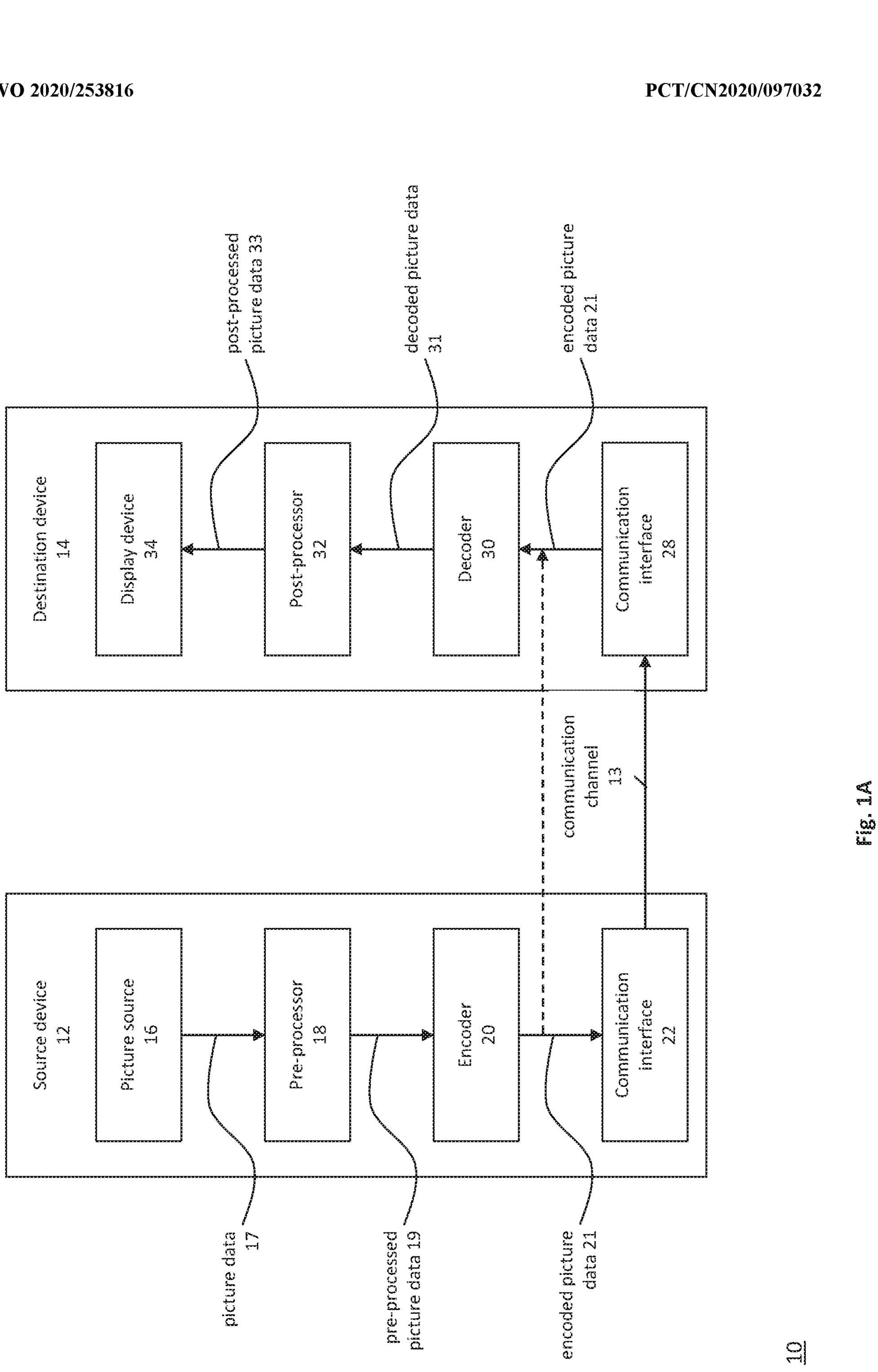

Source device
12
Picture source
16
Pre-processor
18
Encoder
20
Communication
interface
22
picture data
17
pre-processed
picture data 19
encoded picture
data 21
communication
channel
13
Destination device
14
Display device
34
Post-processor
32
Decoder
30
Communication
interface
28
encoded picture
data 21
decoded picture data
31
post-processed
picture data 33

