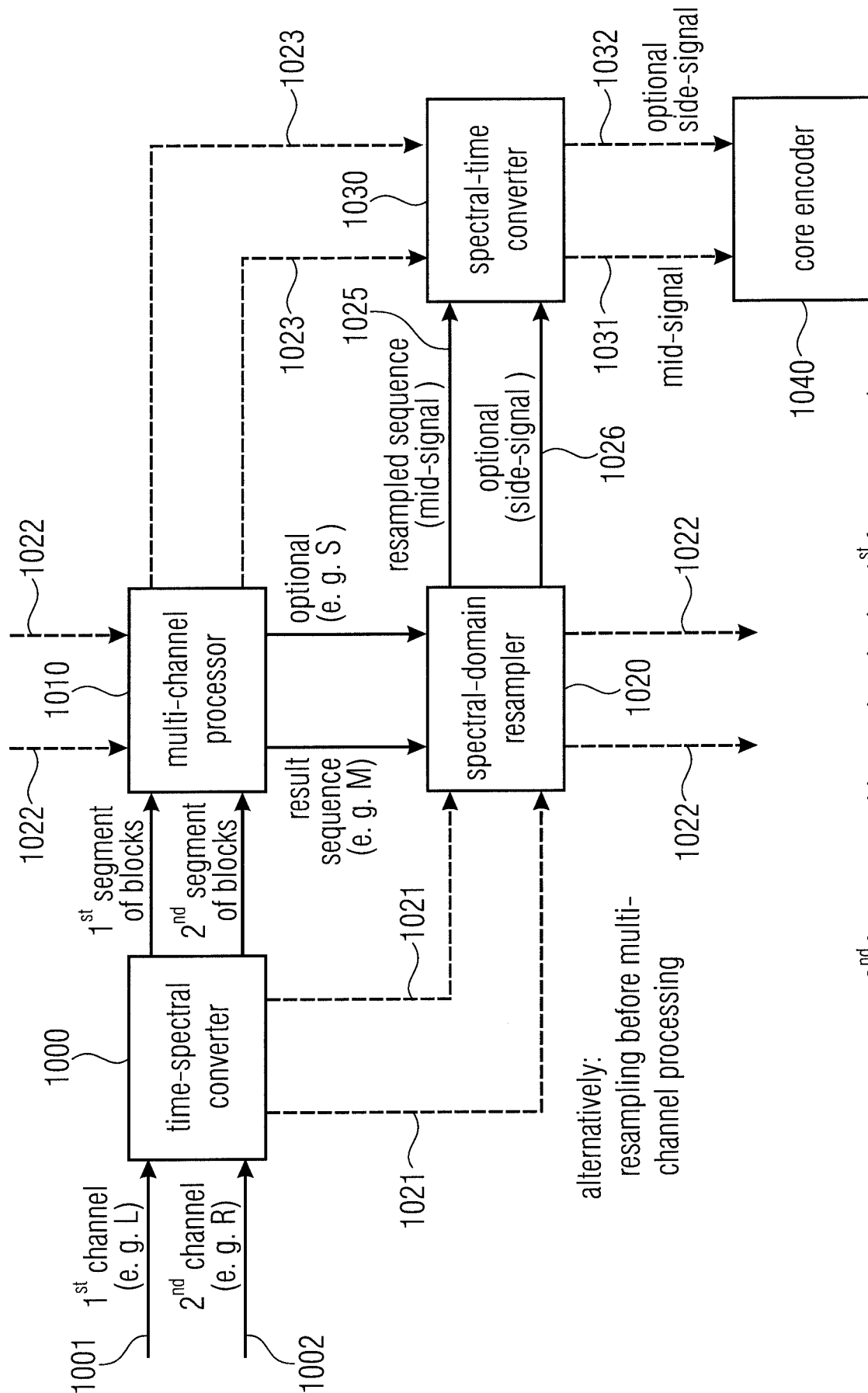


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2nd frame control is synchronized to 1st frame control

Fig. 1

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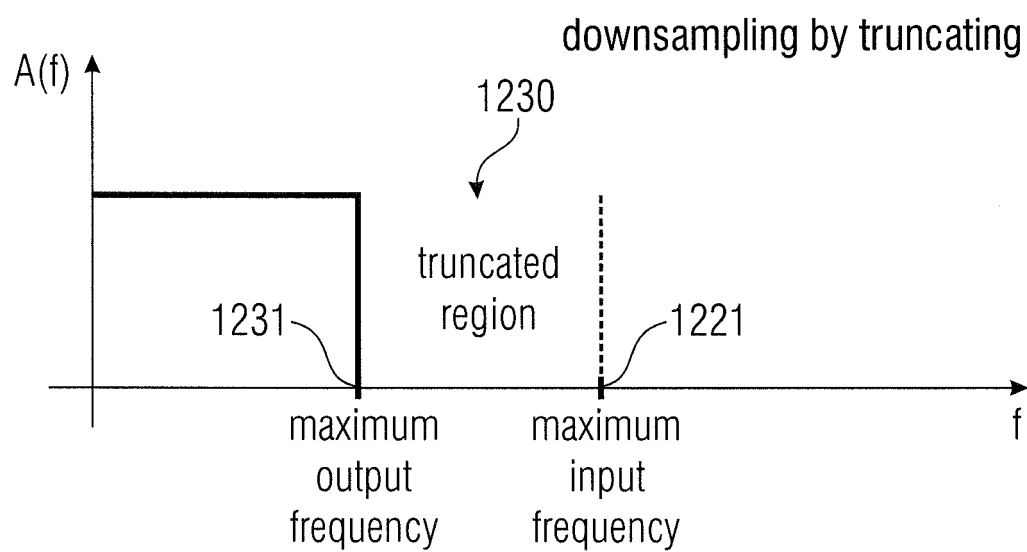
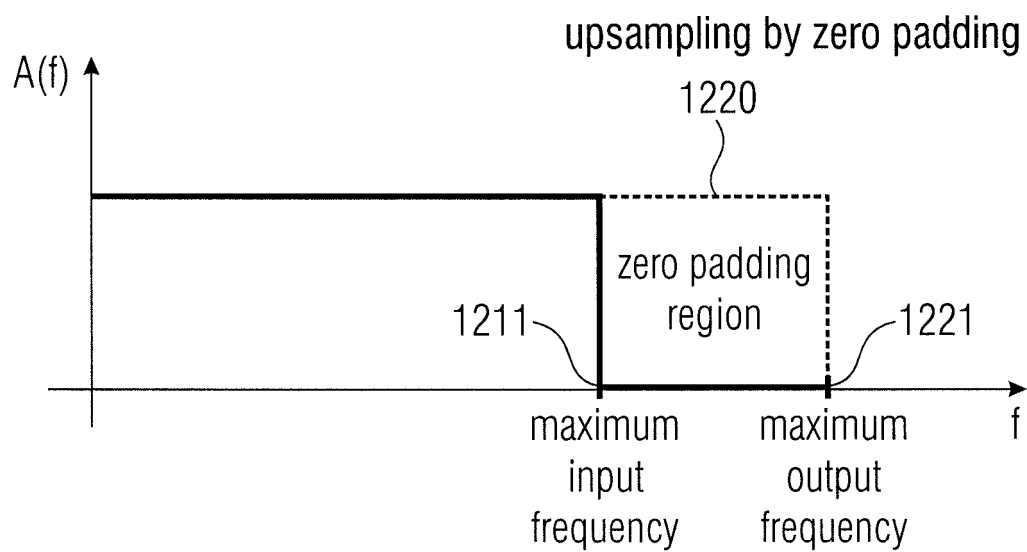
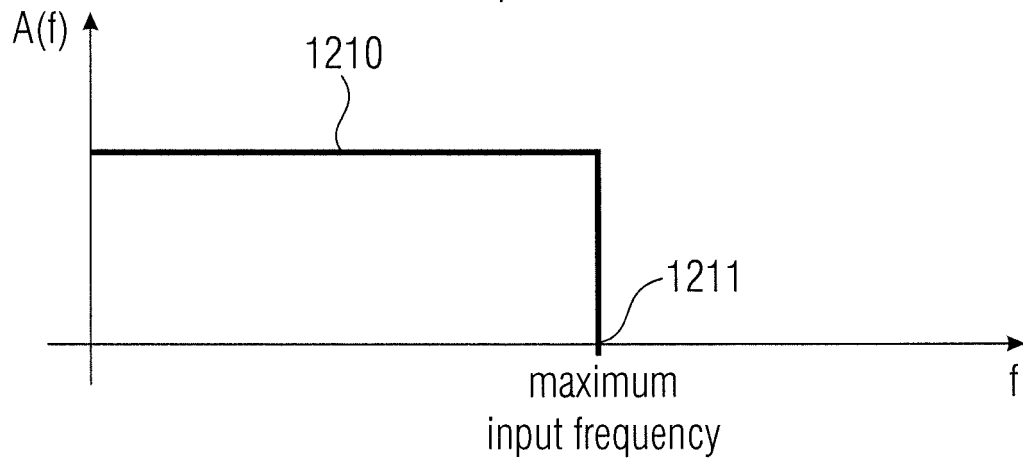


