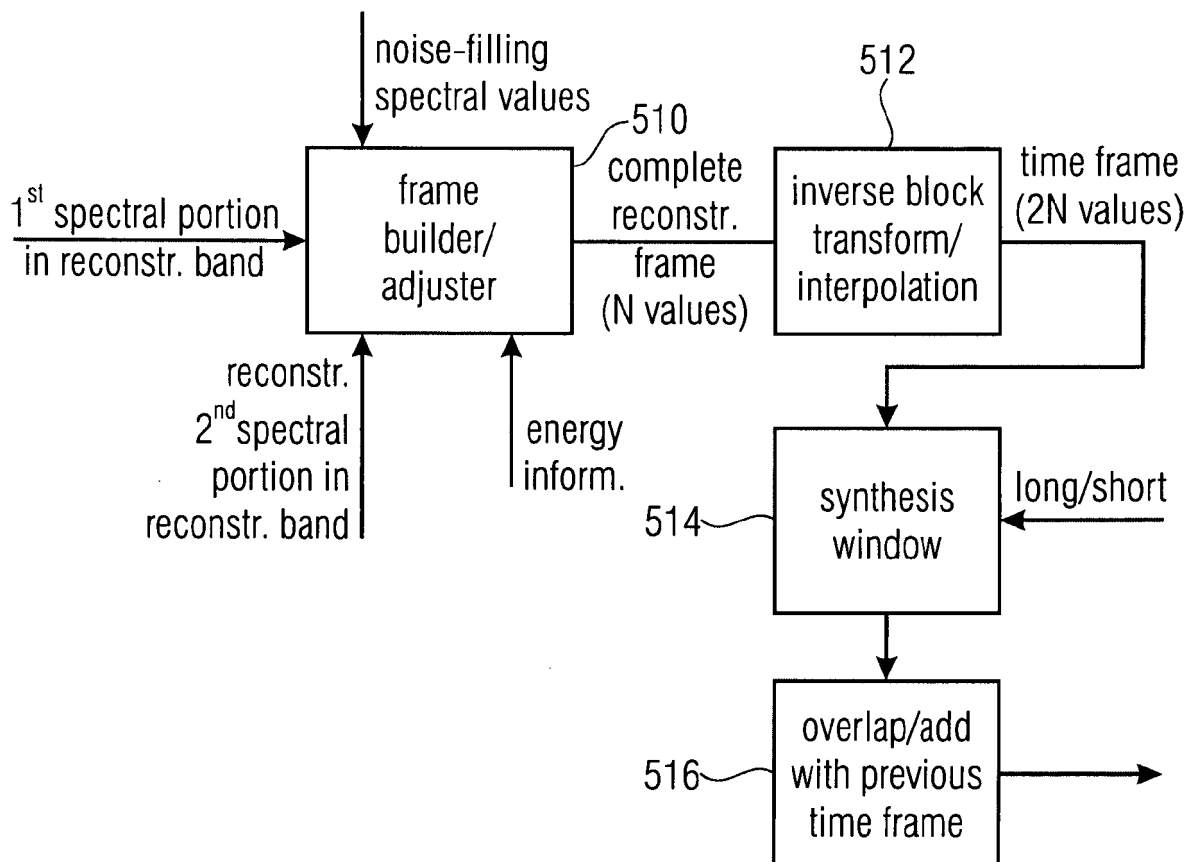


**FIG 5B**

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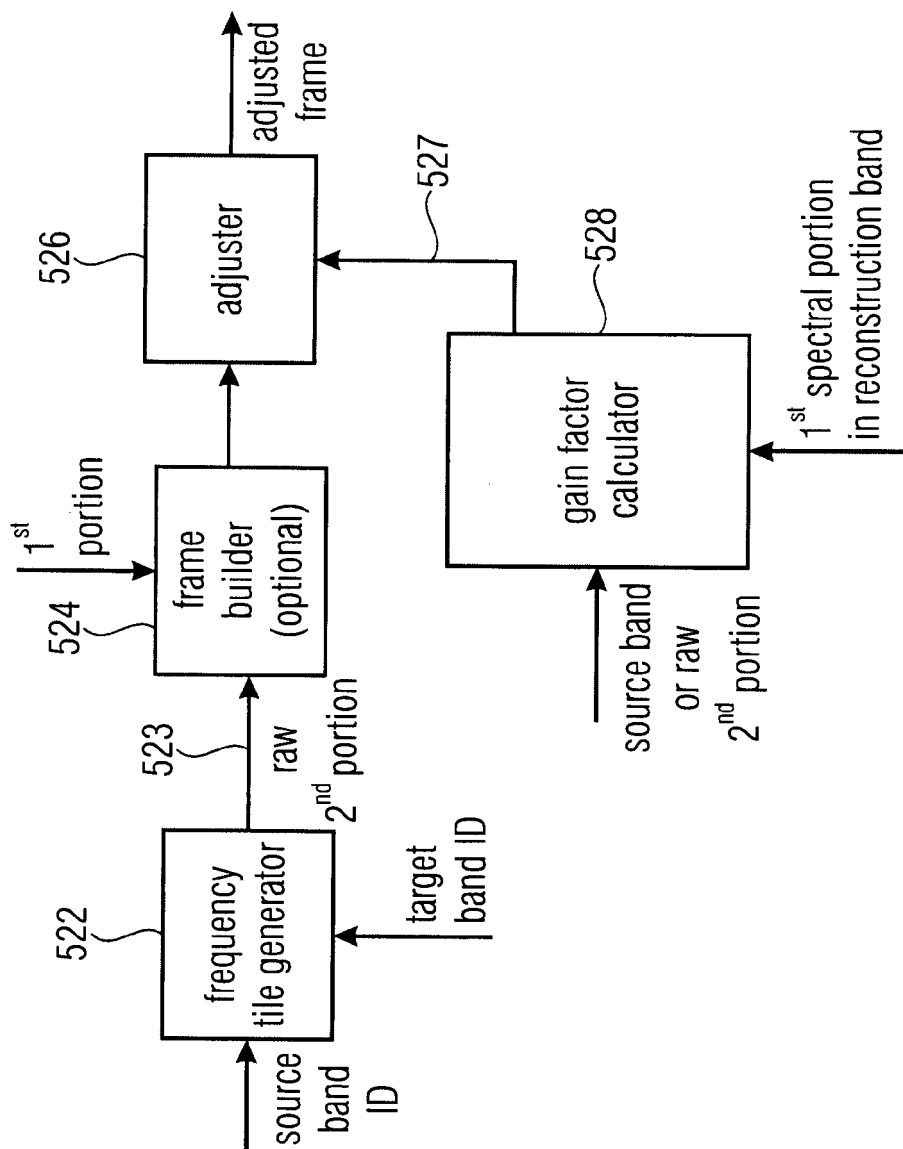


FIG 5C

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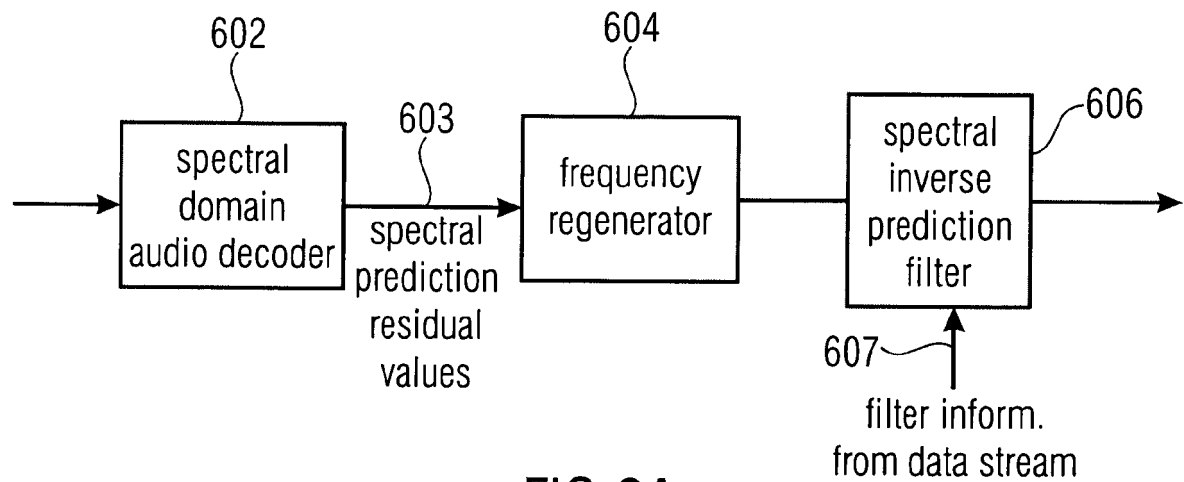