Fig. 1A

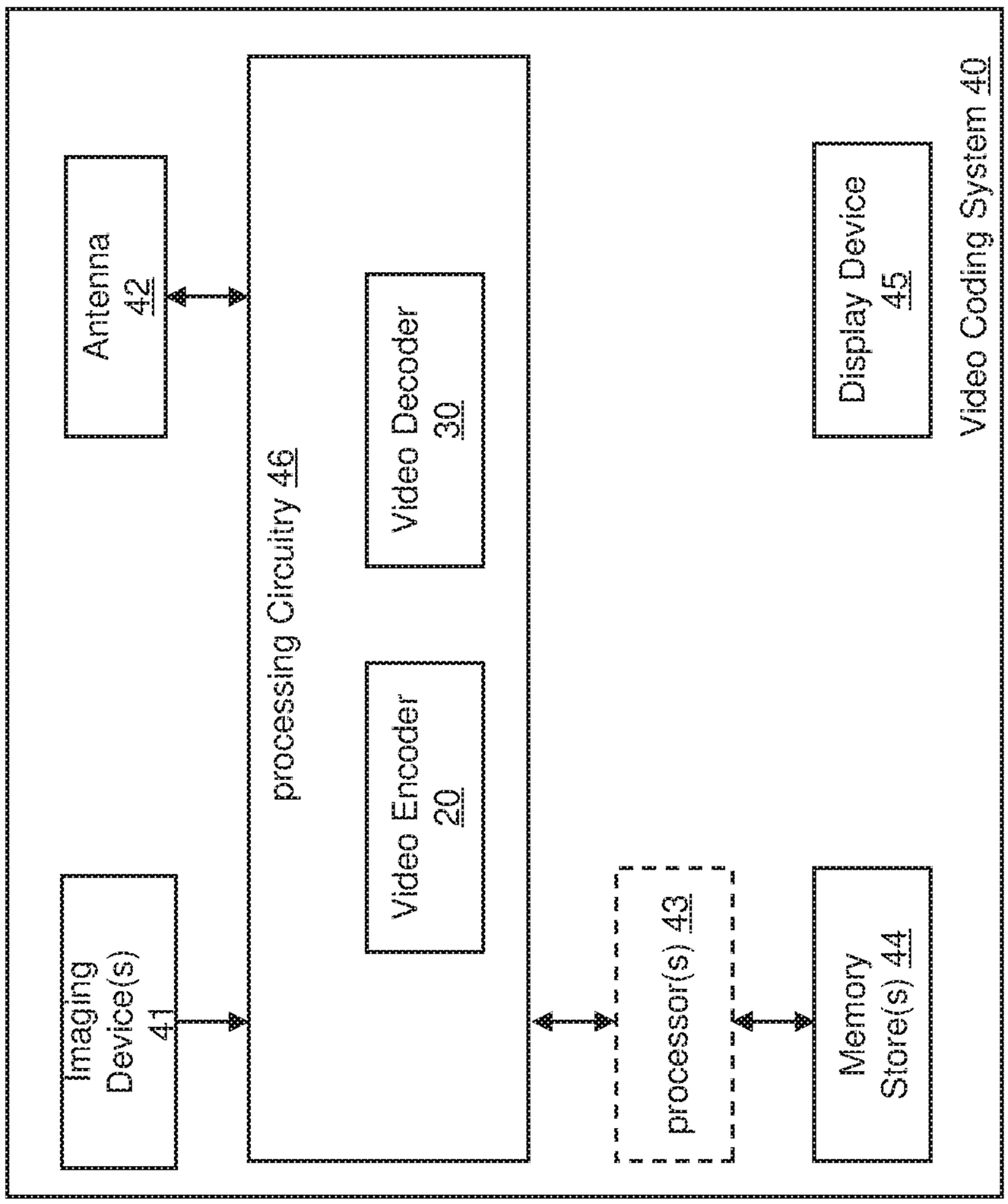

Video Coding System 40
Antenna 42
processing Circuitry 46
Video Encoder 20
Video Decoder 30
Imaging Device(s) 41
processor(s) 43
Memory Store(s) 44
Display Device 45