Fig. 2

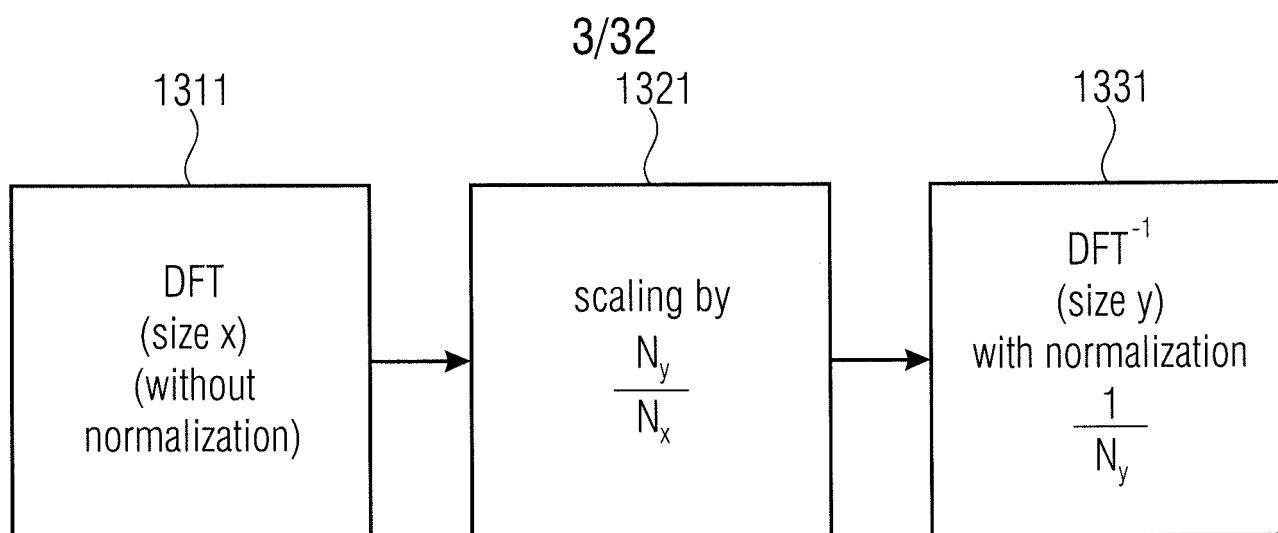


Fig. 3a

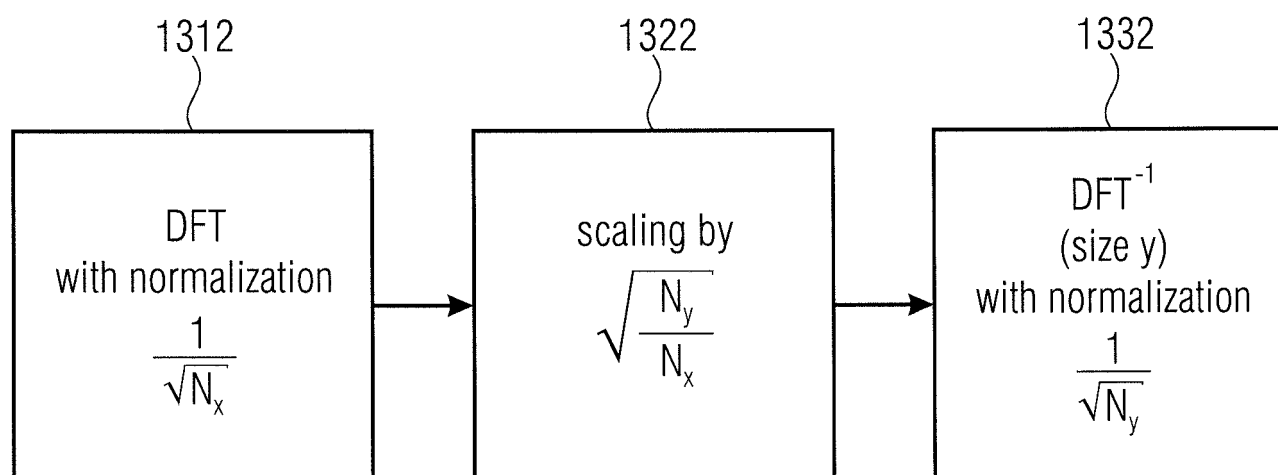


Fig. 3b

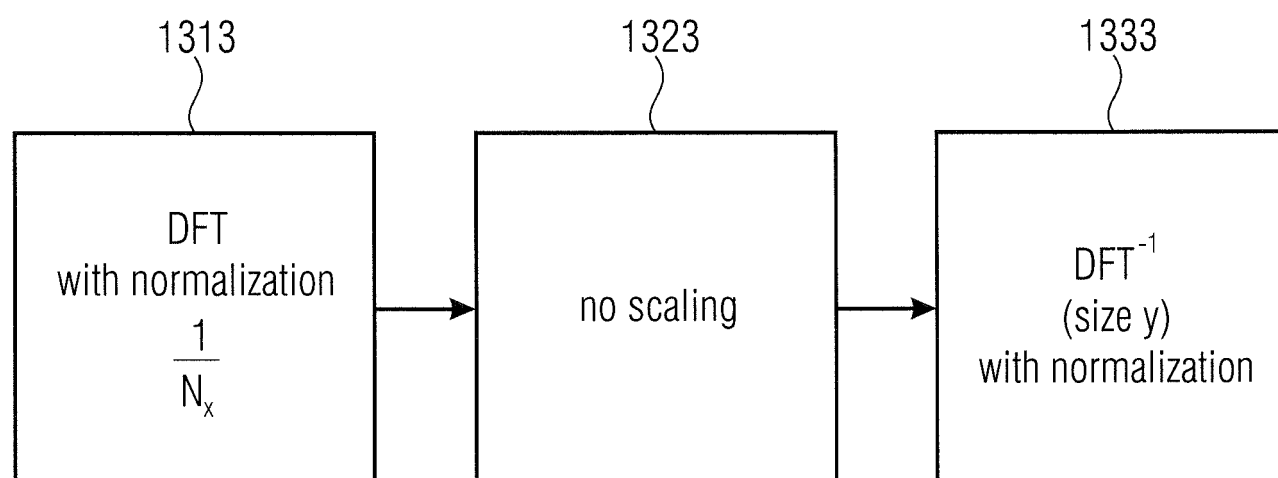
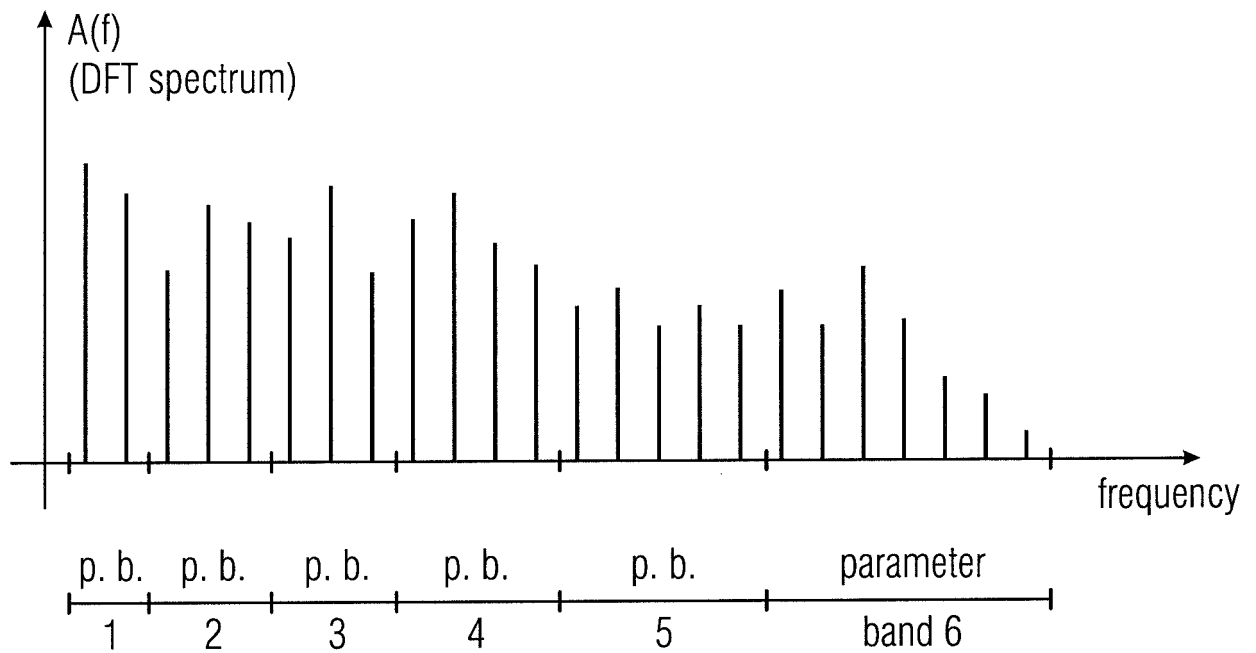


Fig. 3c

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- single broadband alignment parameter for whole spectrum (e. g. p. band 1 to p. band 6);
- plurality of narrowband alignment parameters for parameter bands 1, 2, 3, 4, i. e., four narrowband parameters;
- level parameters for each parameter band, e. g. 6 level parameters;
- stereo filling parameters for parameter bands 4, 5, 6, e. g. three stereo filling parameters;
- side (residual) signal for parameter bands 1, 2, 3;
- more spectral lines in higher band, e.g. seven spectral lines in parameter band 6 versus three spectral lines in parameter band 2.

Fig. 3d

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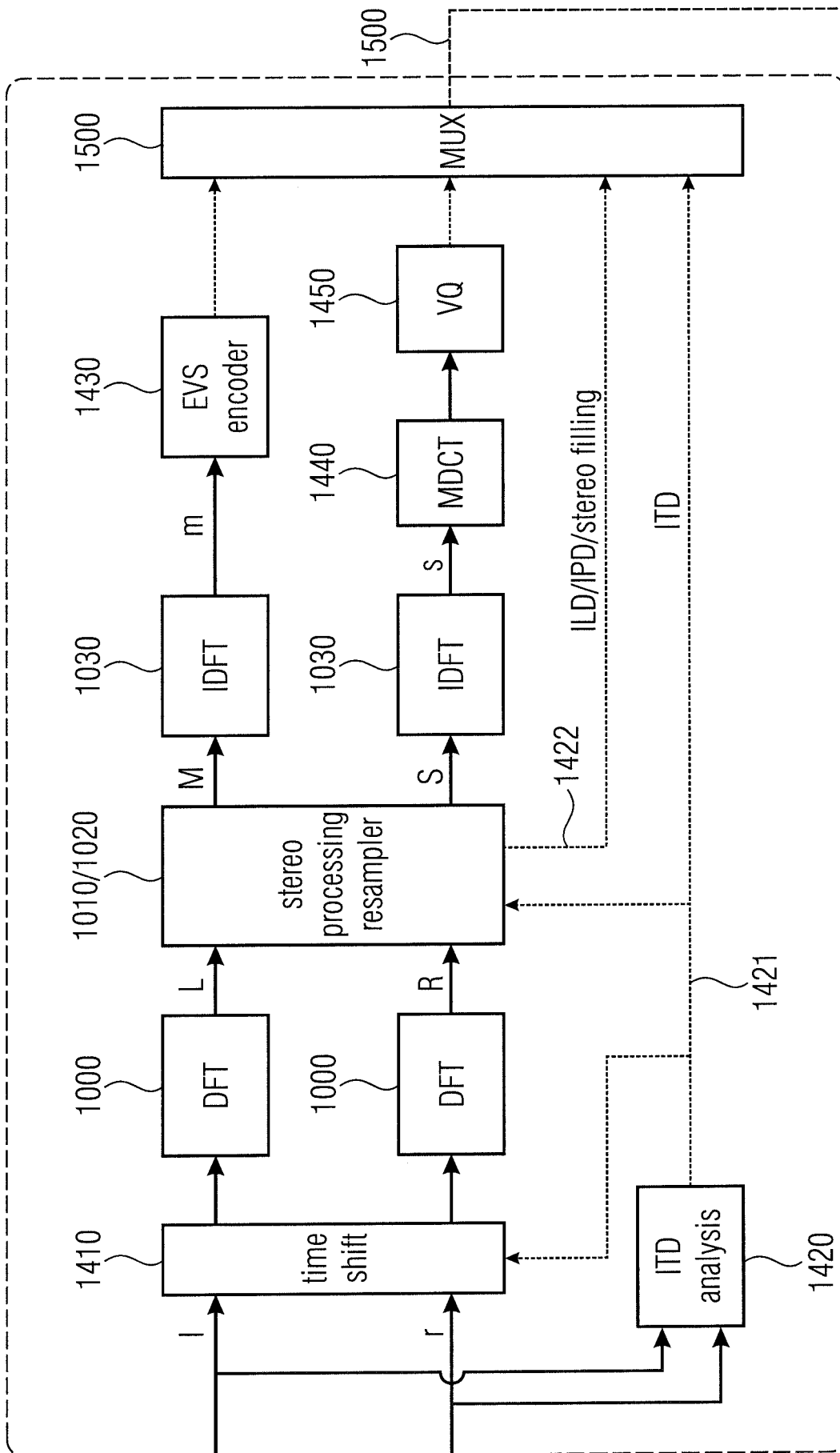


Fig. 4a

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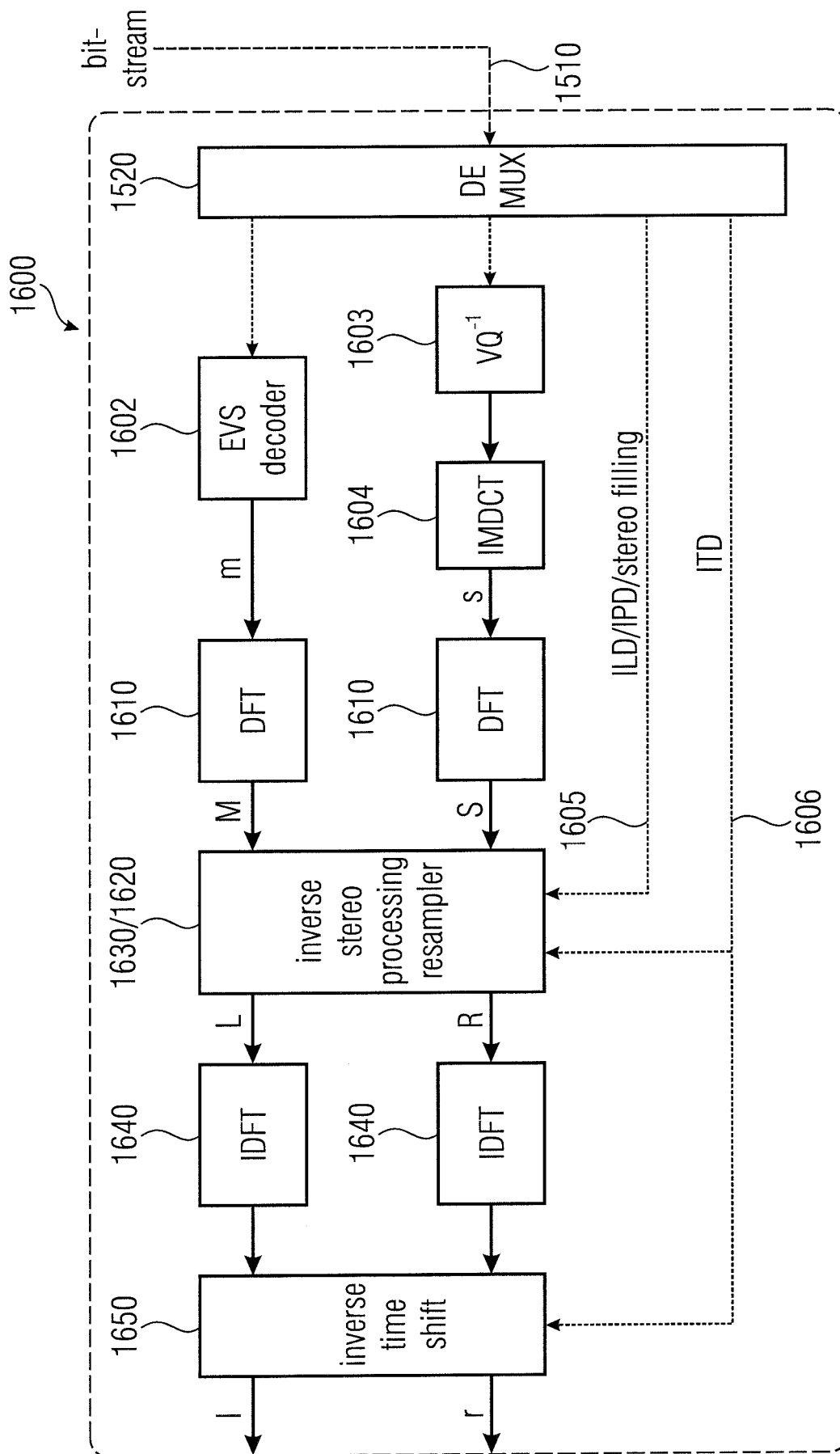