FIG 6A

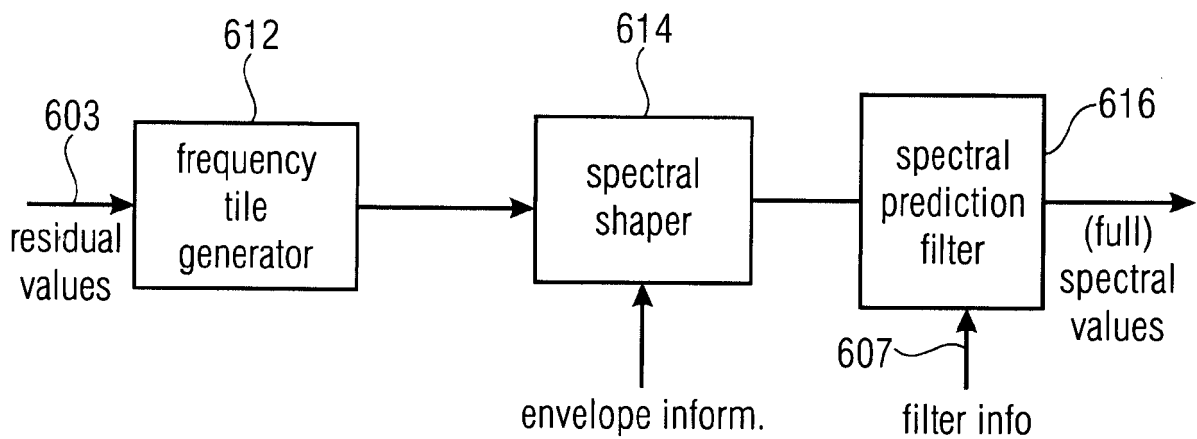


FIG 6B

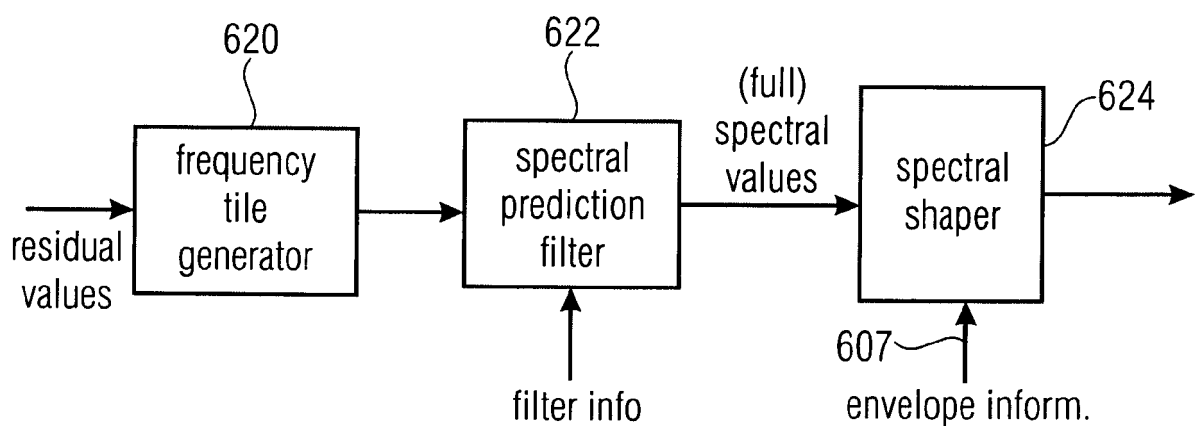


FIG 6C

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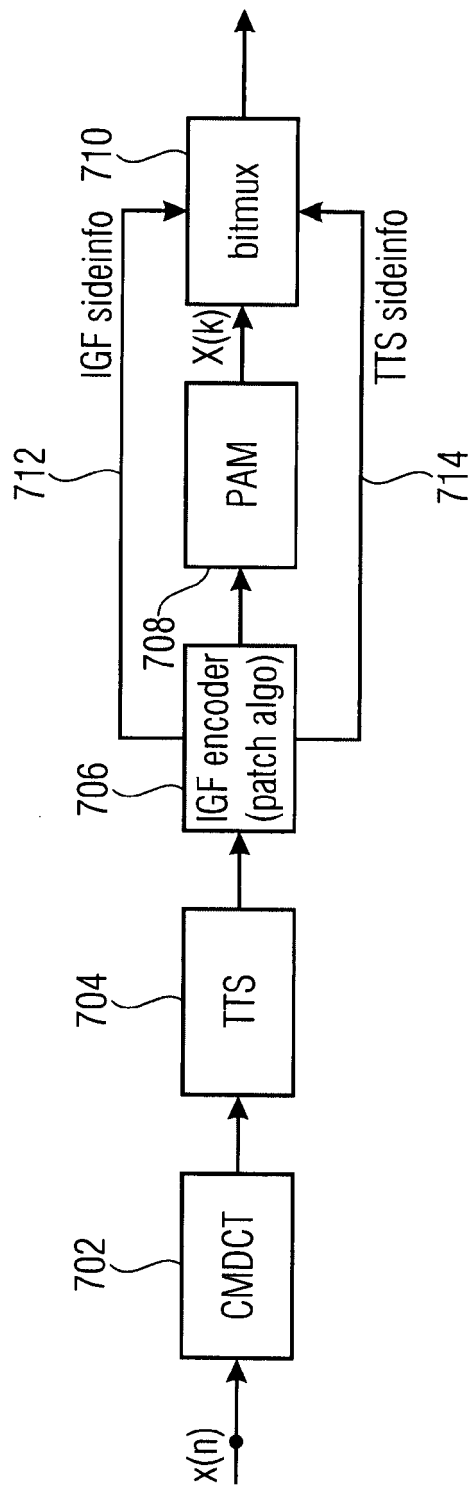


FIG 7A  
(ENCODER)

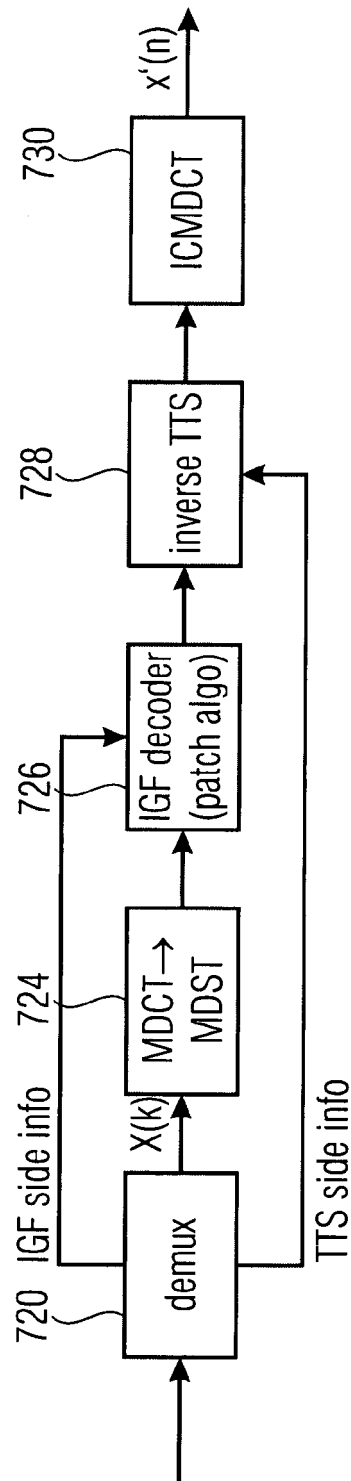
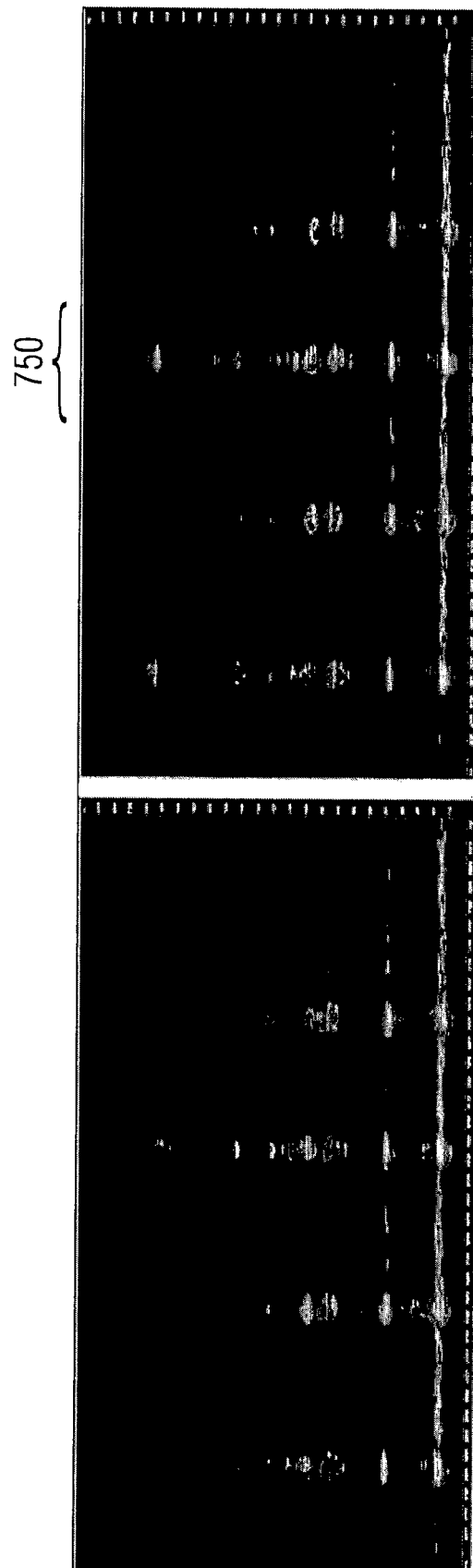


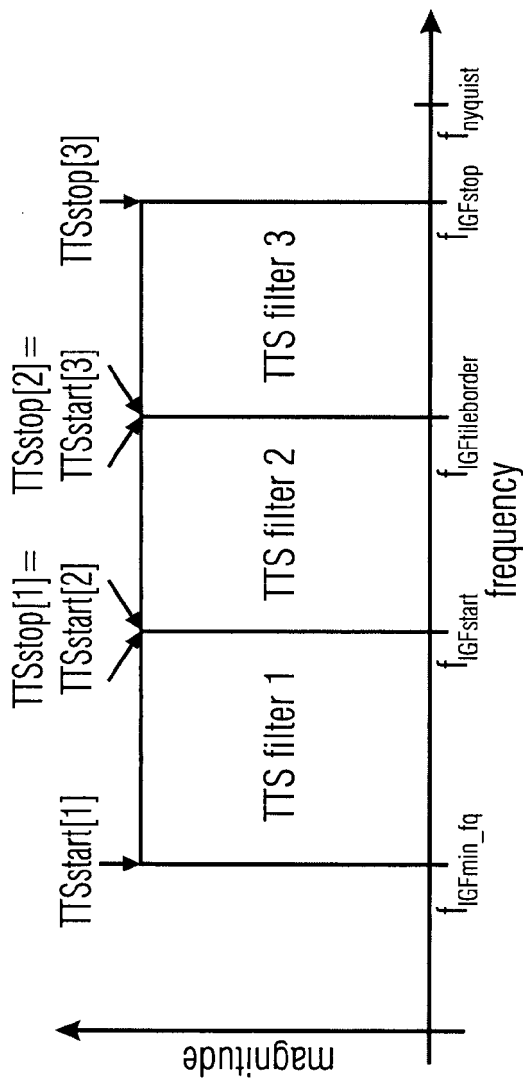
FIG 7B  
(DECODER)

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DFT spectrogram of the original signal (left panel);  
DFT spectrogram of the extended signal without TTS (right panel).