Fig. 1B

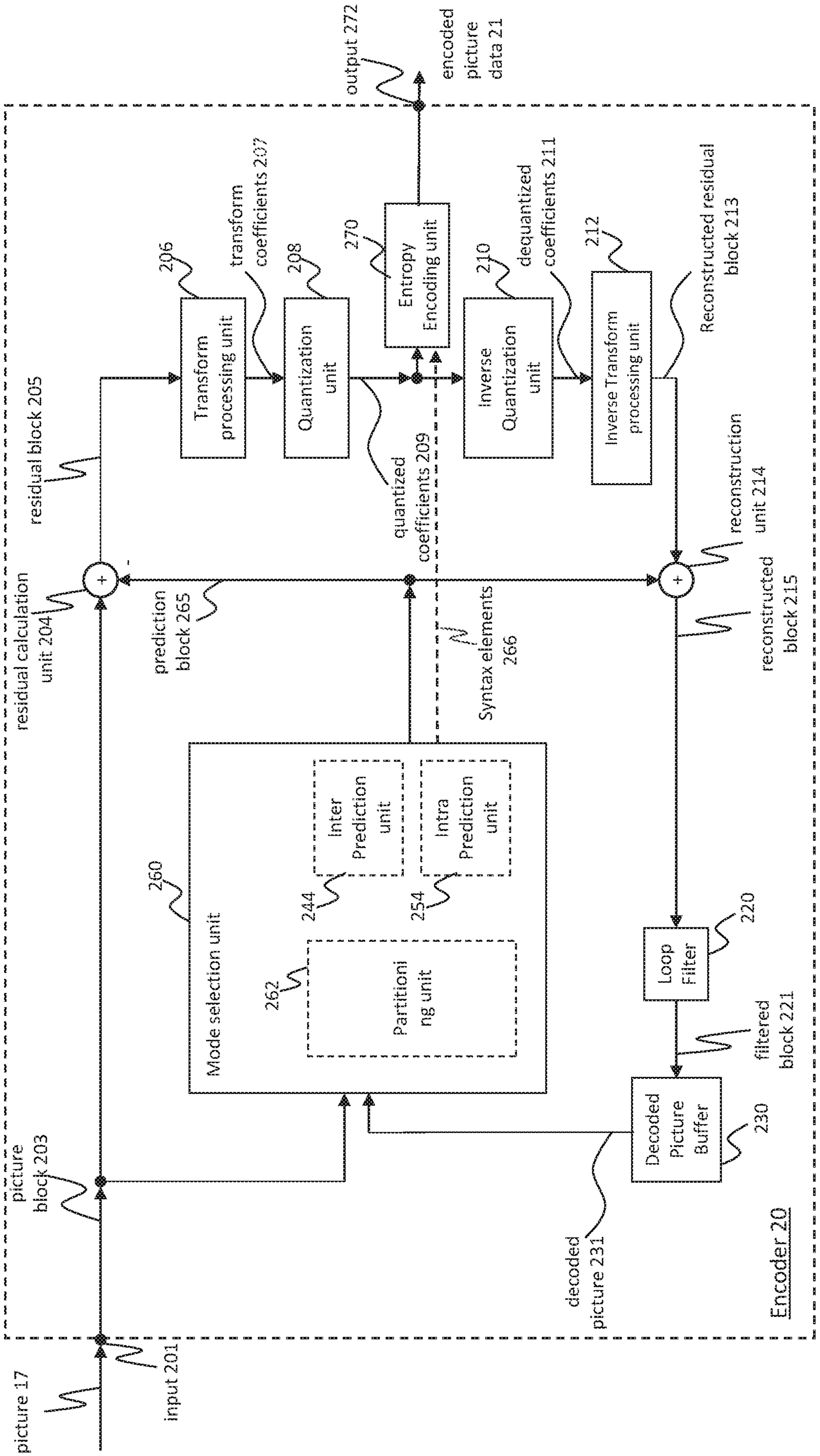

Encoder 20
input 201
picture 17
picture block 203
residual calculation unit 204
residual block 205
206
transform coefficients 207
Transform processing unit
208
Quantization unit
quantized coefficients 209
210
dequantized coefficients 211
Inverse Quantization unit
212
Inverse Transform processing unit
reconstructed residual block 213
reconstruction unit 214
reconstructed block 215
prediction block 265
Syntax elements 266
270
Entropy Encoding unit
output 272
encoded picture data 21
260
Mode selection unit
262
Partitioning unit
244
Inter Prediction unit
254
Intra Prediction unit
Loop Filter
220
filtered block 221
Decoded Picture Buffer
230
decoded picture 231