Fig. 4b

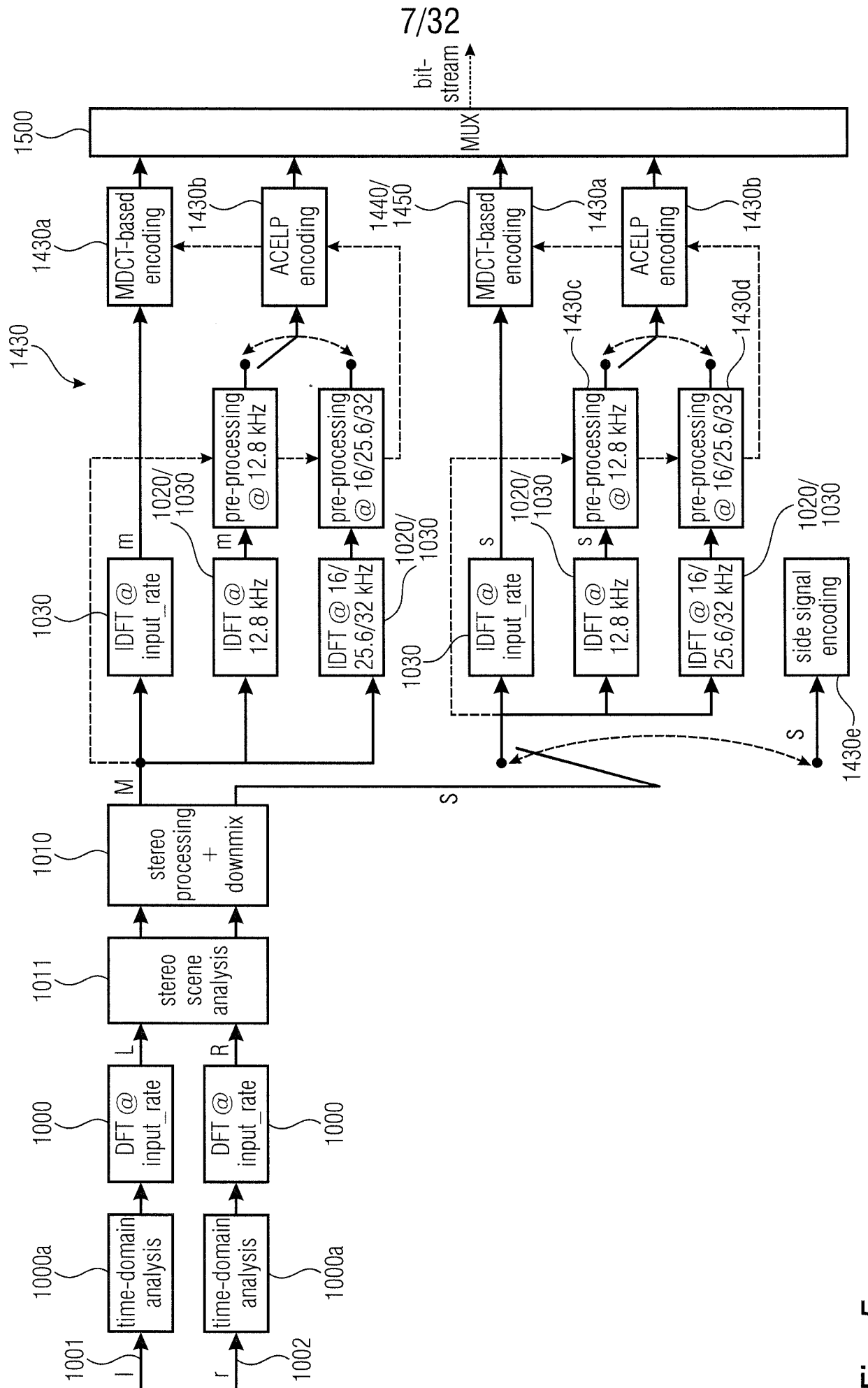


Fig. 5

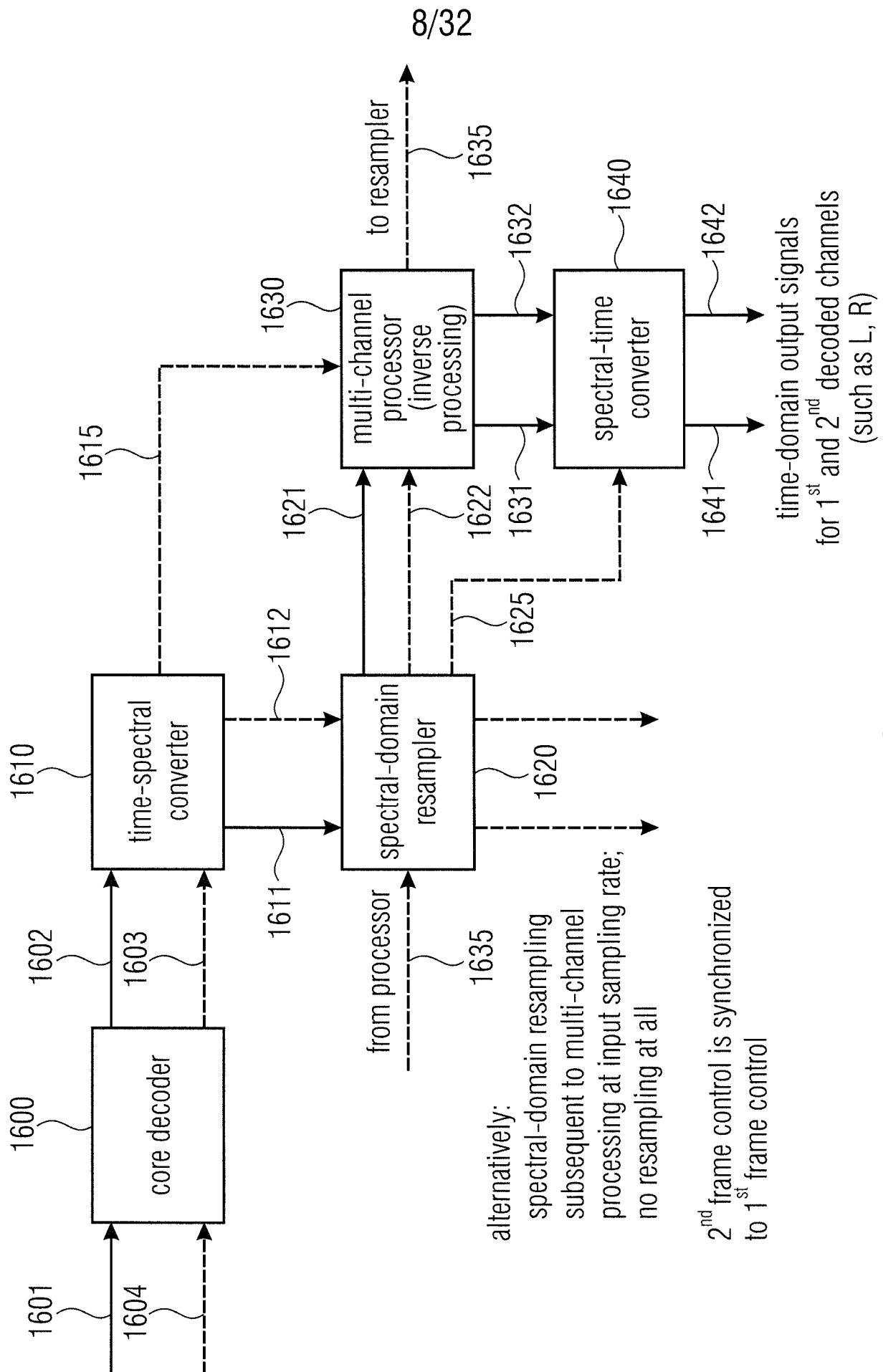


Fig. 6

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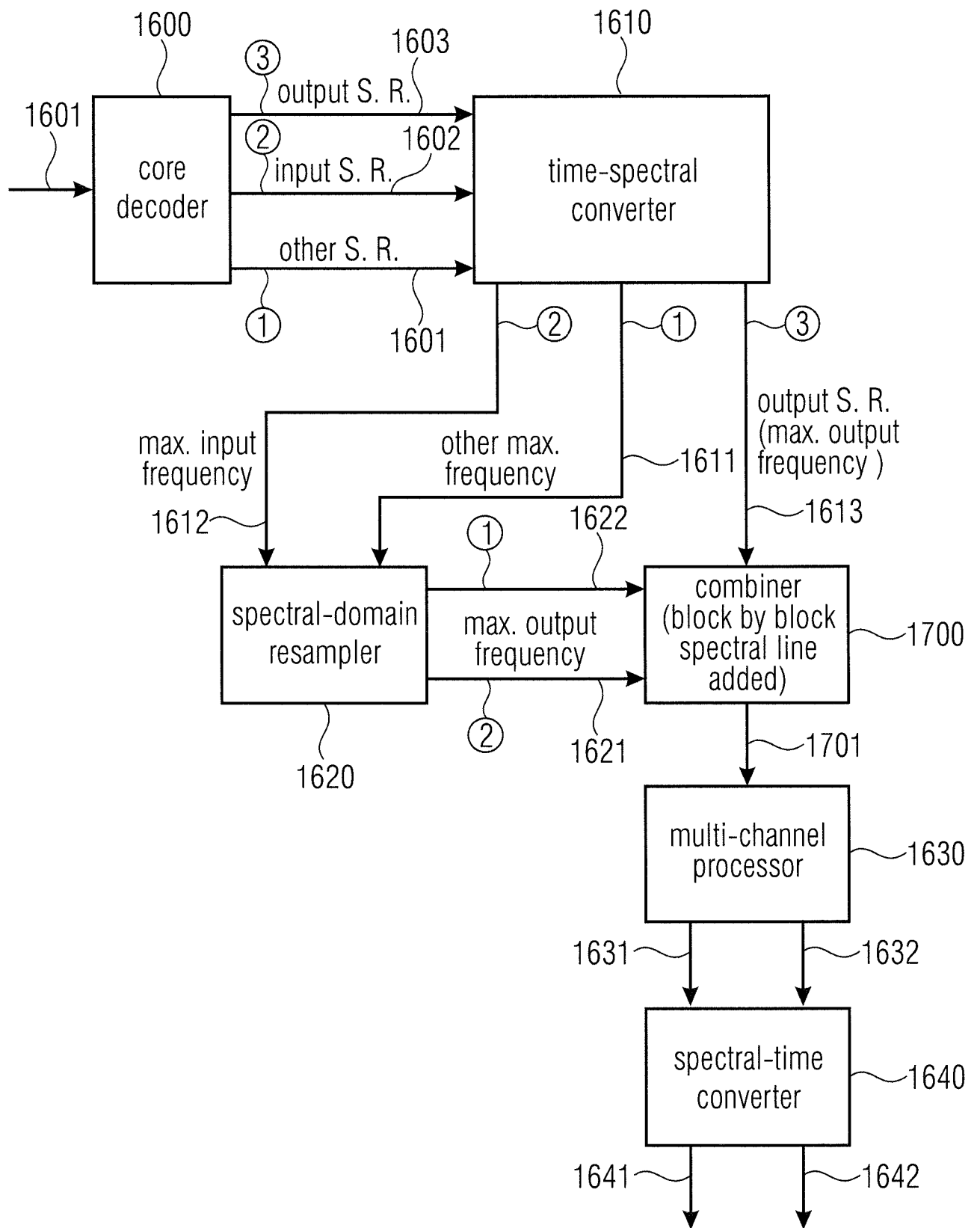


Fig. 7a

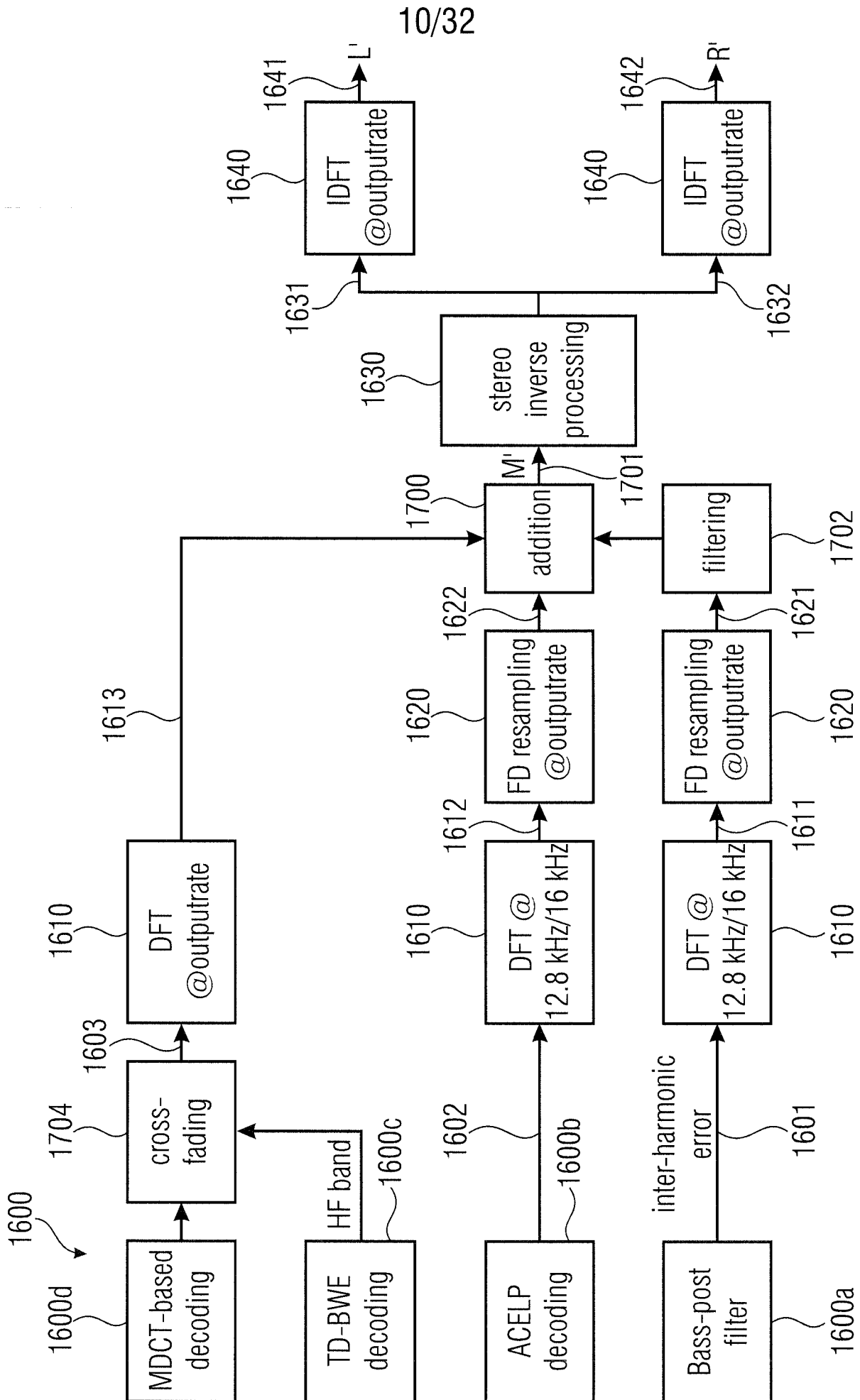


Fig. 7b

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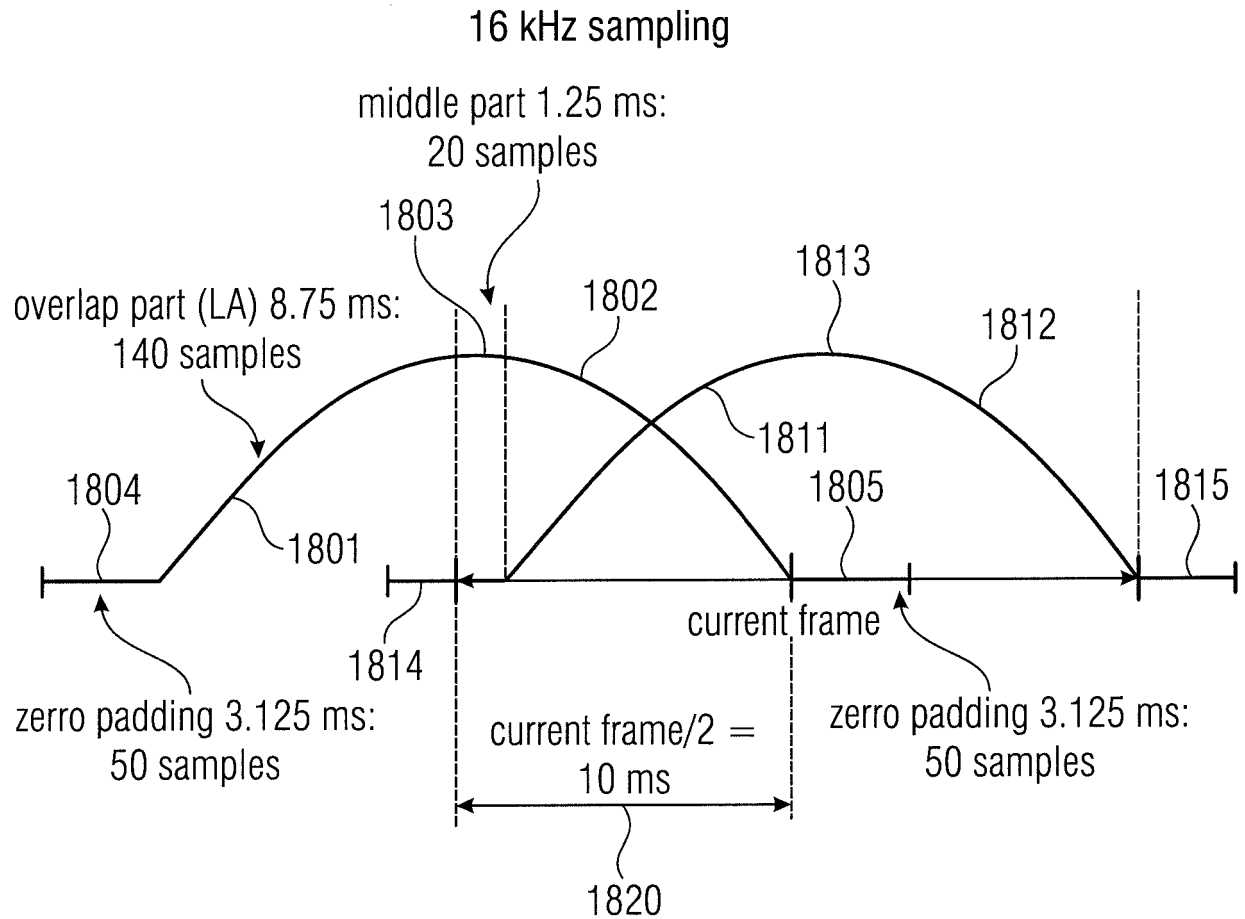
	Duration (ms)	Samples @12.8 kHz	Samples @16 kHz	Samples @32 kHz	Samples @48 kHz
zero padding	3.125	40	50	100	150
overlapping	8.75	112	140	280	420
middle part	1.25	16	20	40	60
window size	25	320	400	800	1200
DFT max radix		5	5	5	5

Fig. 8a

proposal number	filterband/ block transform type	delay total	delay encoder	delay decoder	available delay at decoder side after core decoder	freq. resolution of filterband/ block transform	time resolution of filterband/ block transform
1	DFT	38.75 ms	8.75 ms	10 ms	1.25 ms	53.3 Hz	10 ms
2	DFT	38.75 ms	8.75 ms	10 ms	0 ms	53.3/34.8 Hz	10/20 ms
3	CLDFB	38.75 + x ms	13.75 ms	5 + x ms	x ms	400 Hz	1.25 ms
4	DFT	48.75 ms	17.5 ms	11.25 ms	2.5 ms	53.3 Hz	10 ms
5	DFT	40 ms	13.75 ms	6.25 ms	1.25 ms	100 Hz	5 ms

Fig. 8b

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the ascending `ovlp_size` coefficients are given by:

$$\text{win_ovlp}(k) = \sin(\pi \cdot (k + 0.5) / (2 \cdot \text{ovlp_size}));$$

for $k = 0.. \text{ovlp_size} - 1$

the descending `ovlp_size` coefficients are given by:

$$\text{win_ovlp}(k) = \sin(\pi \cdot (\text{ovlp_size} - 1 - k + 0.5) / (2 \cdot \text{ovlp_size}));$$

for $k = 0.. \text{ovlp_size} - 1$

where `ovlp_size` is function of the sampling rate and given in Fig. 8a.