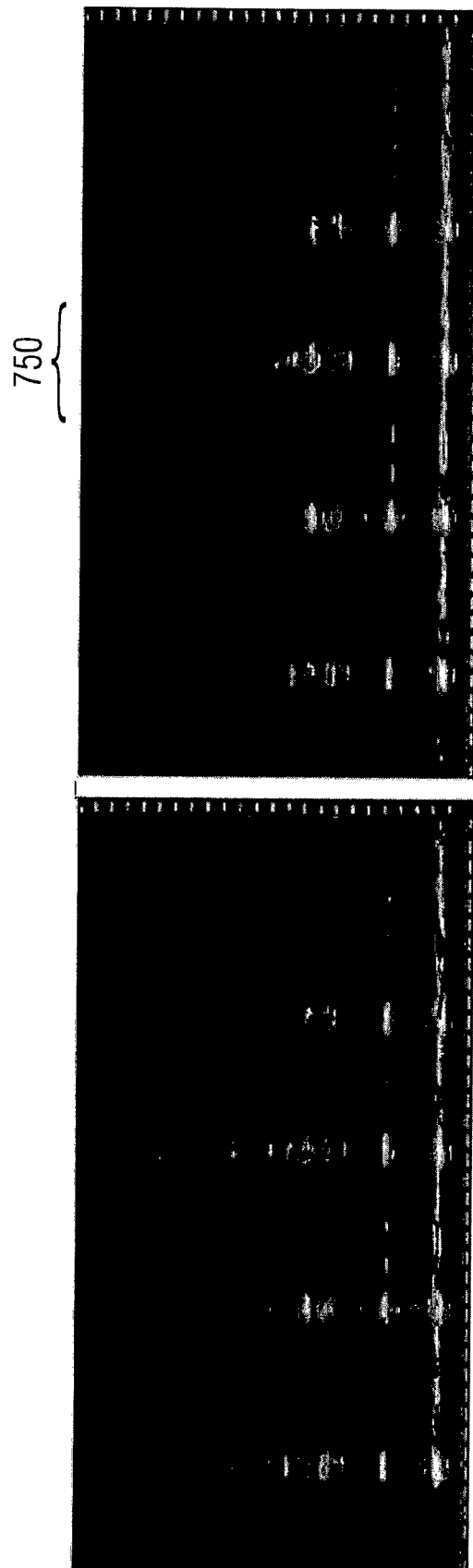
FIG 7C



Basis TTS filter scheme. Each box marks the spectral region covered by one particular filter.

FIG 7D

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DFT spectrogram of the original signal (left panel);  
DFT spectrogram of the extended signal with TTS (right panel).

FIG 7E

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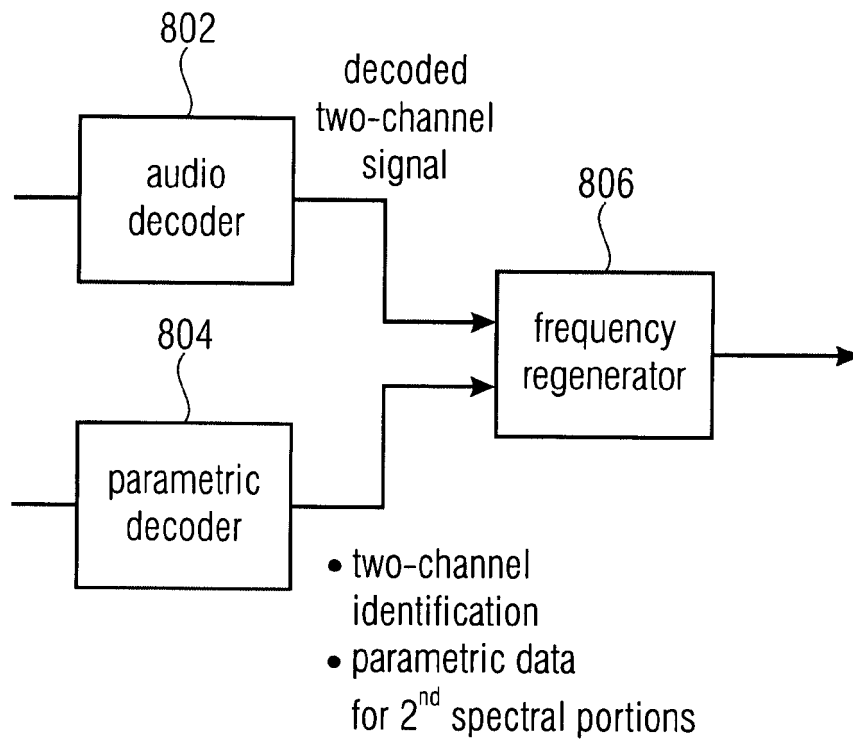


FIG 8A

|               |   |   |   |   |
|---------------|---|---|---|---|
| source range  | 1 | 1 | 2 | 2 |
| destin. range | 1 | 2 | 1 | 2 |

1: first two-channel representation (e.g. L/R)

2: second two-channel representation (e.g. M/S)

FIG 8B

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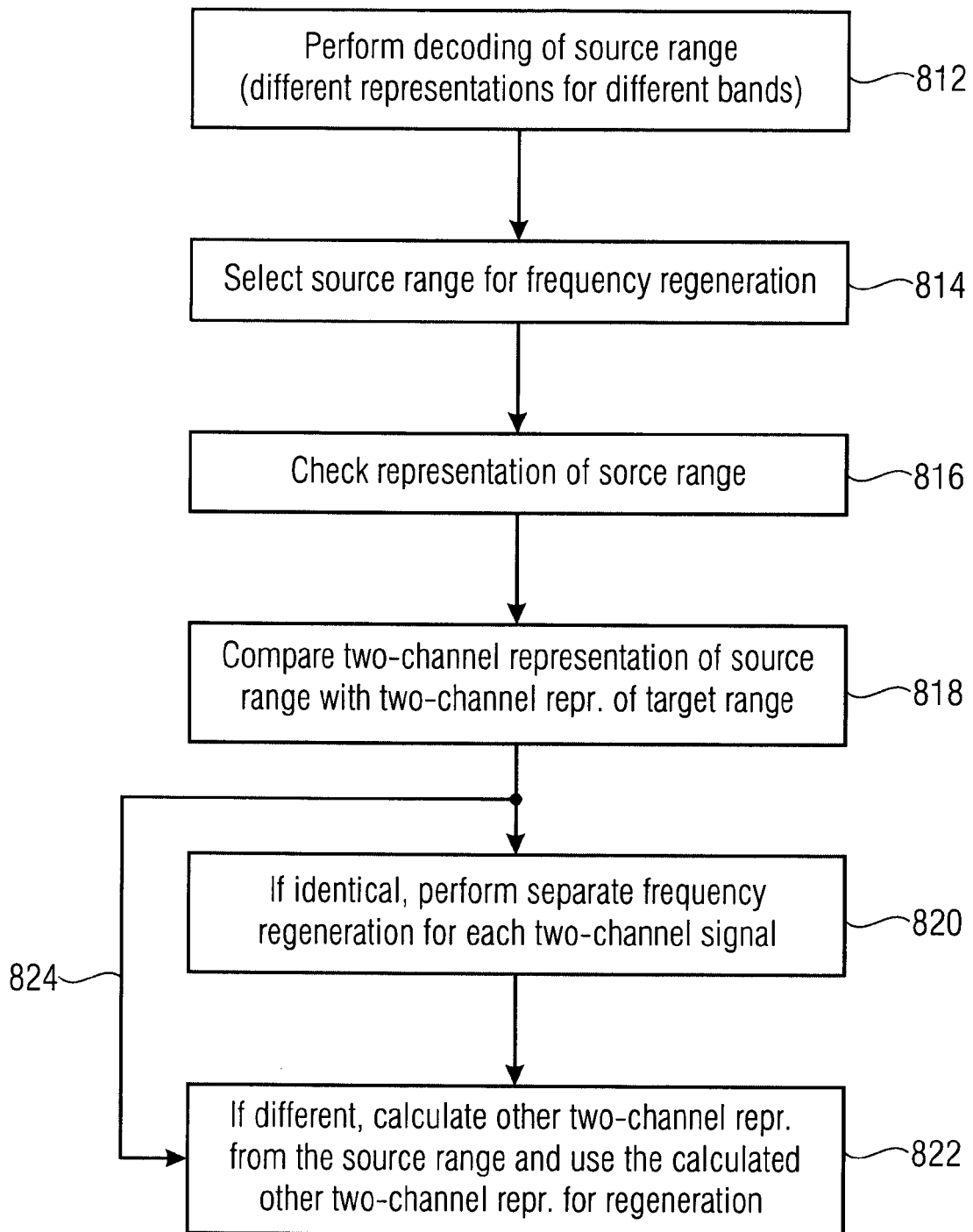