Fig. 2

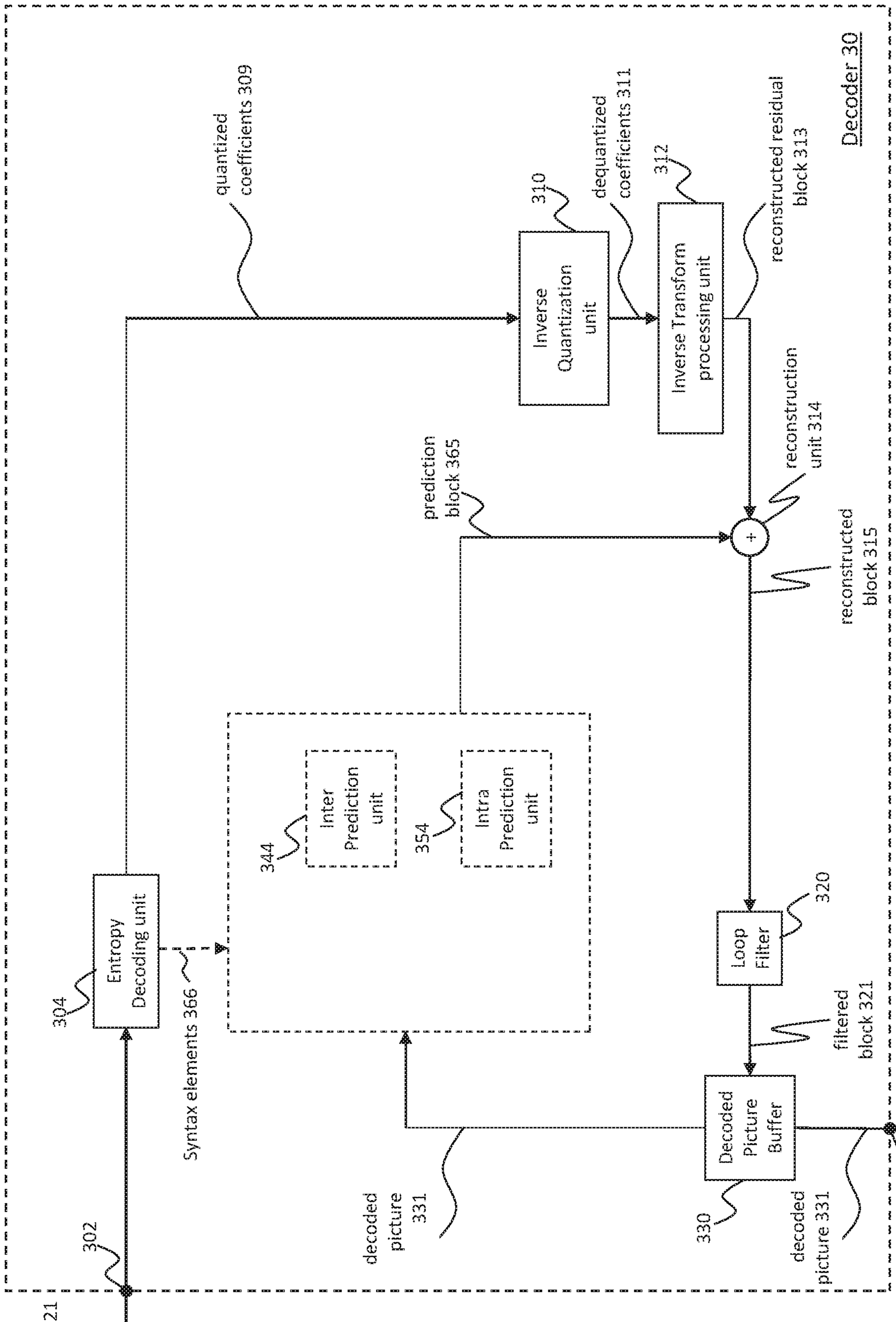

Decoder 30
quantized coefficients 309
310
dequantized coefficients 311
312
constructed residual block 313
Inverse Quantization unit
Inverse Transform processing unit
prediction block 365
reconstruction unit 314
reconstructed block 315
344
Inter Prediction unit
354
Intra Prediction unit
304
Entropy Decoding unit
Syntax elements 366
Loop Filter
320
filtered block 321
Decoded Picture Buffer
330
decoded picture 331
decoded picture 331
output 332
302
encoded picture data 21