Fig. 8c

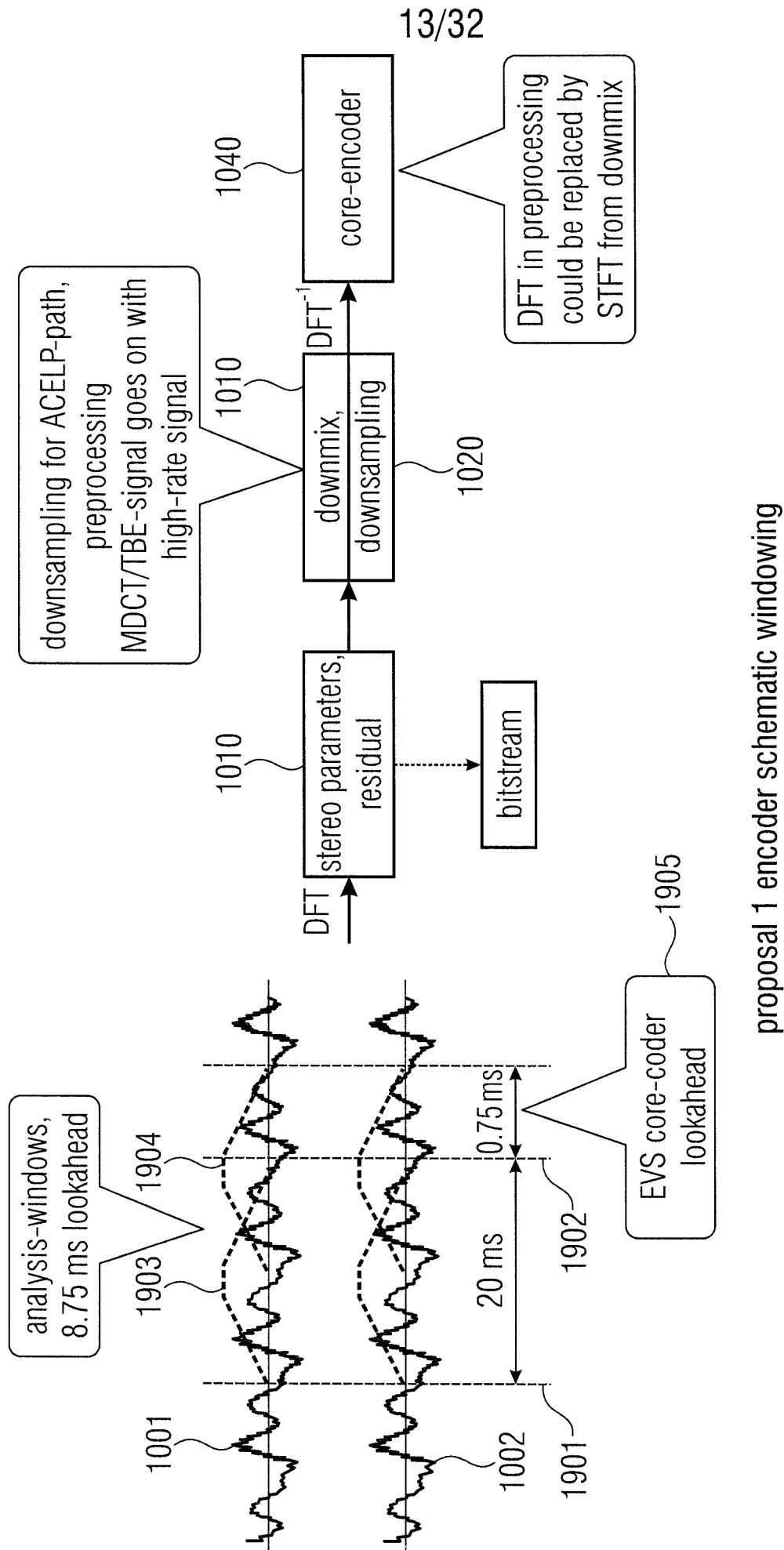
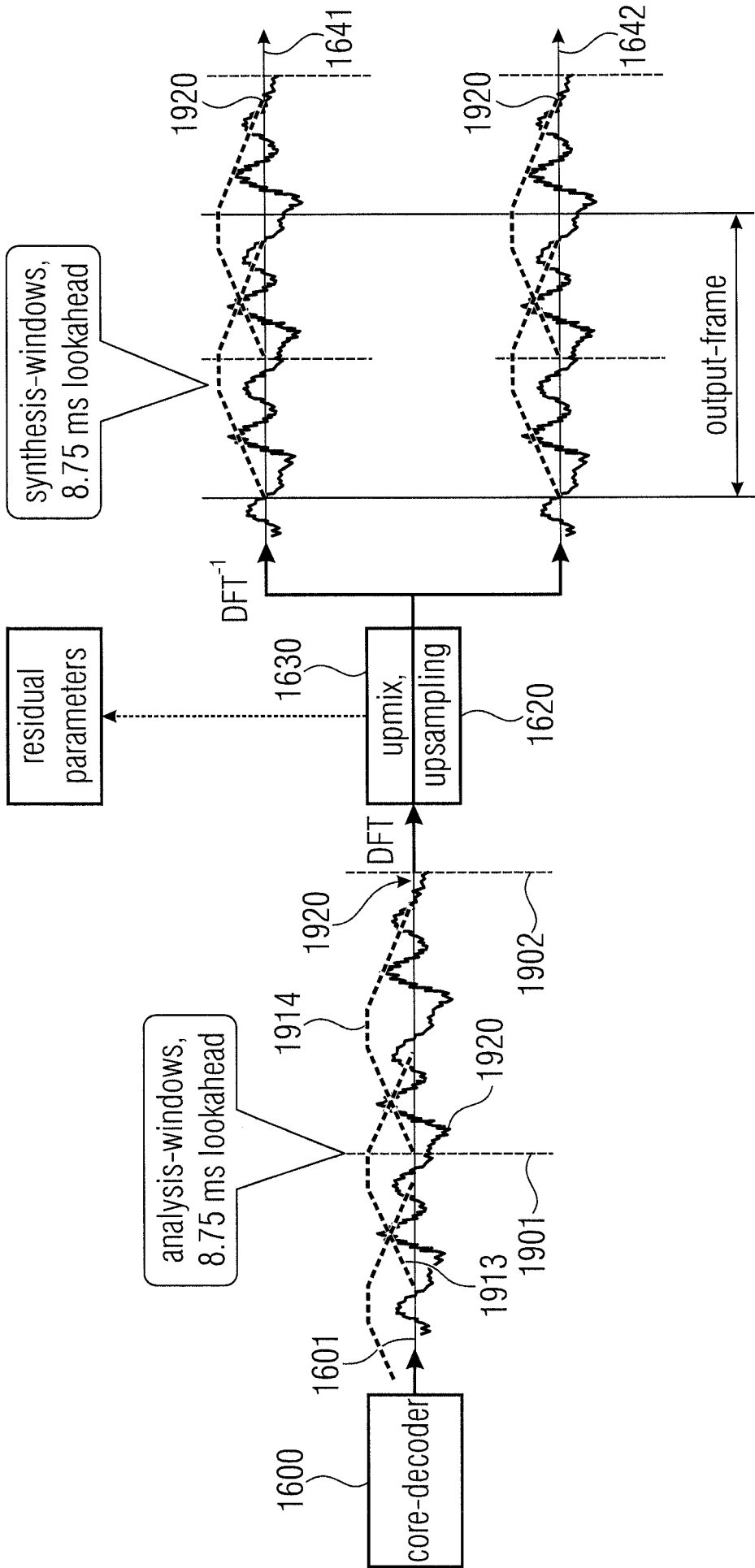


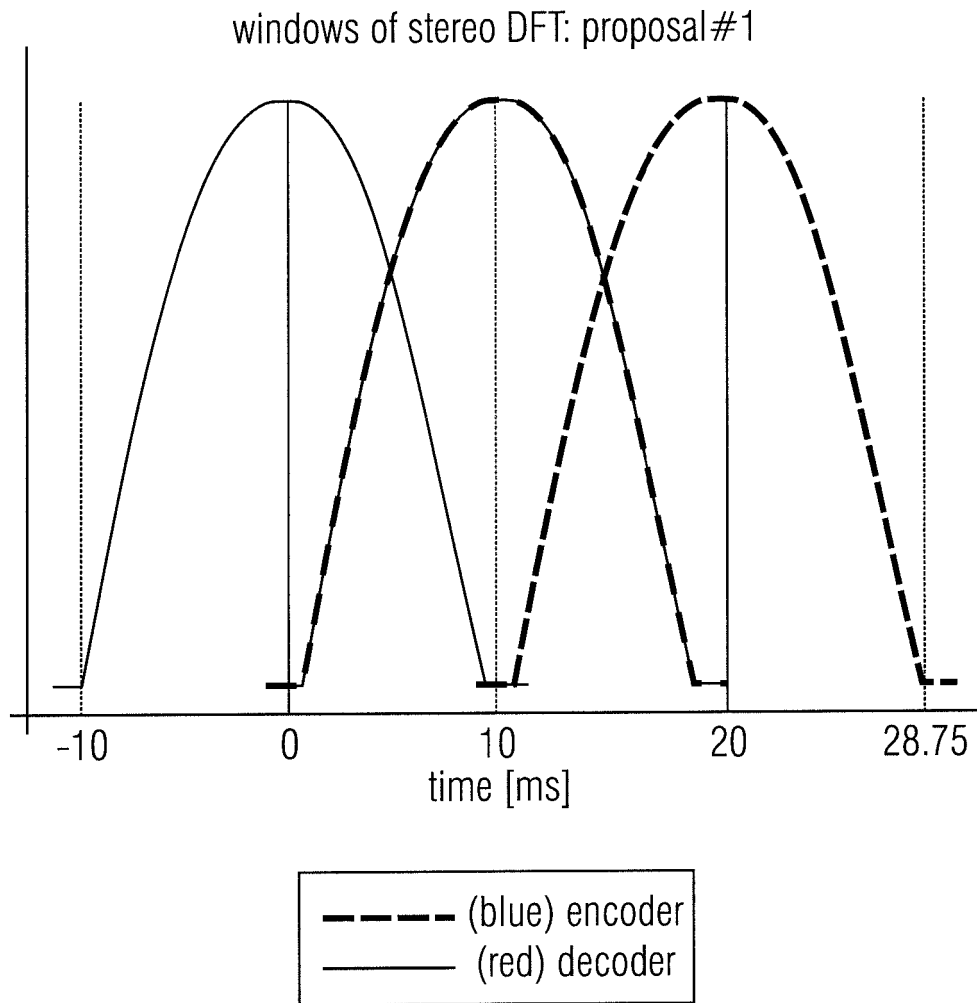
Fig. 9a



proposal 1 decoder schematic windowing

Fig. 9b

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proposal 1 windows at encoder and decoder

Fig. 9c

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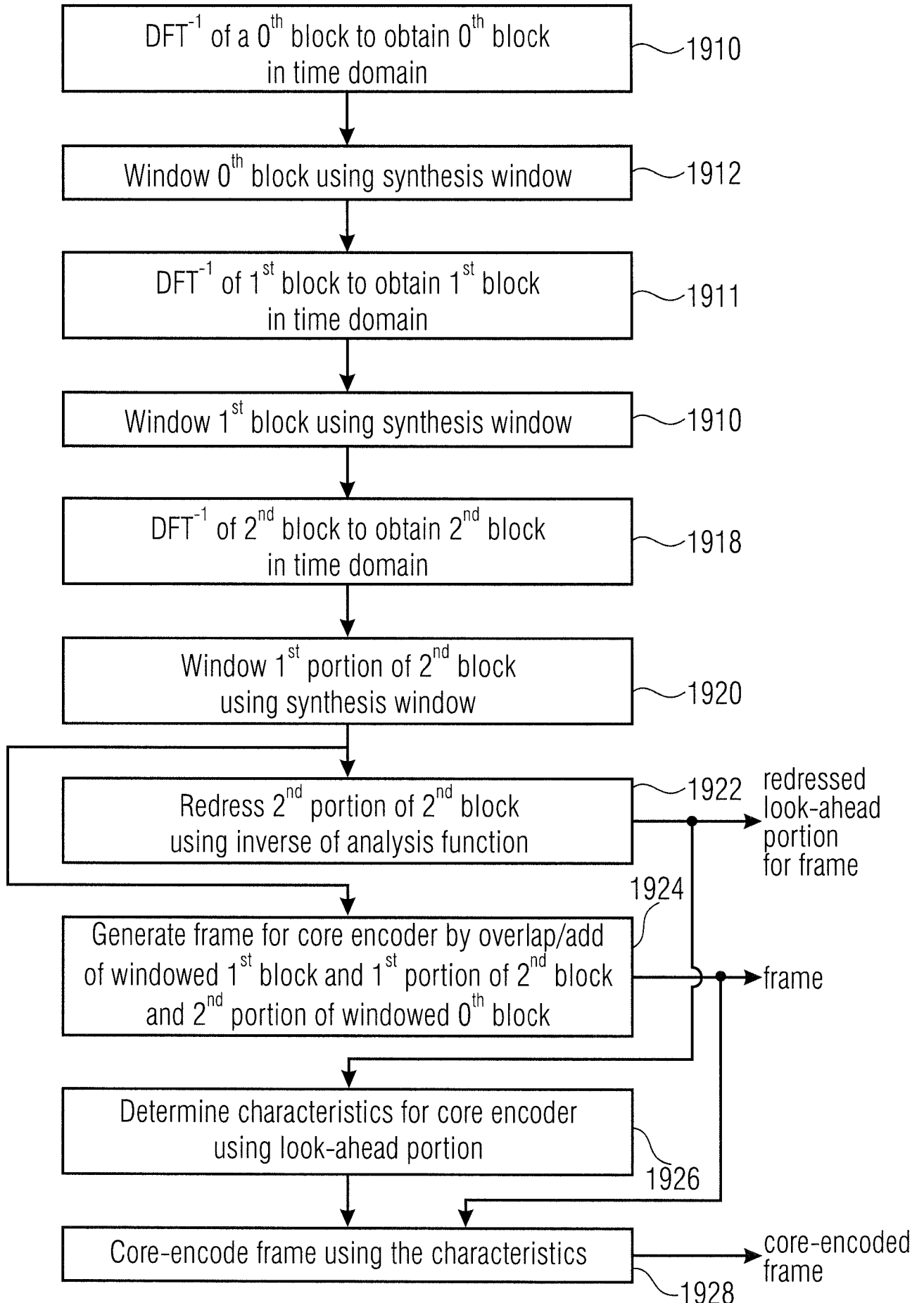