FIG 8C

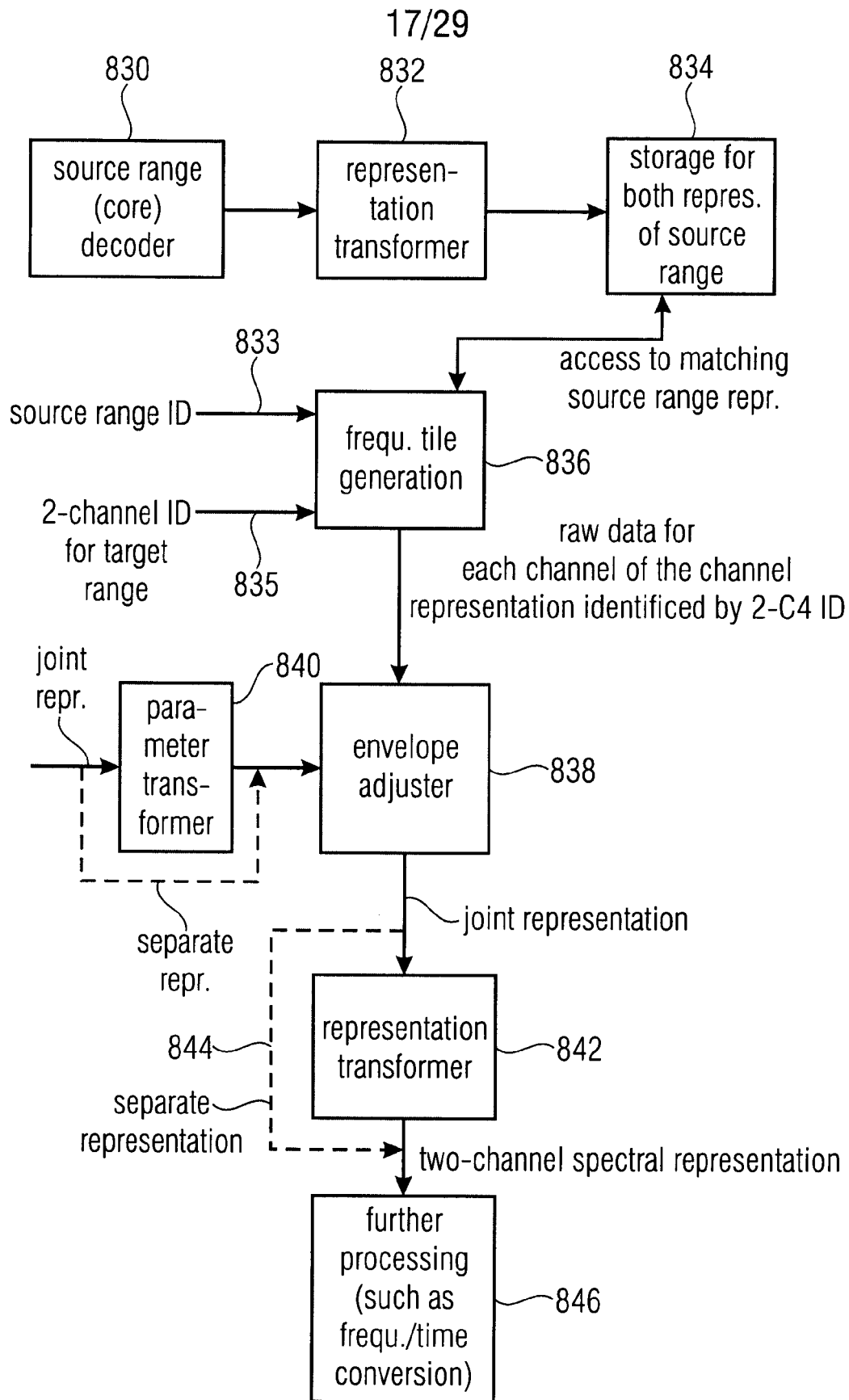


FIG 8D

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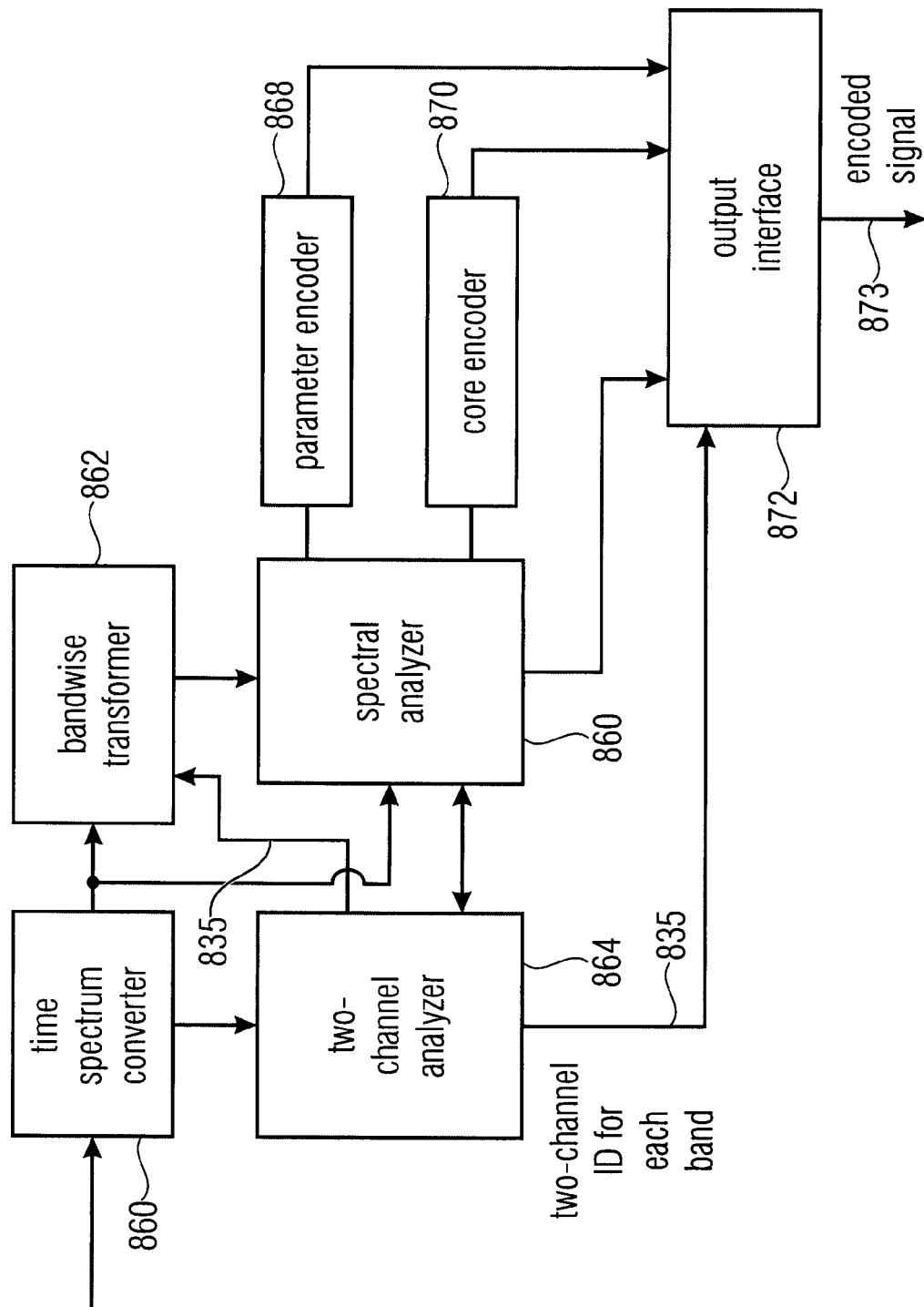


FIG 8E

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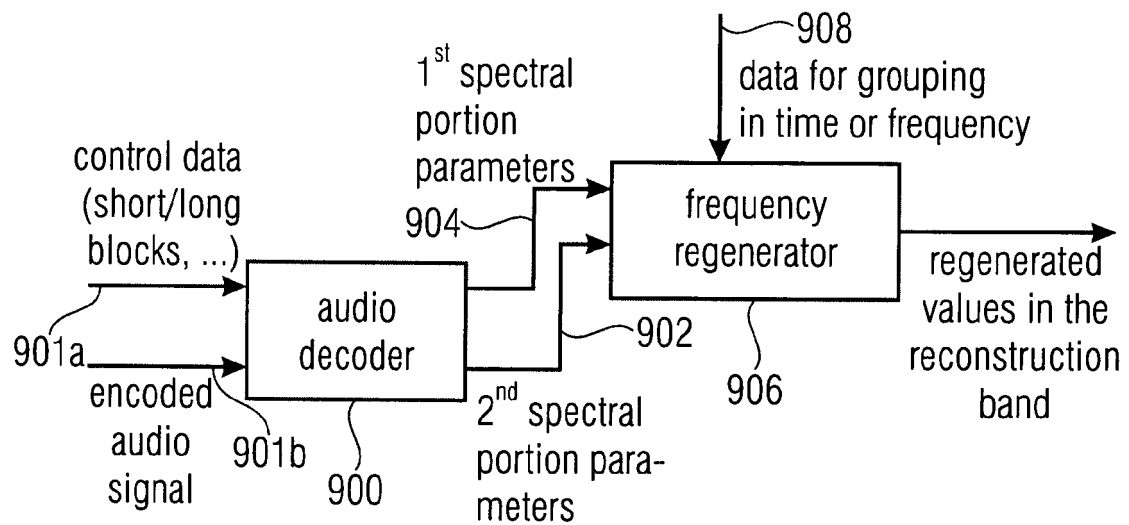