Fig. 3

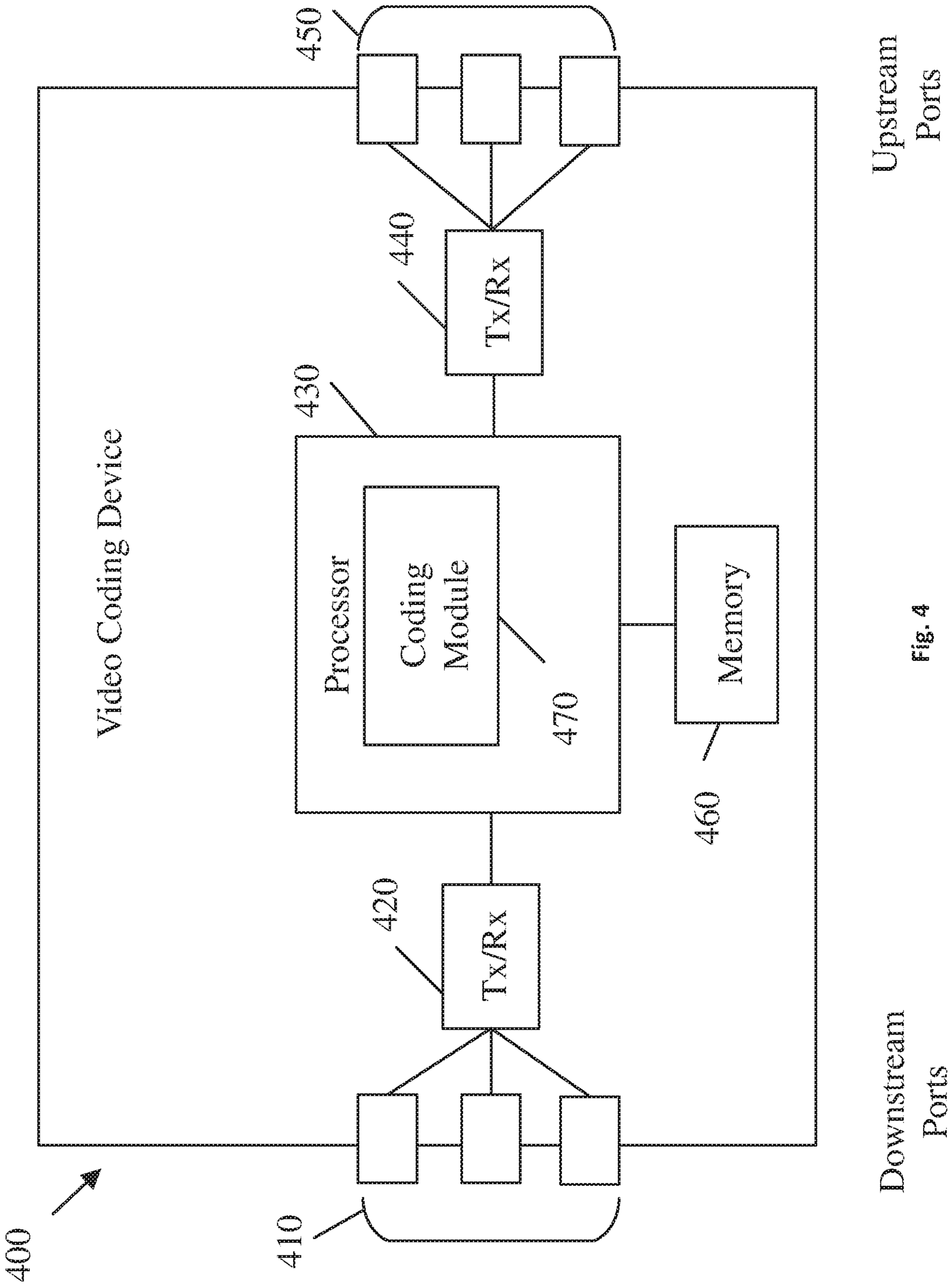

Video Coding Device
Processor
Coding Module
Tx/Rx
Tx/Rx
Memory
Upstream Ports
Downstream Ports
400
410
420
430
440
450
460
470