Fig. 9d

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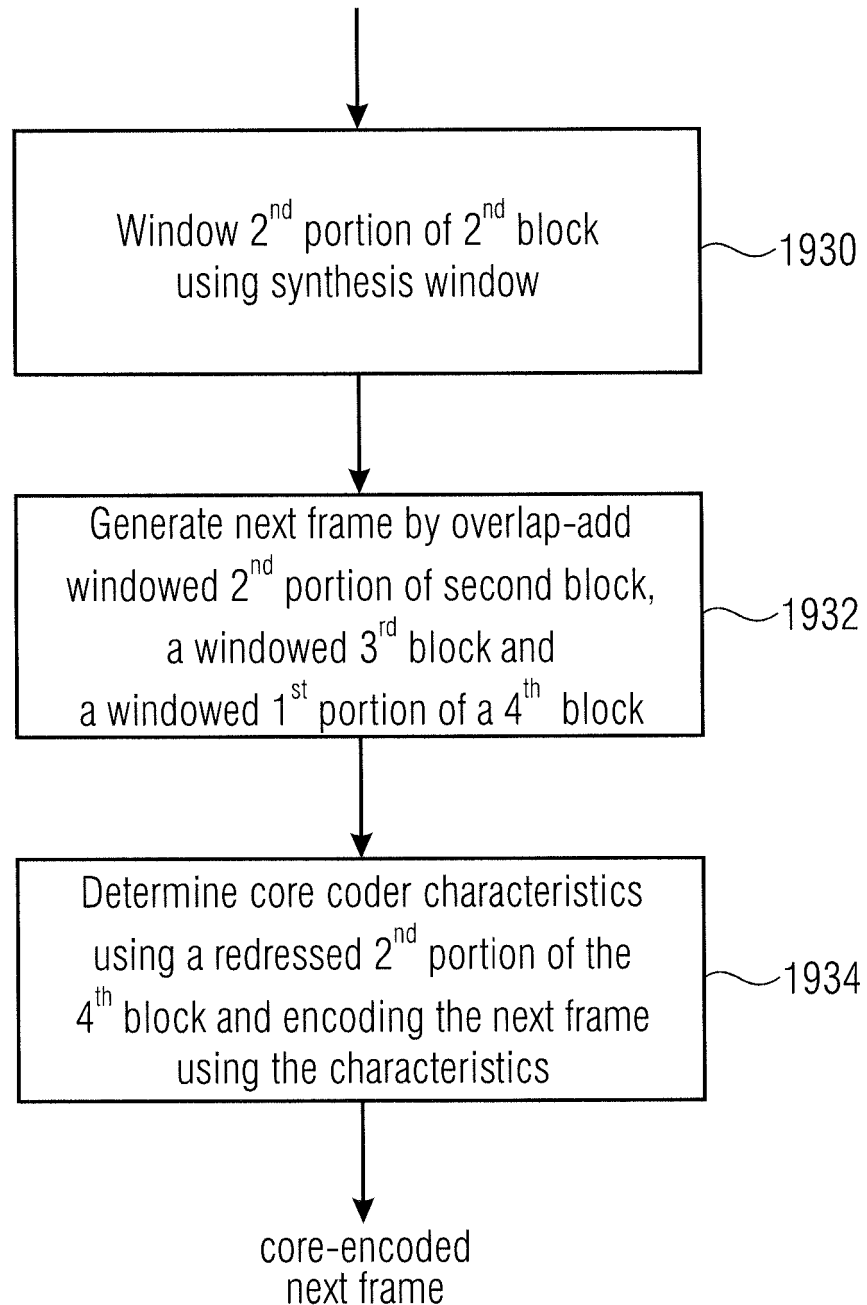


Fig. 9e

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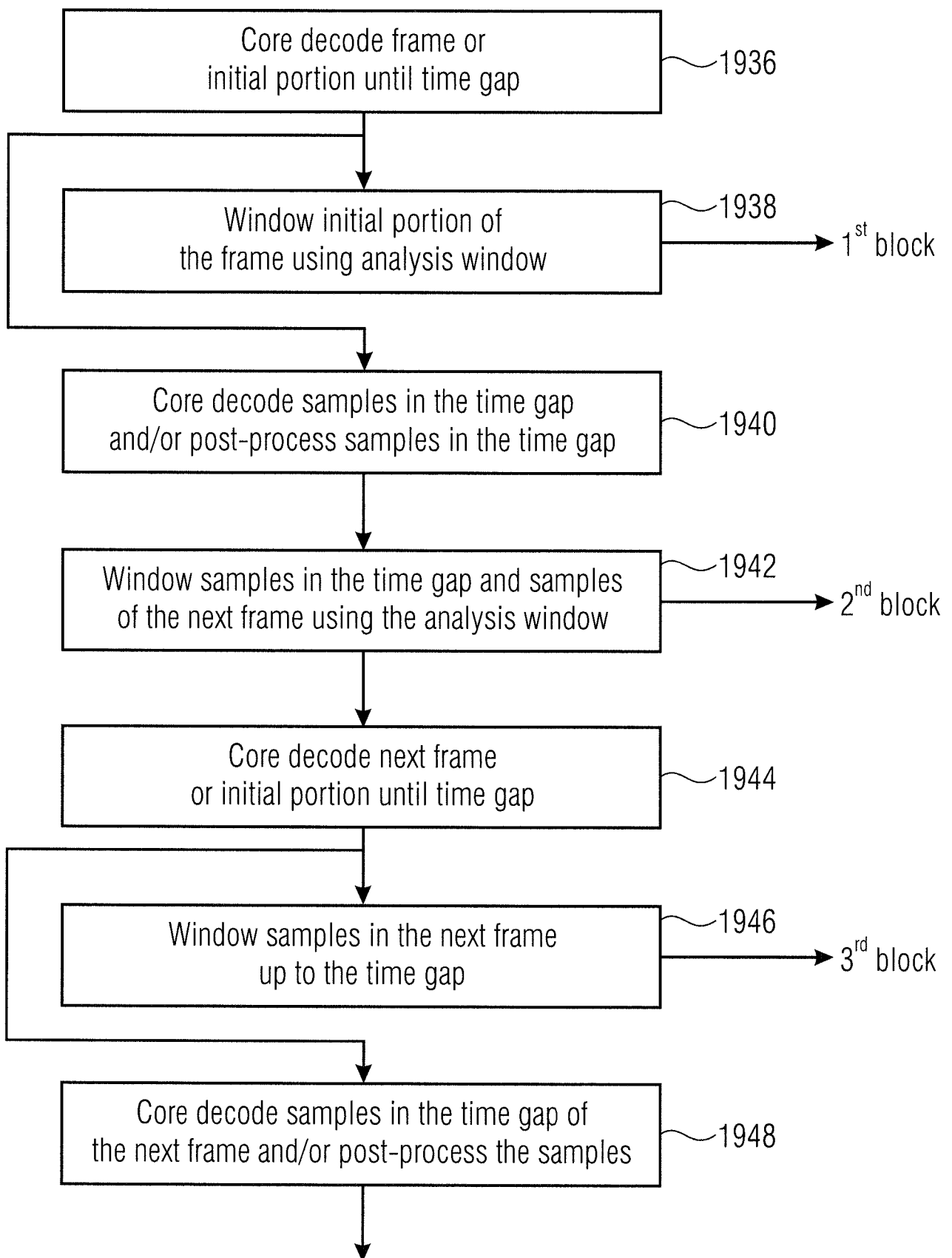
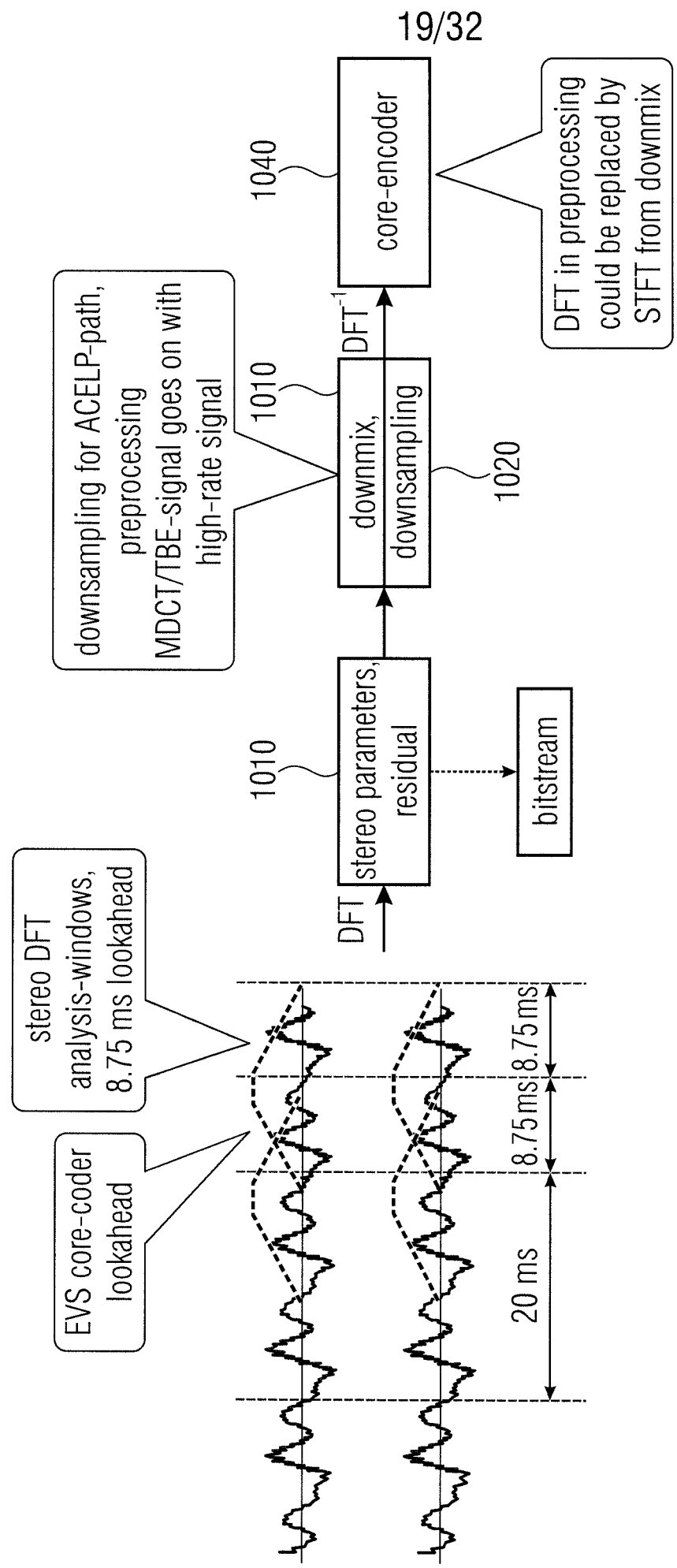
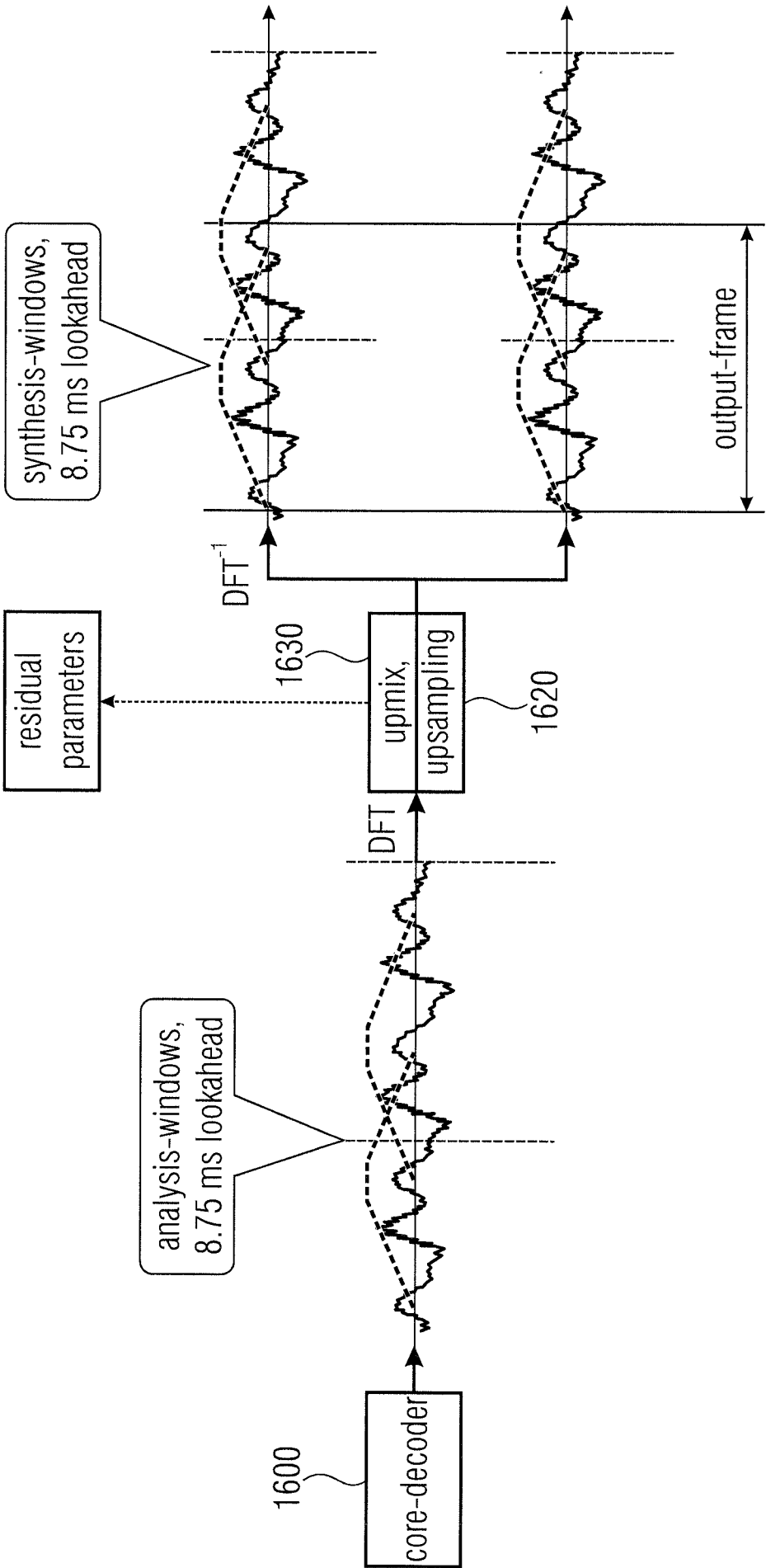