FIG 9A

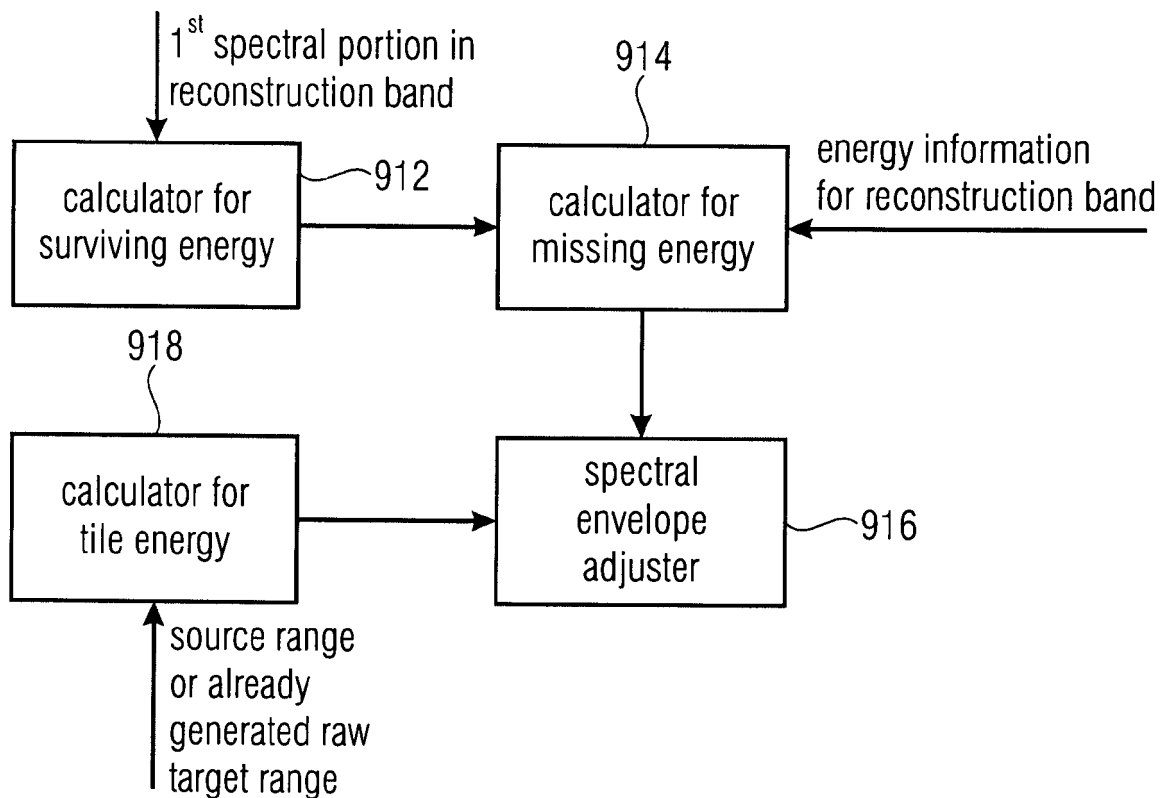
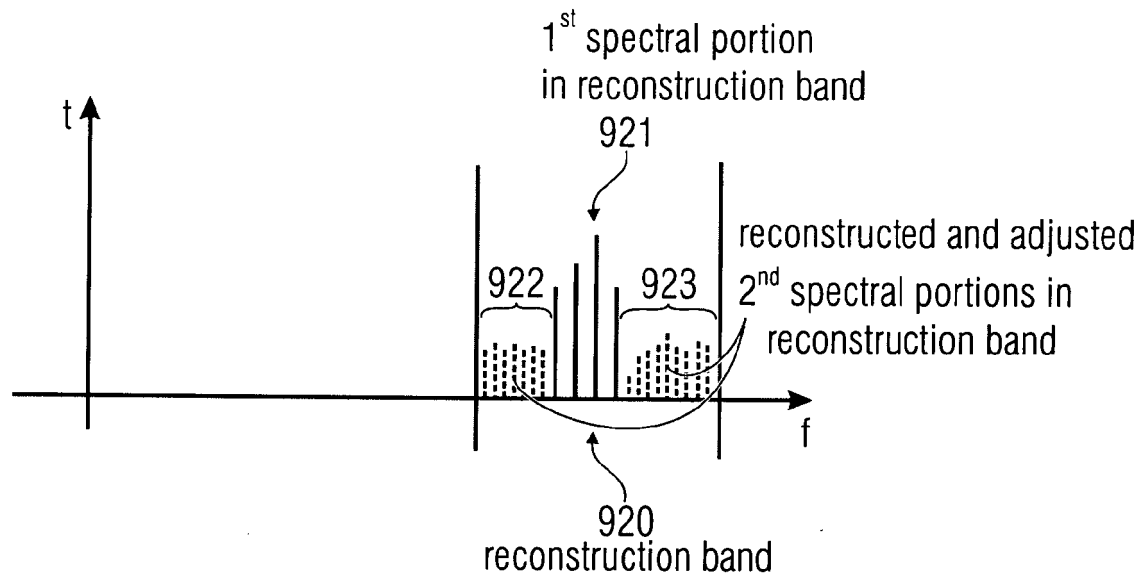


FIG 9B

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- e.g. • surviving energy: 5 units
- energy value for reconstr. band: 10 units (covers 1<sup>st</sup> and 2<sup>nd</sup> spectral portions in the reconstruction band)
- energy of source range data or raw target range data: 8 units
- missing energy: 5 units
- gain factor:  $g := \sqrt{\frac{mE_k}{pE_k}} = 0.79$

→ only spectral values for the 2<sup>nd</sup> spectral portions are adjusted

→ 1<sup>st</sup> spectral portion is not influenced by the envelope adjustment

FIG 9C

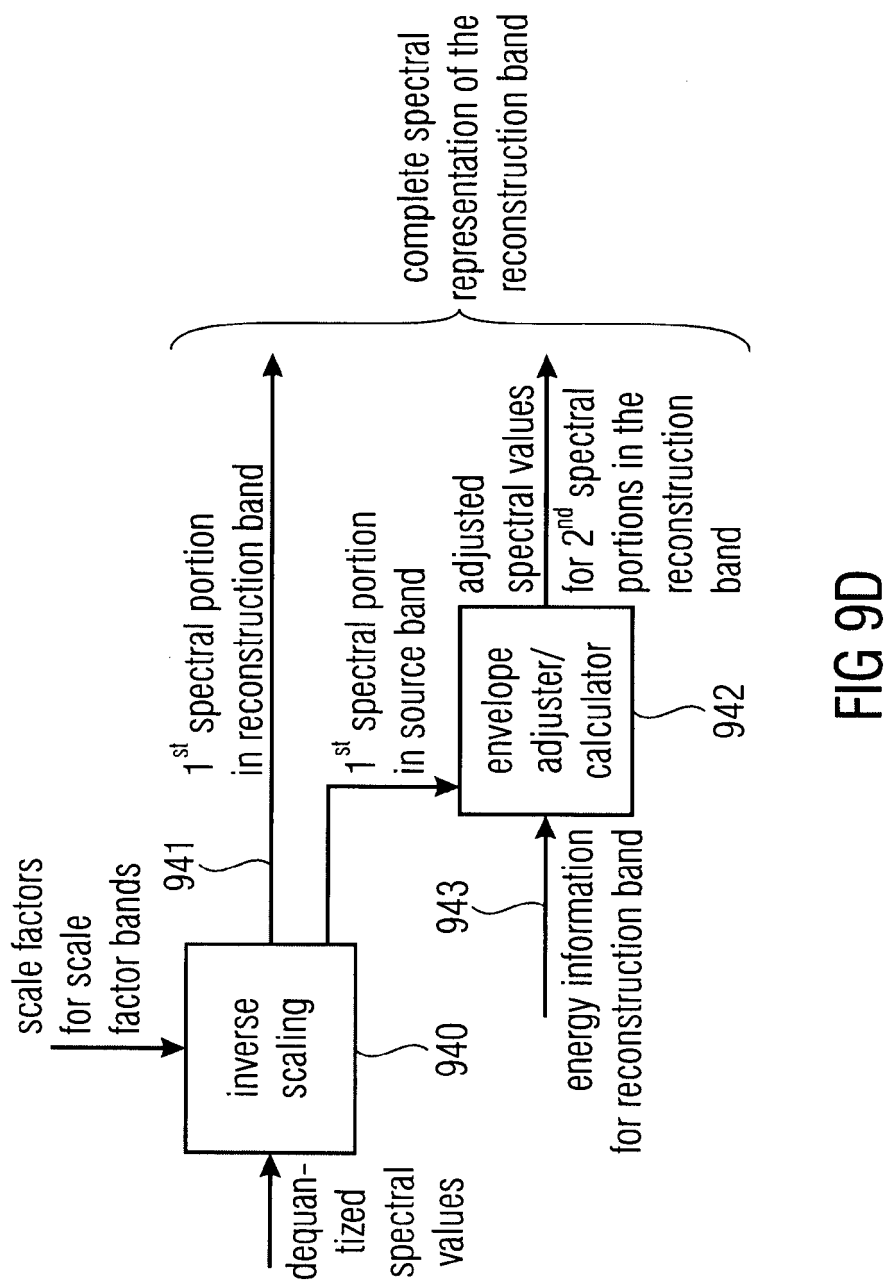


FIG 9D

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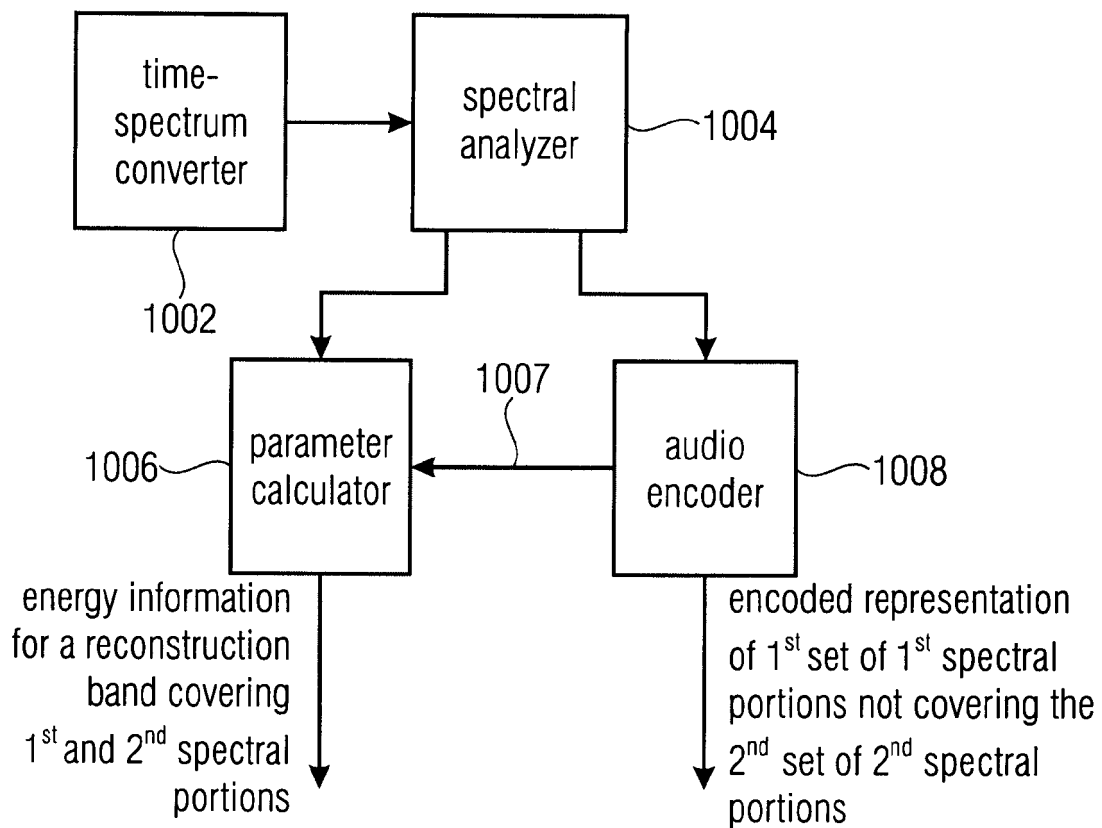