Fig. 4

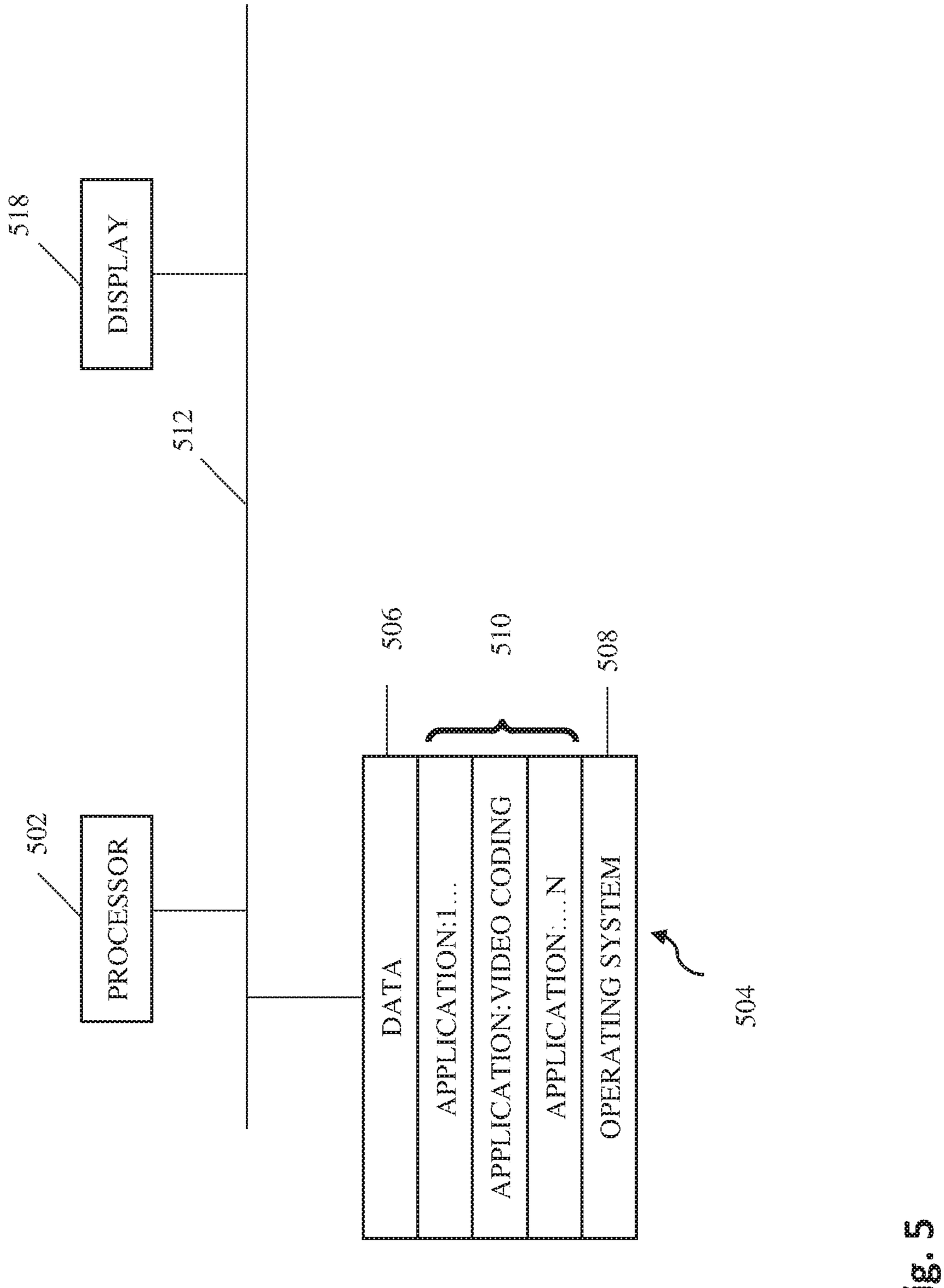

500
502
PROCESSOR
504
DATA
APPLICATION:1...
APPLICATION:VIDEO CODING
APPLICATION:...N
OPERATING SYSTEM
506
508
510
512
518
DISPLAY