Fig. 9f



proposal 4 encoder schematic windowing

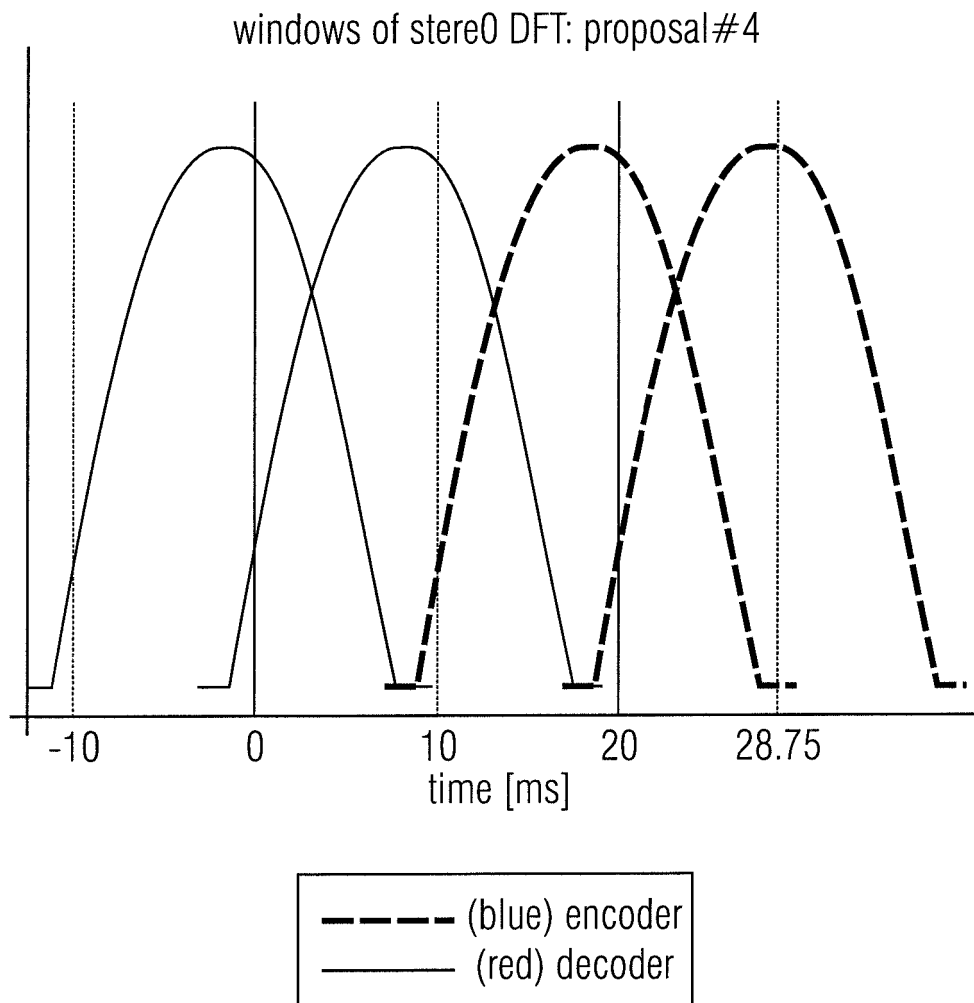
Fig. 10a



proposal 4 decoder schematic windowing

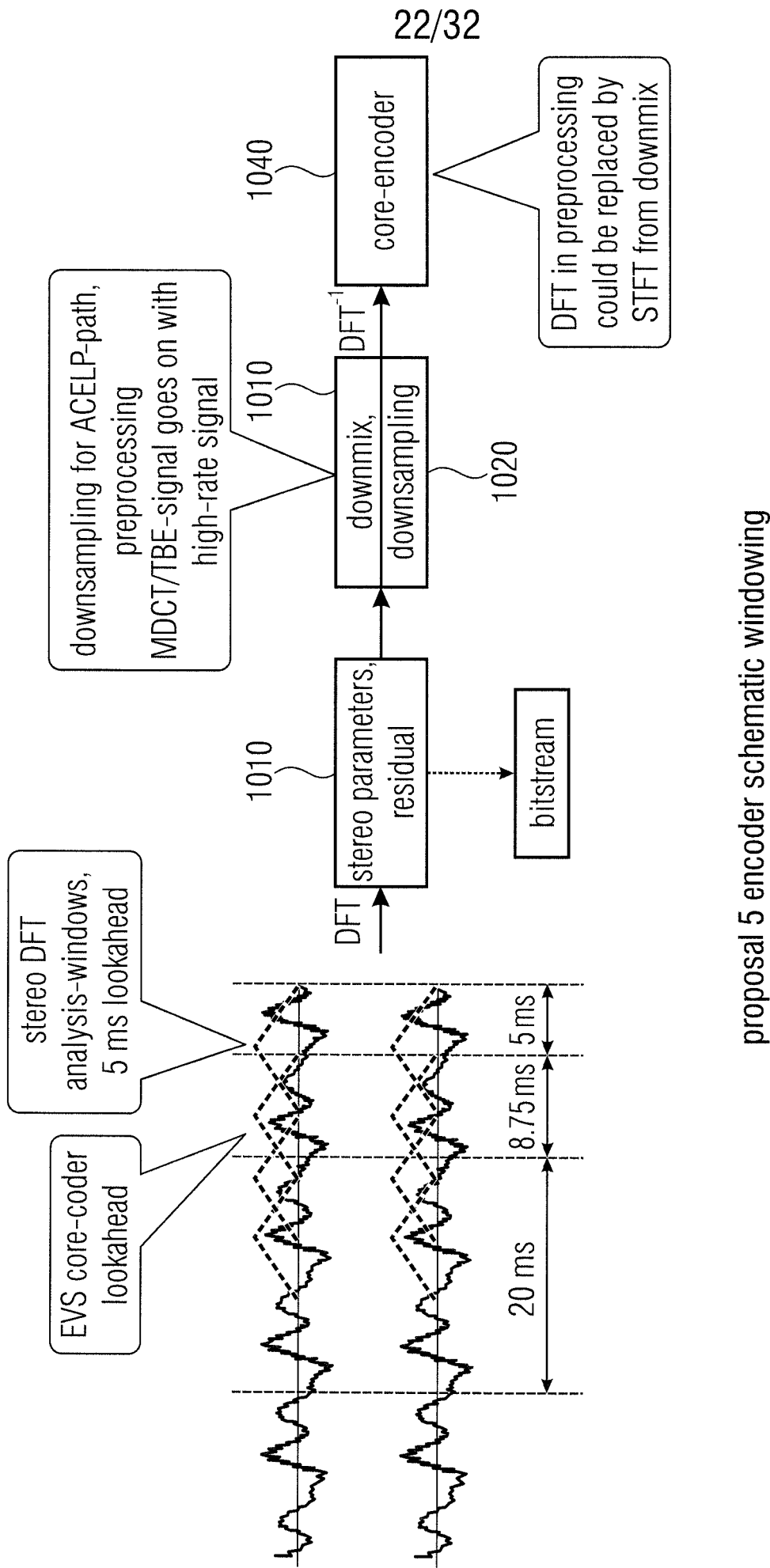
Fig. 10b

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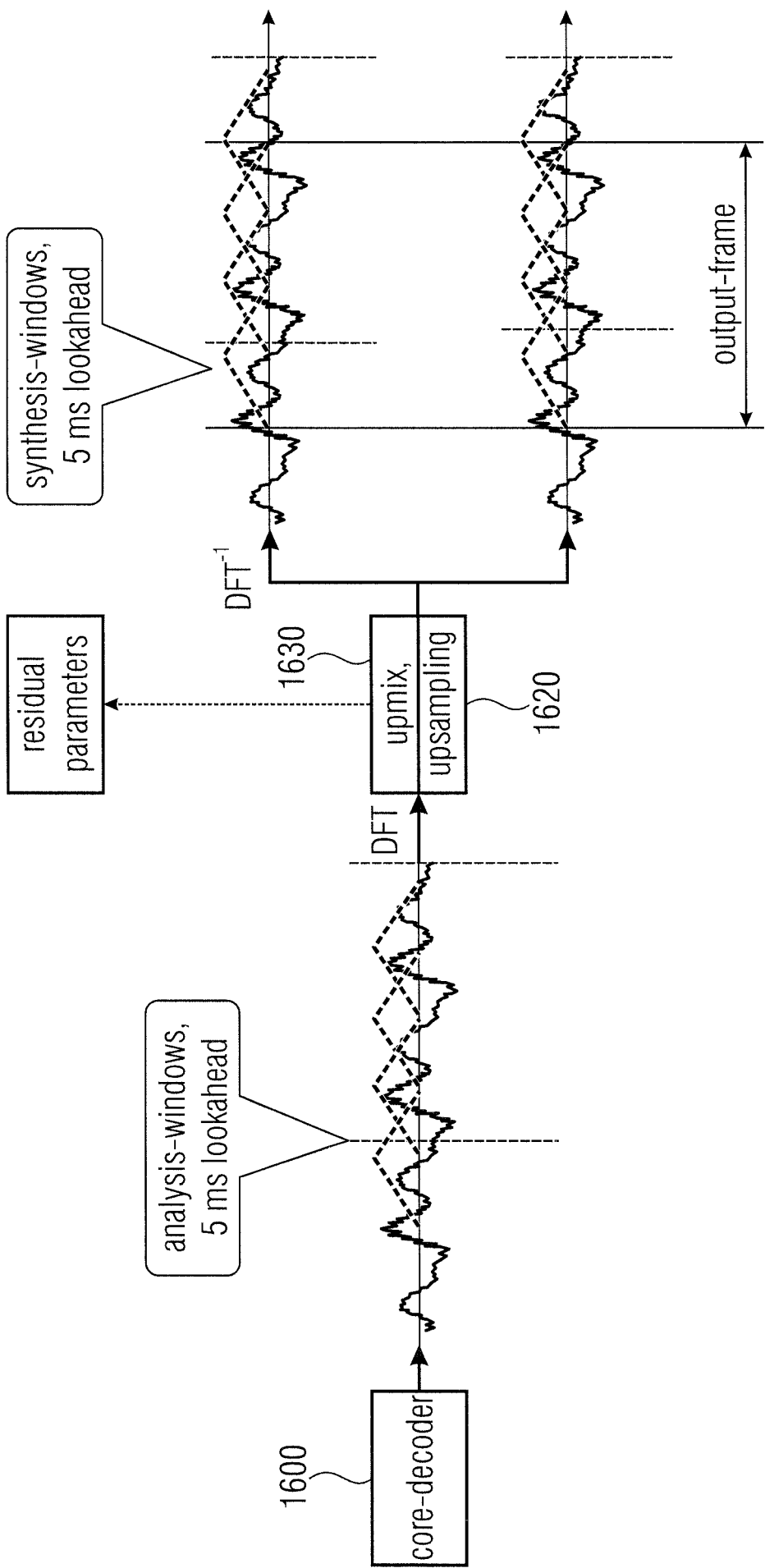
proposal 4 windows at encoder and decoder