FIG 10A

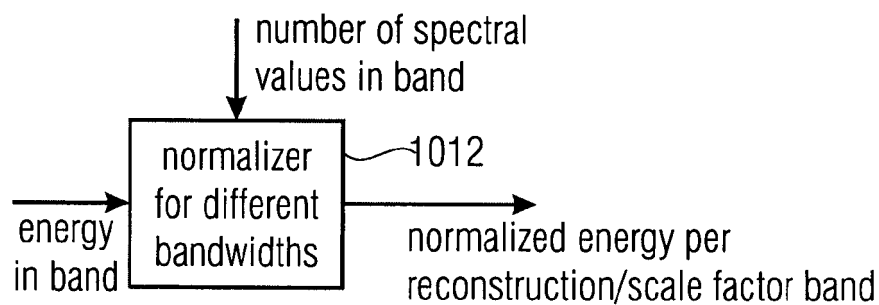


FIG 10B

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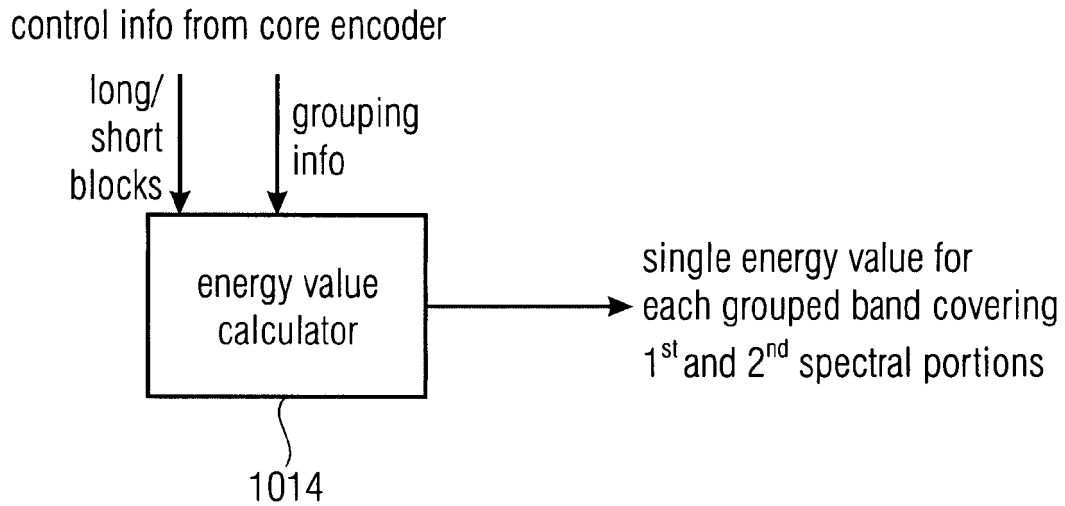


FIG 10C

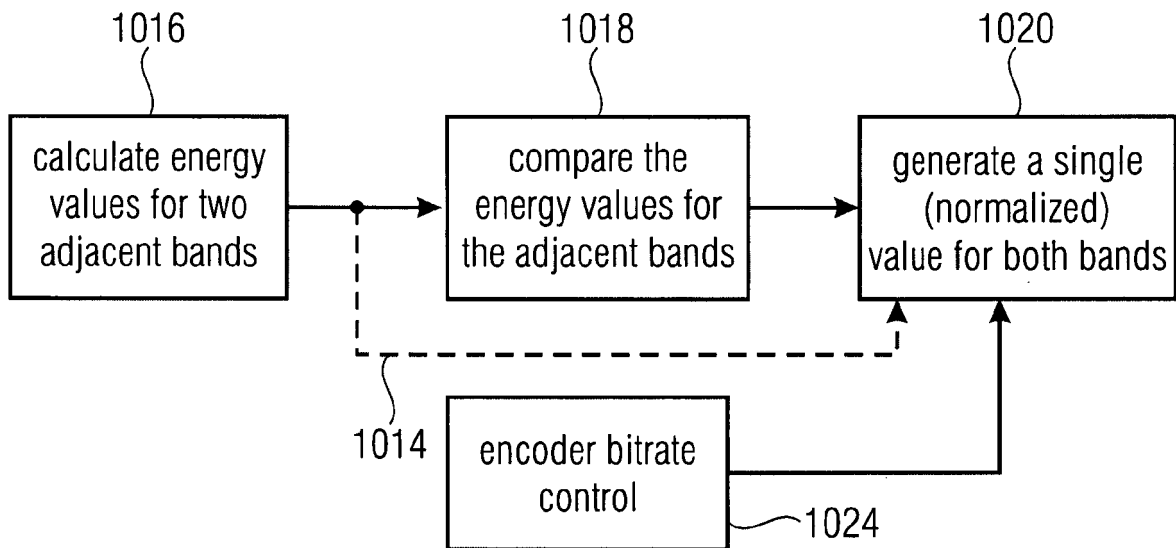


FIG 10D

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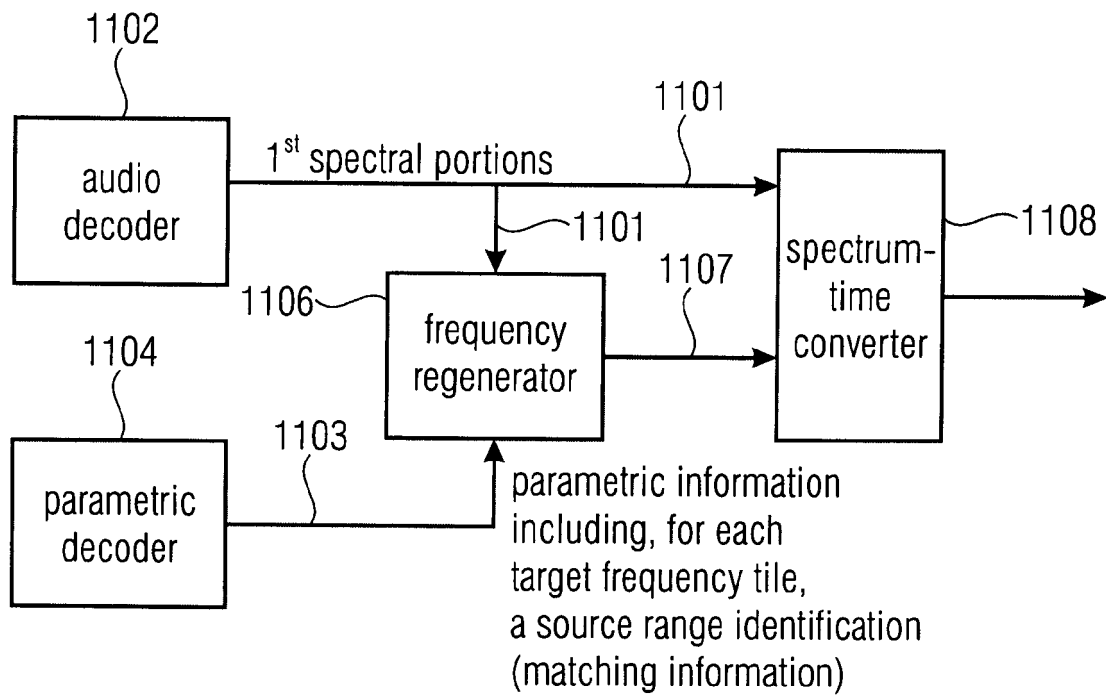


FIG 11A

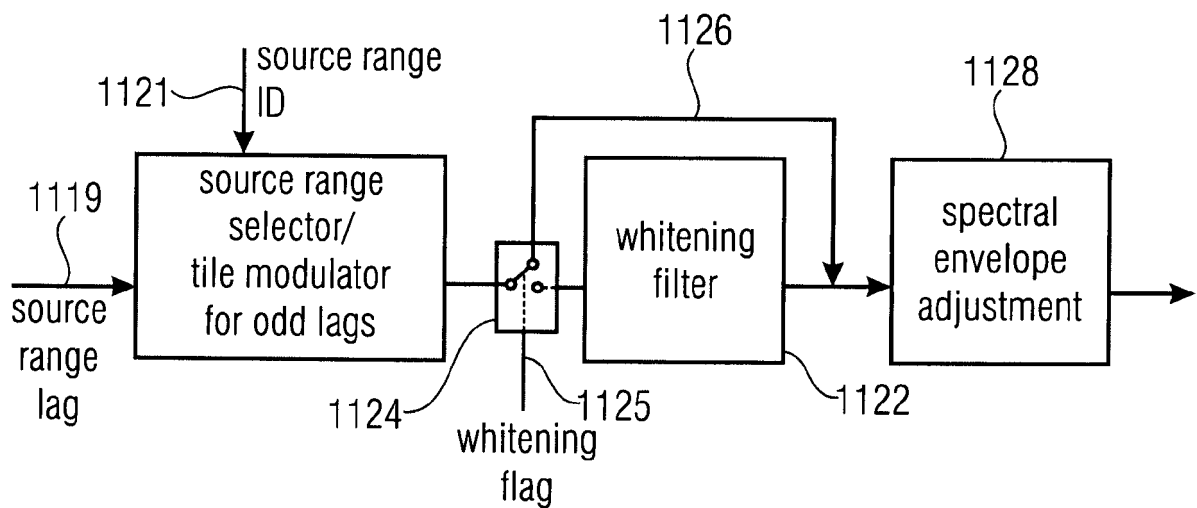


FIG 11B

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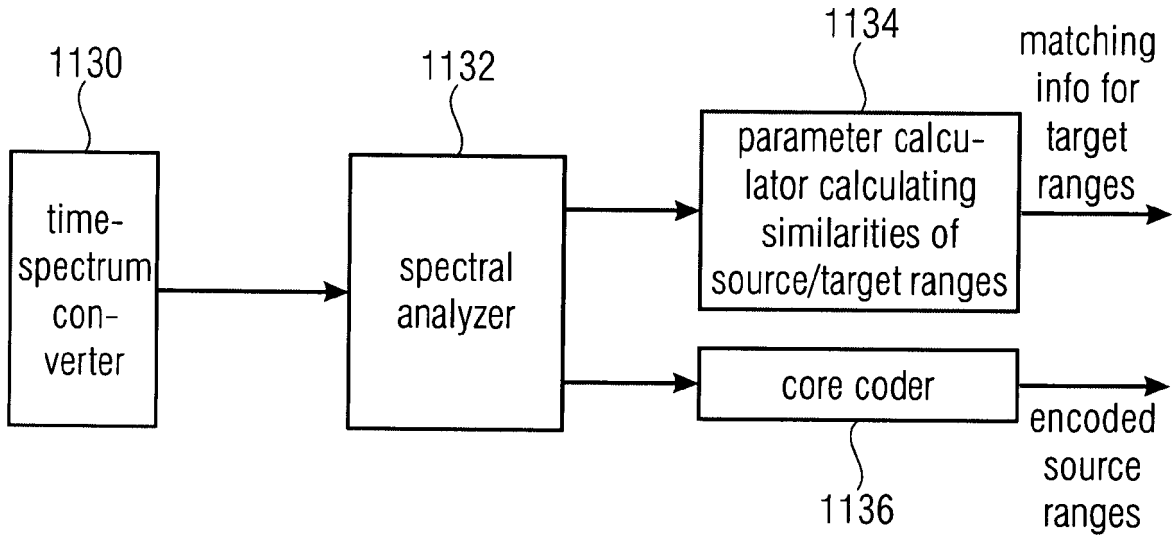