Fig. 5

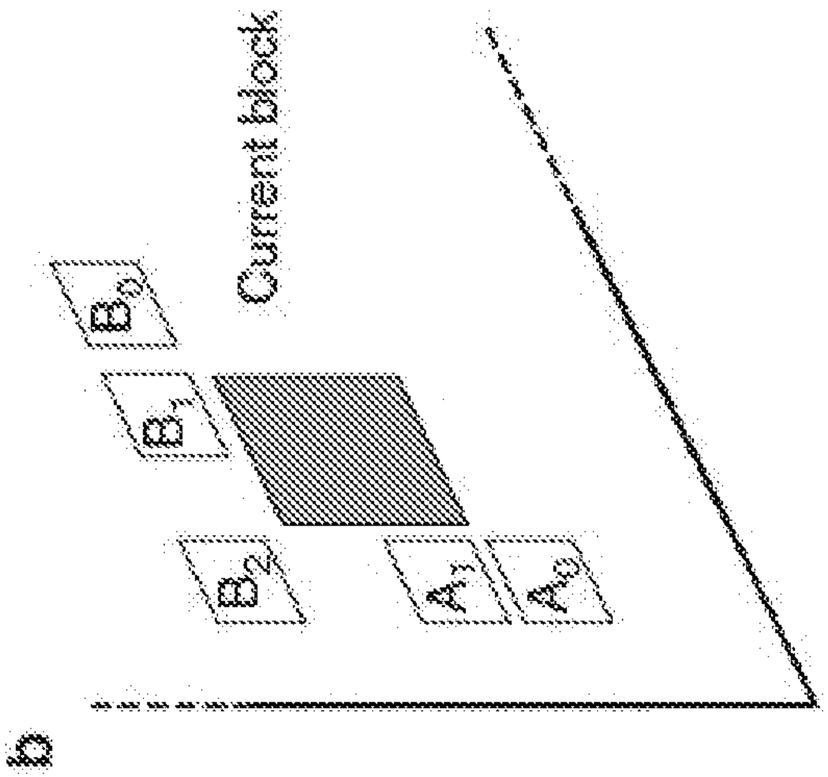


FIG. 6b

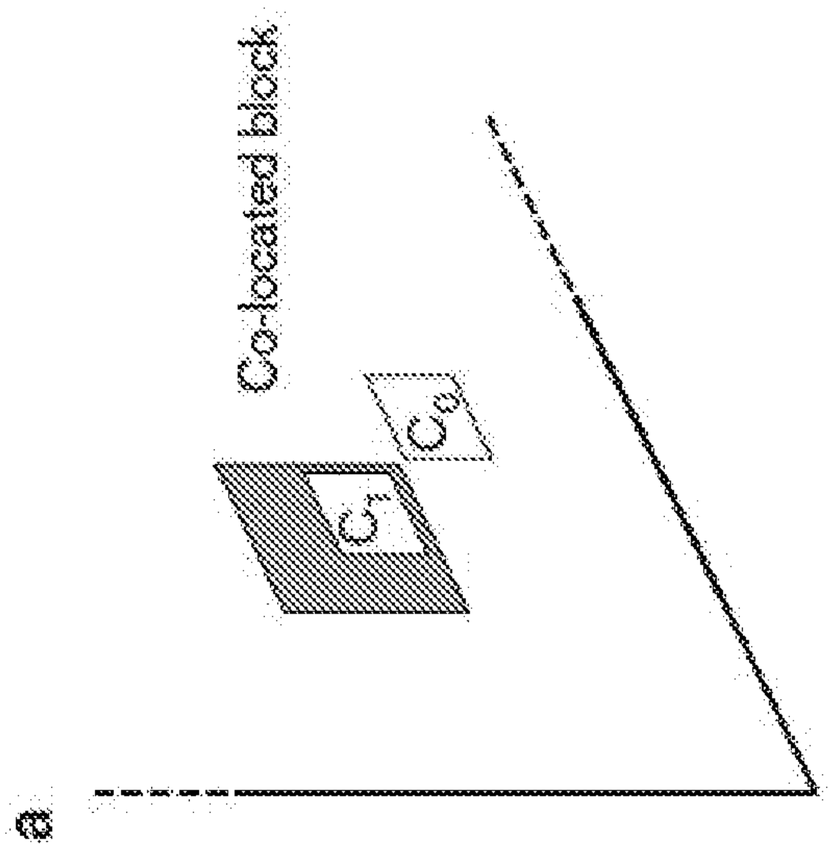
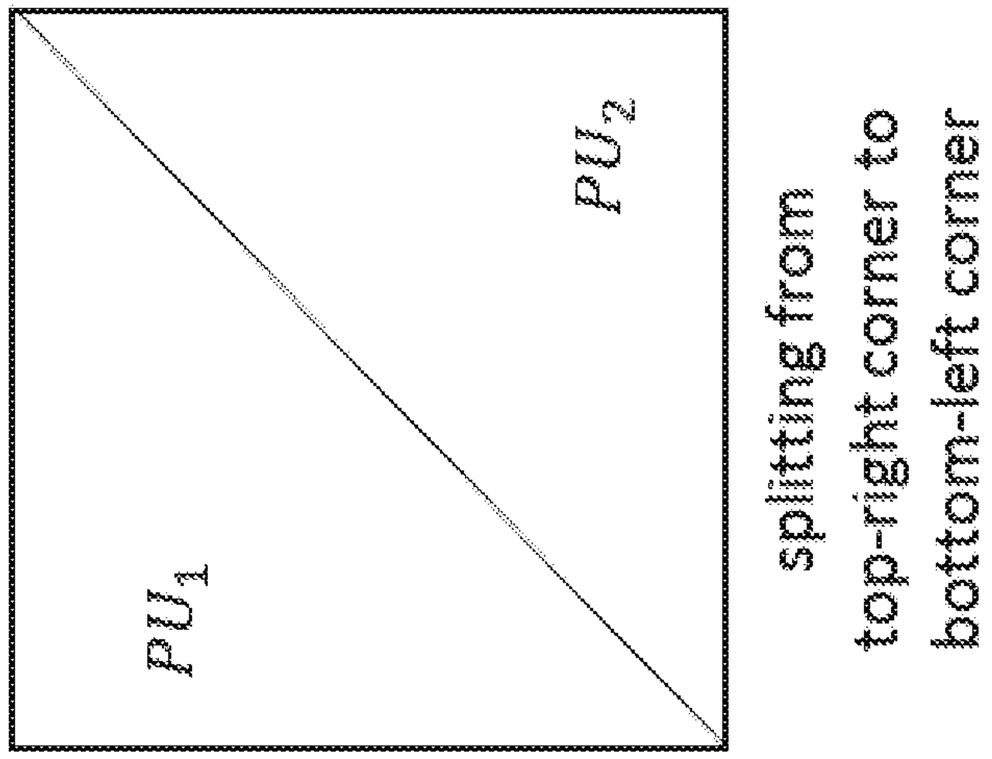