Fig. 10c



proposal 5 encoder schematic windowing

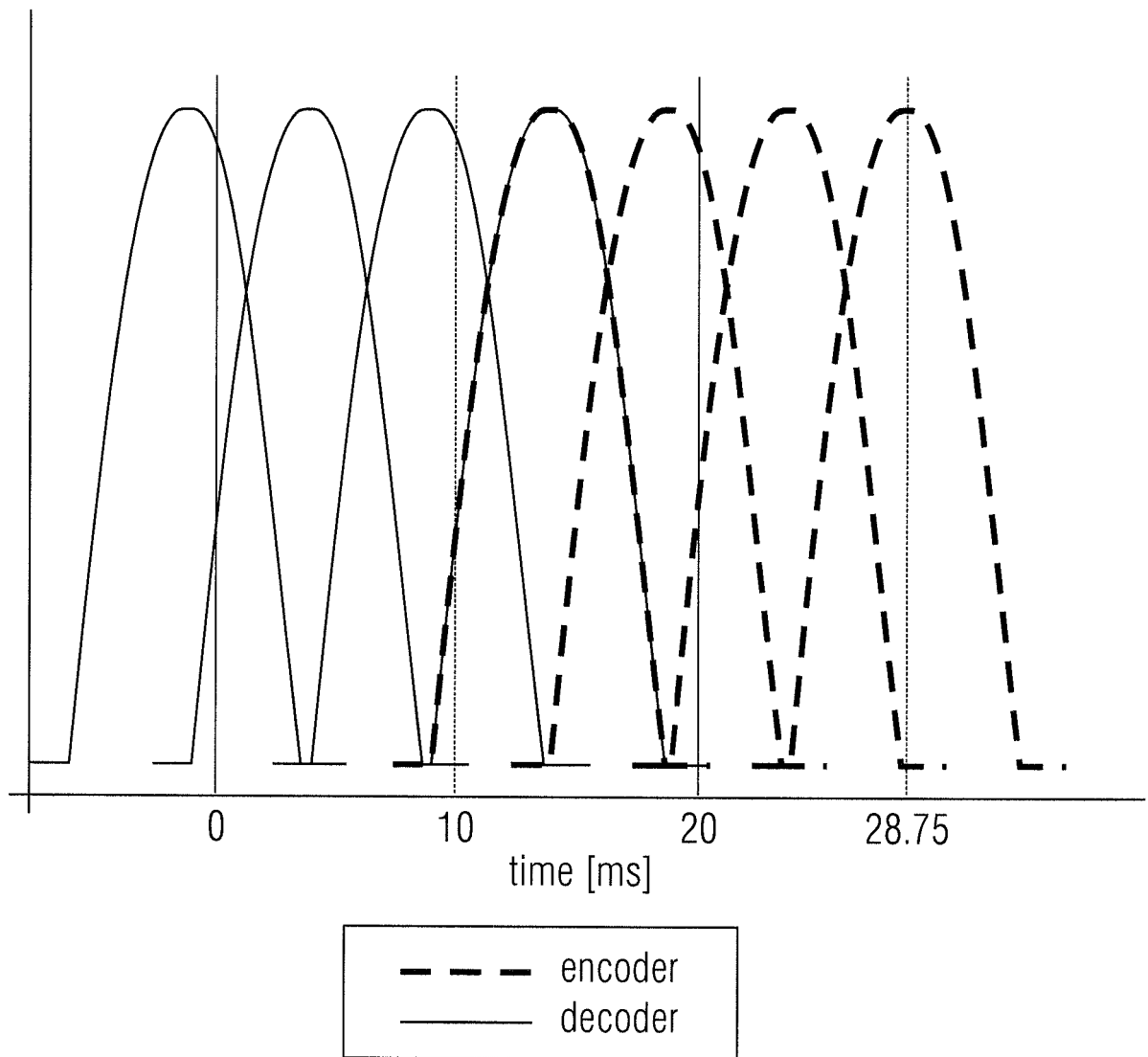
Fig. 11a



proposal 5 decoder schematic windowing

Fig. 11b

windows of stereo DFT: proposal #5



proposal 5 windows at encoder and decoder

Fig. 11c

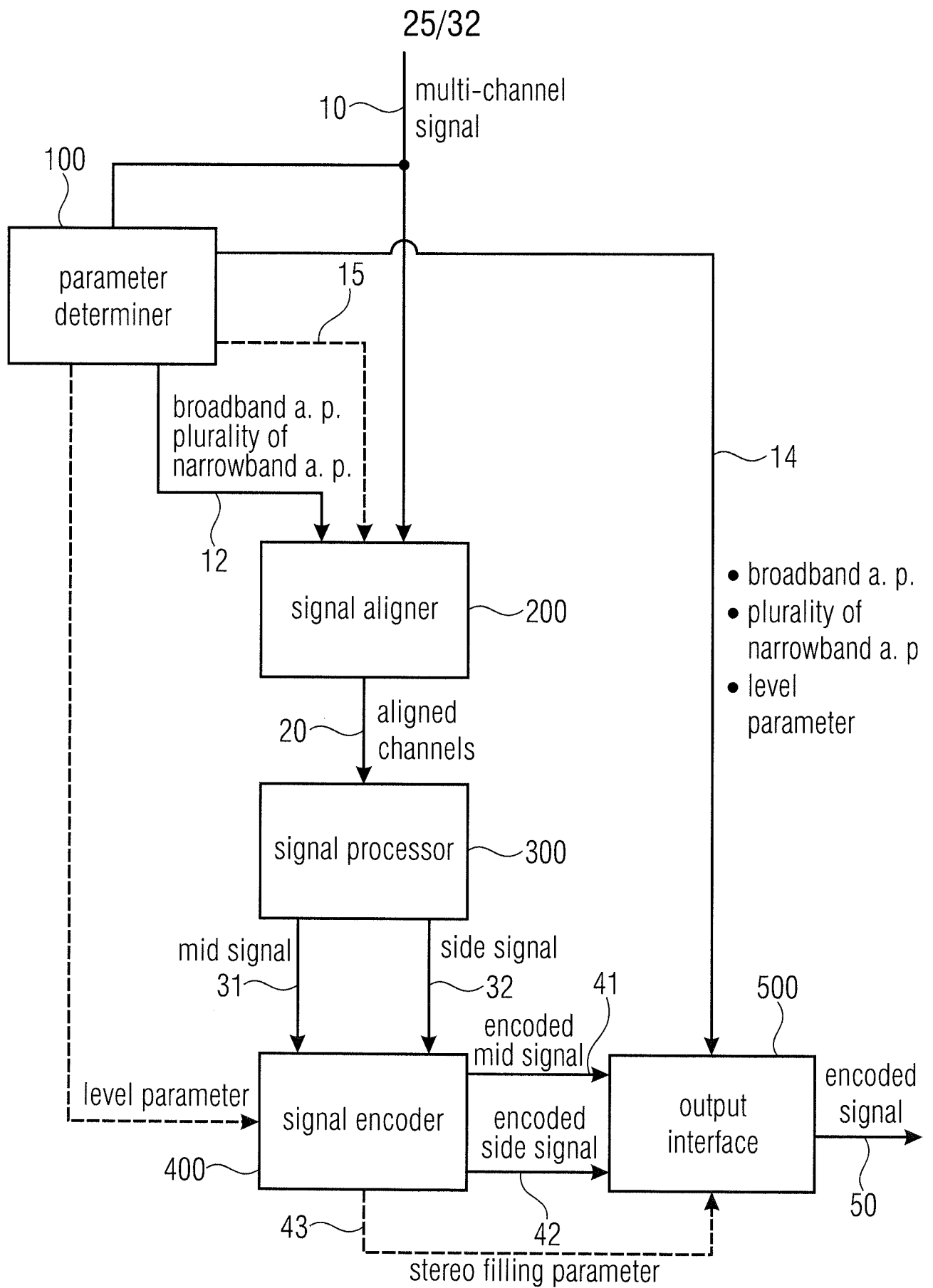


Fig. 12

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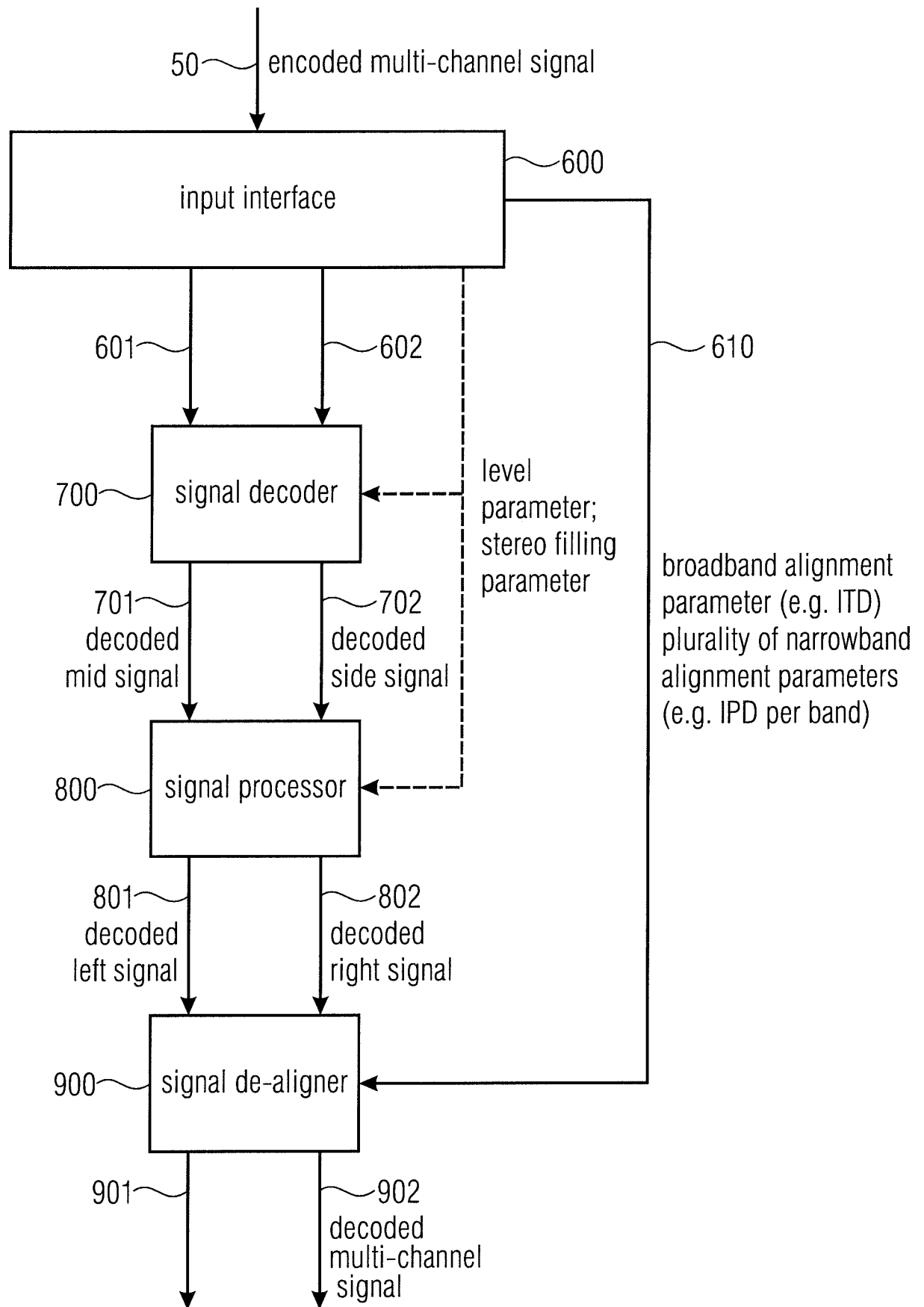


Fig. 13

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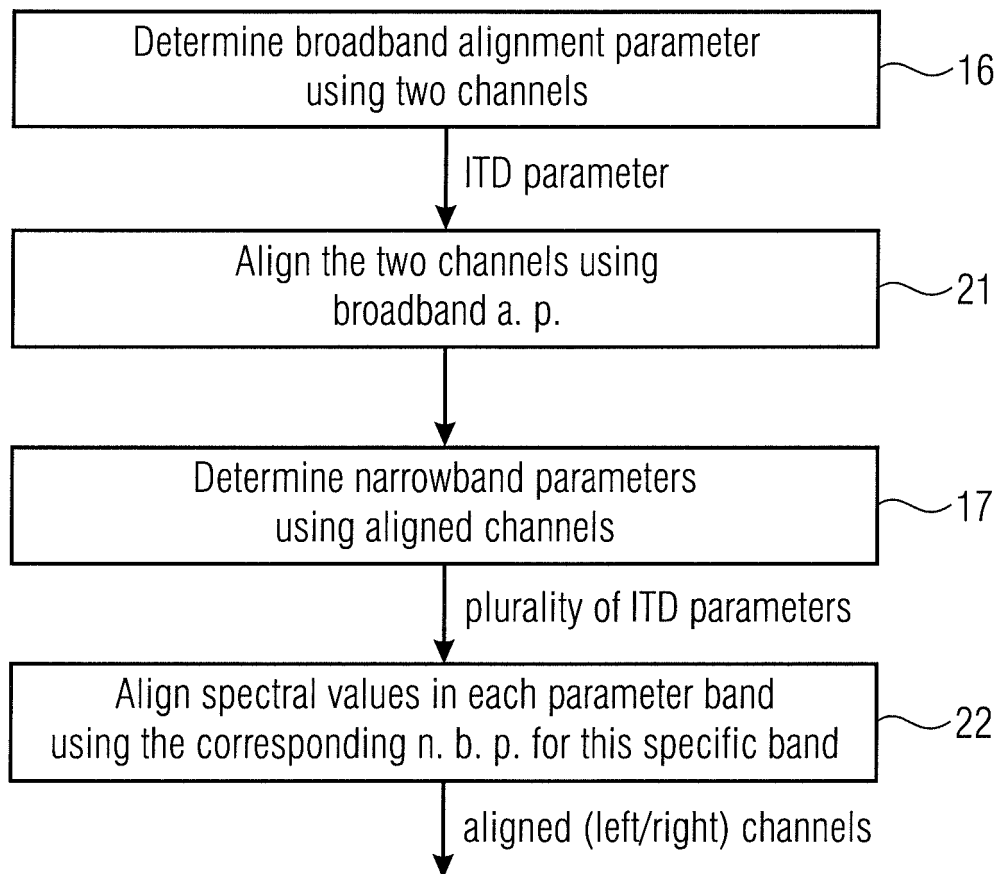