FIG 11C

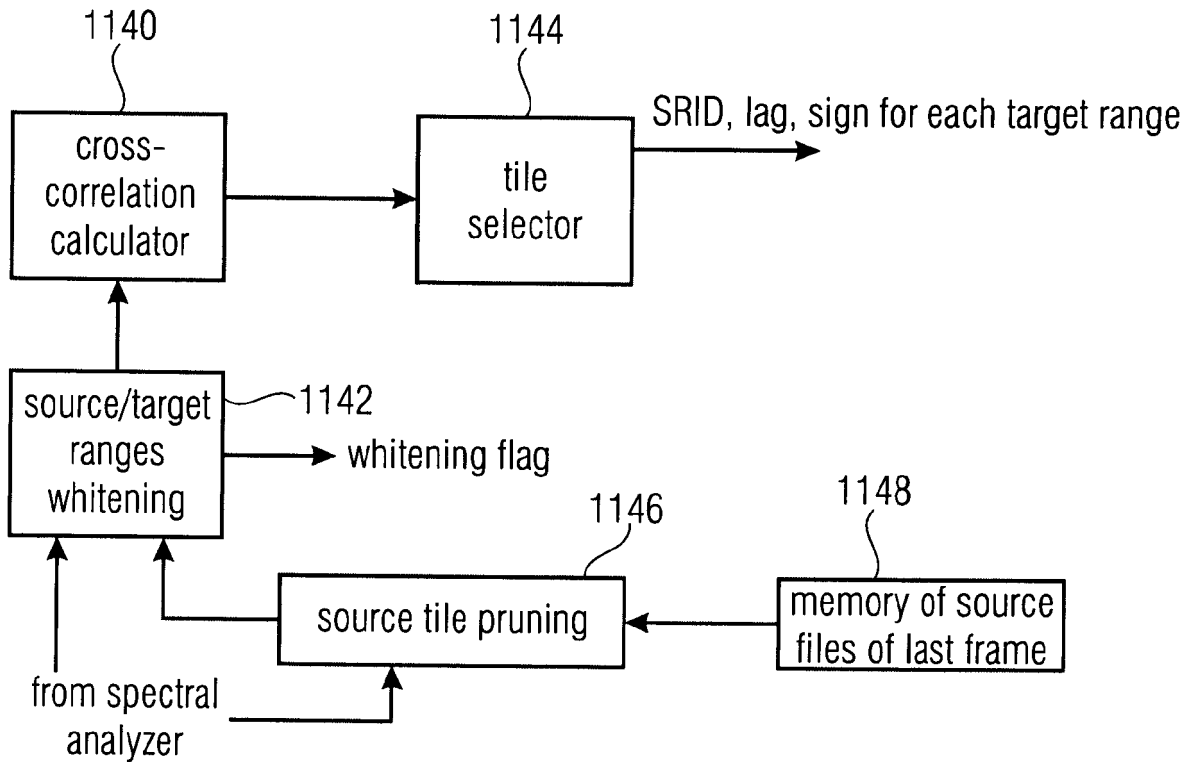


FIG 11D

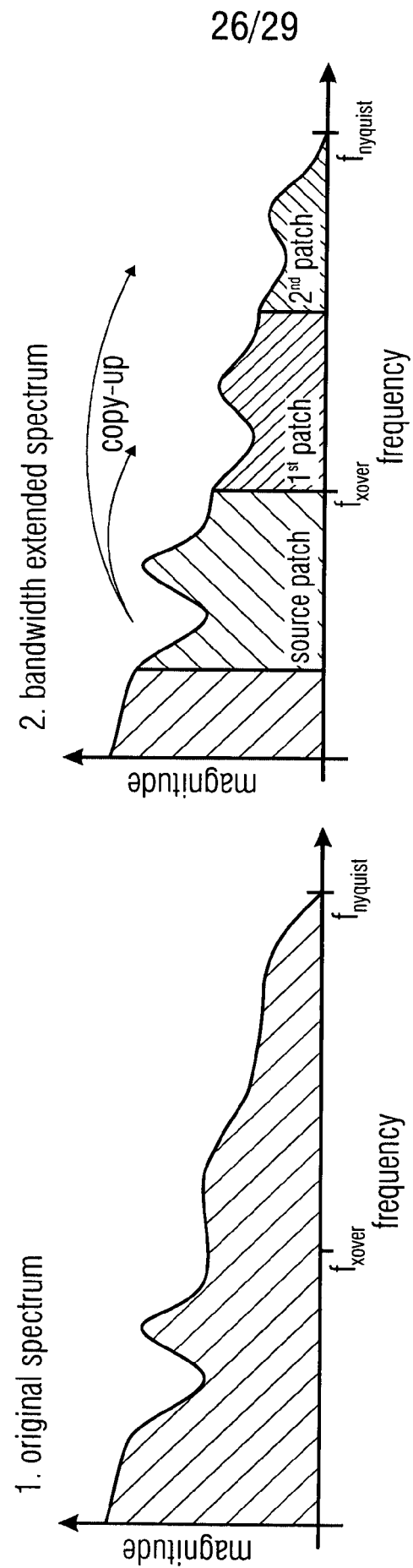


FIG 12A

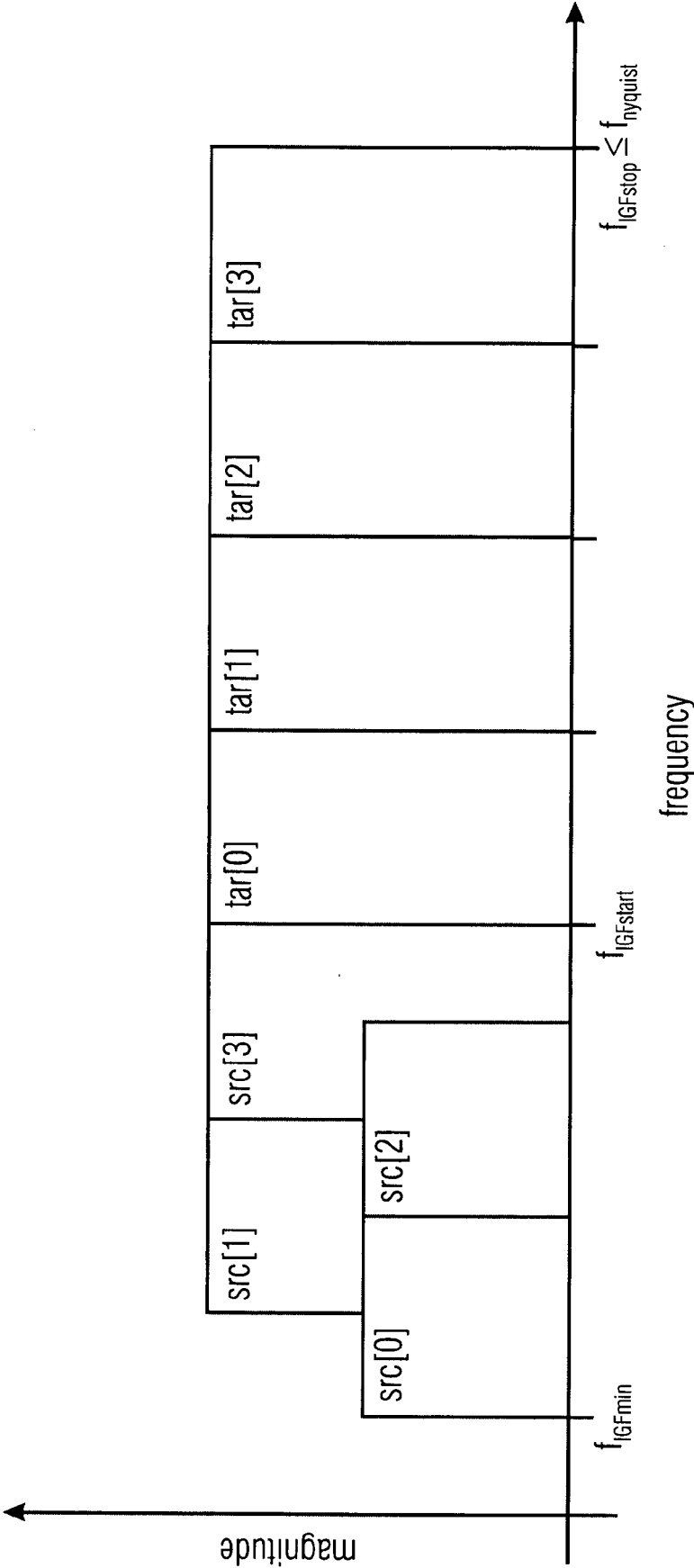


FIG 12B

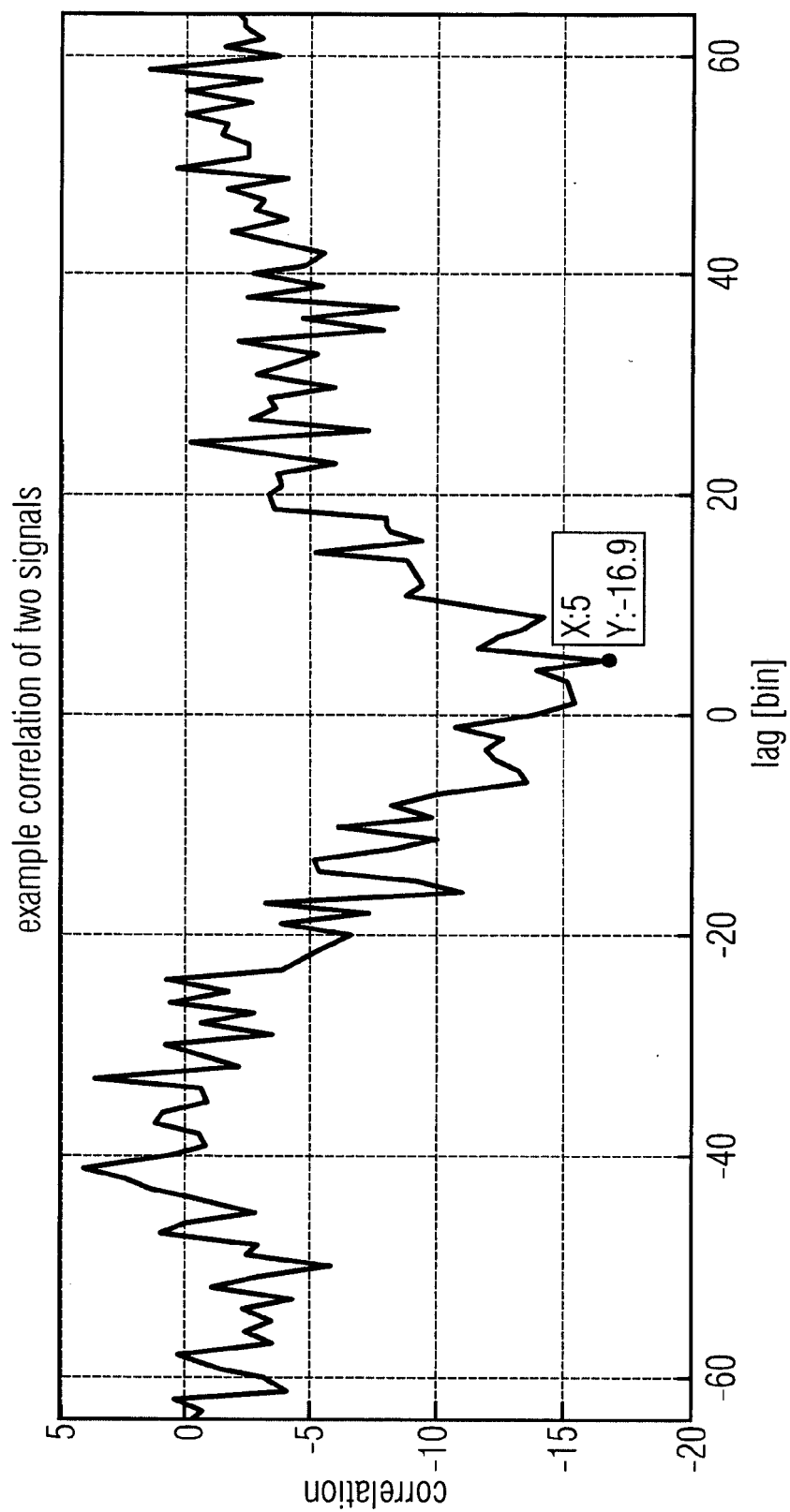


FIG 12C