Fig. 14a

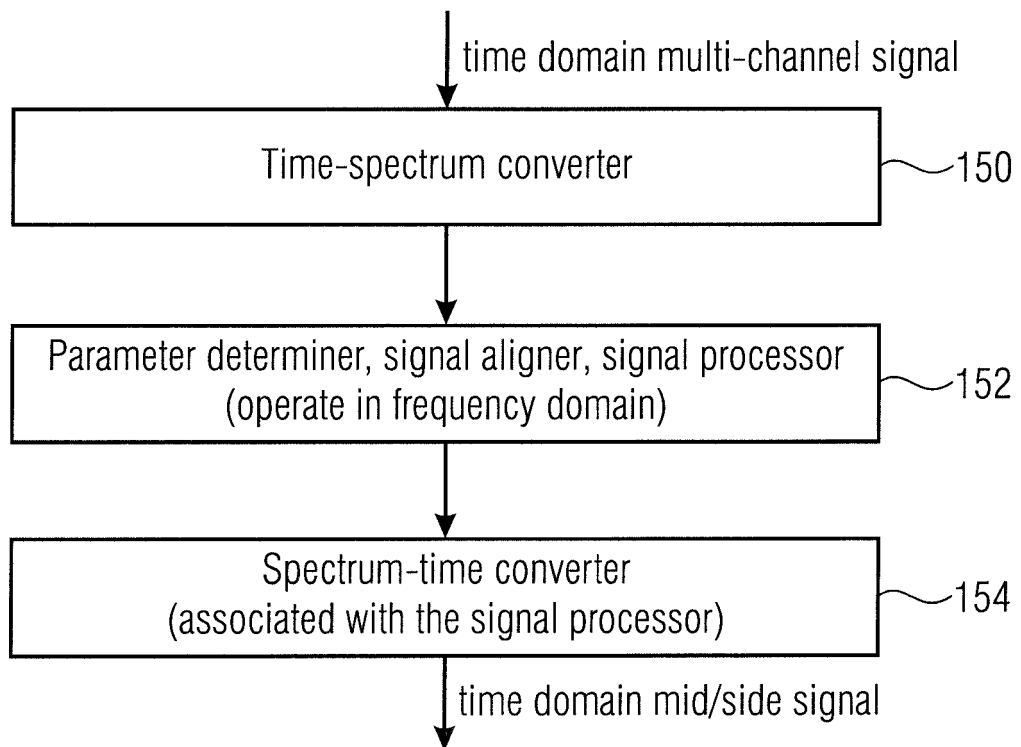


Fig. 14b

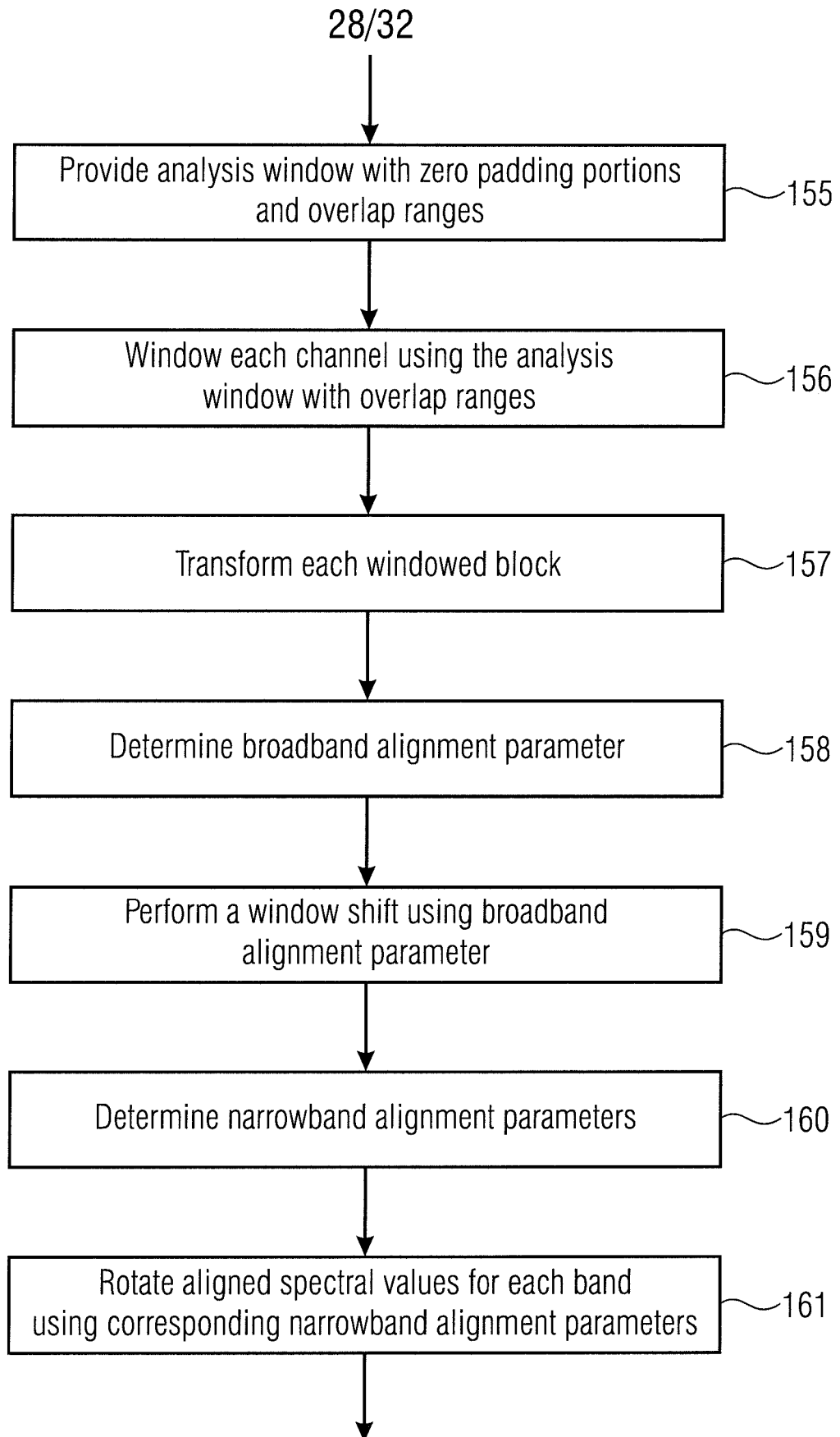


Fig. 14c

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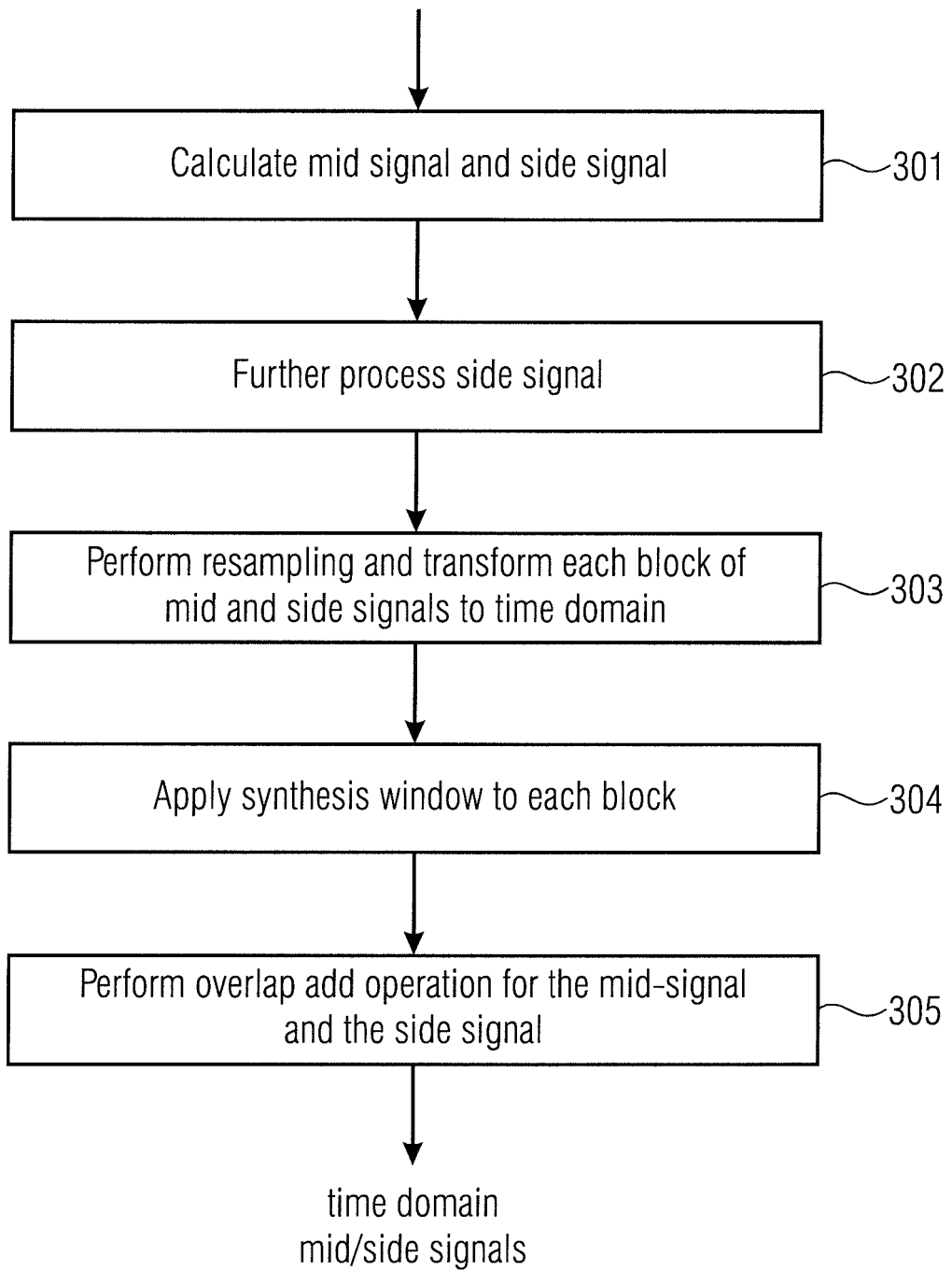


Fig. 14d

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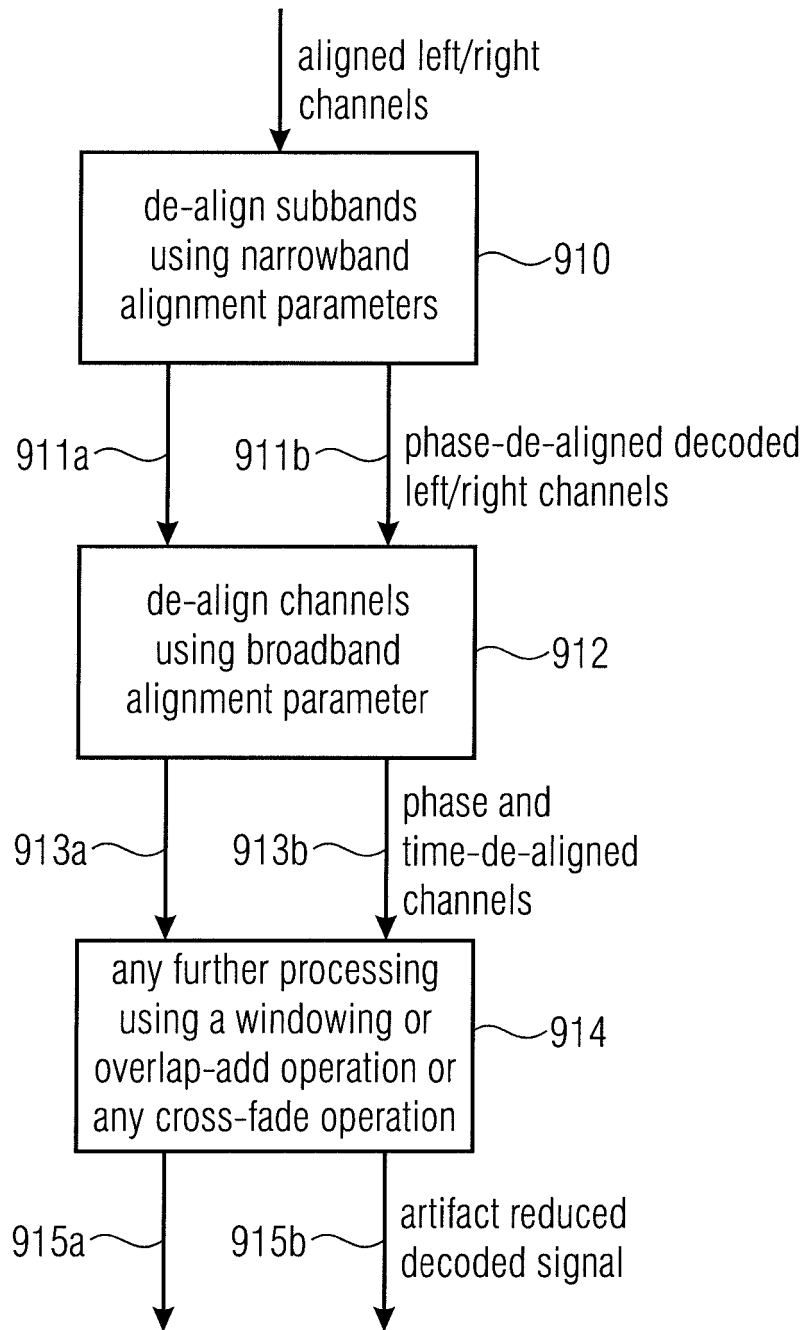


Fig. 15a

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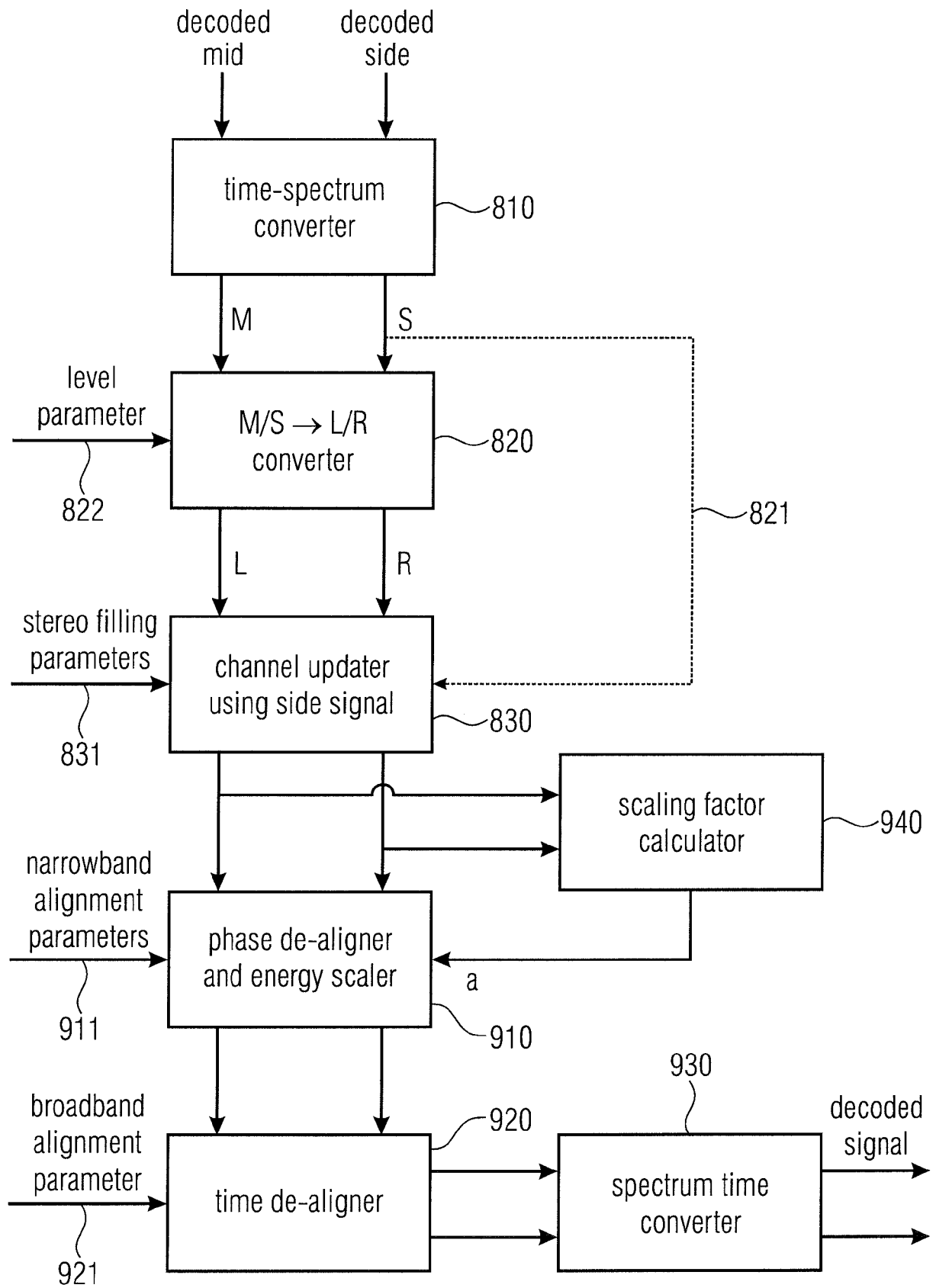


Fig. 15b

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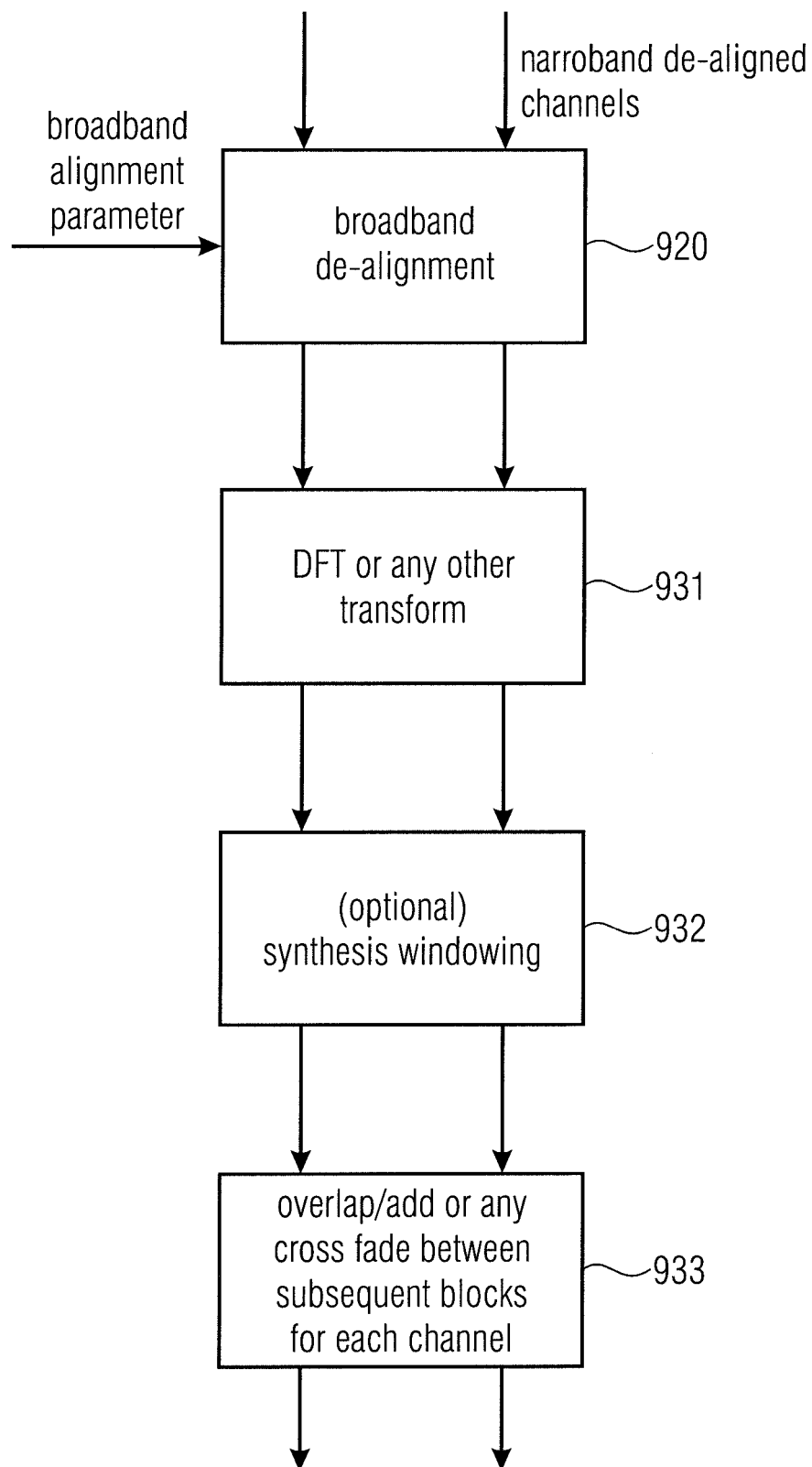


Fig. 15c