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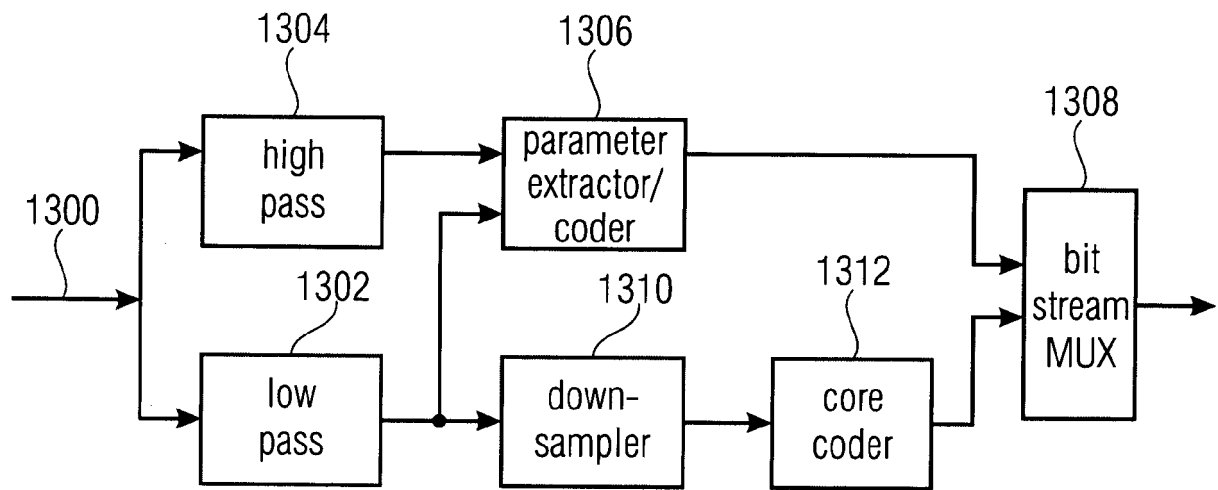


FIG 13A  
(PRIOR ART)

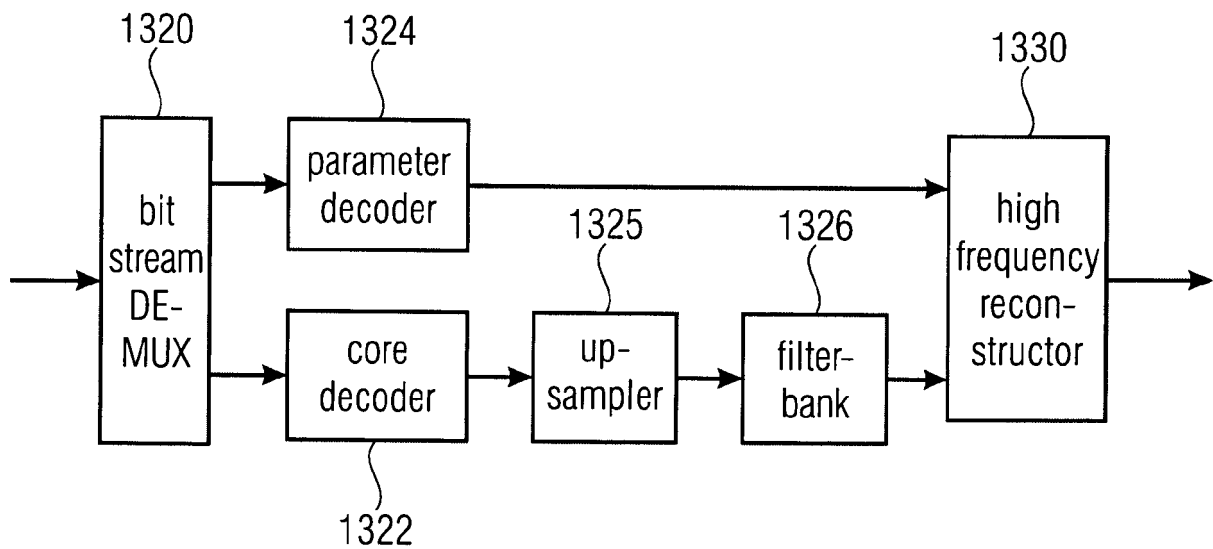


FIG 13B  
(PRIOR ART)

## FIGURE FOR ABSTRACT

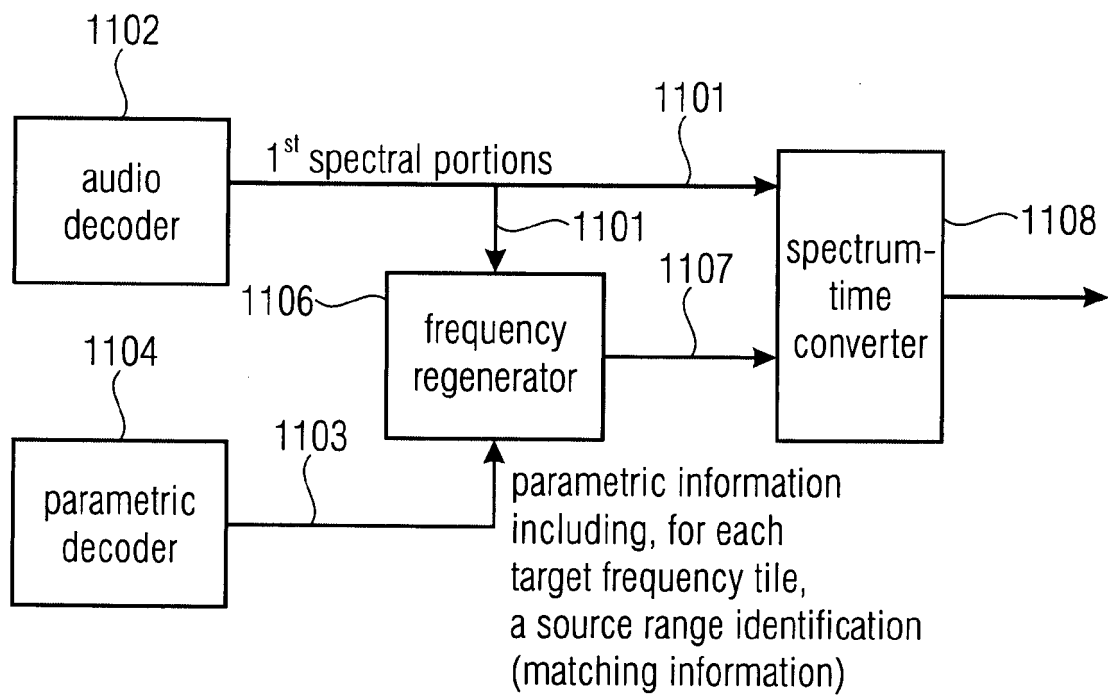


FIG 11A