FIG. 6a


PU_1
PU_2
splitting from
top-right corner to
bottom-left corner

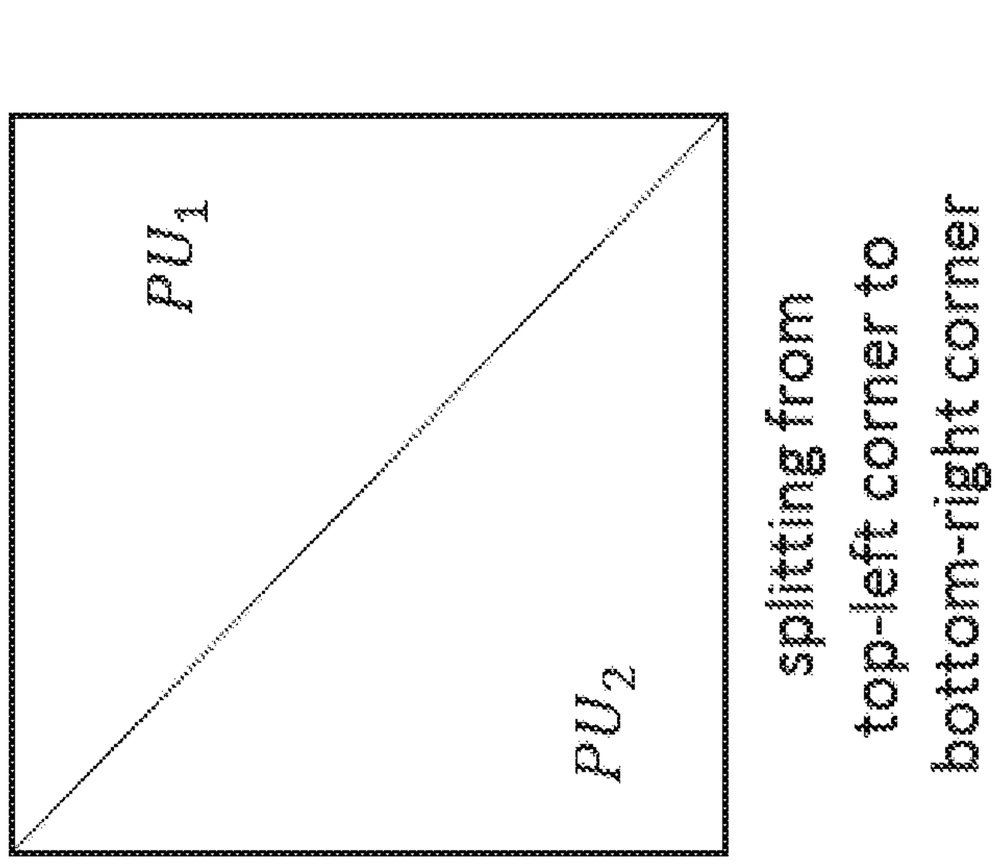

PU_1
PU_2
splitting from
top-left corner to
bottom-right corner

FIG. 7

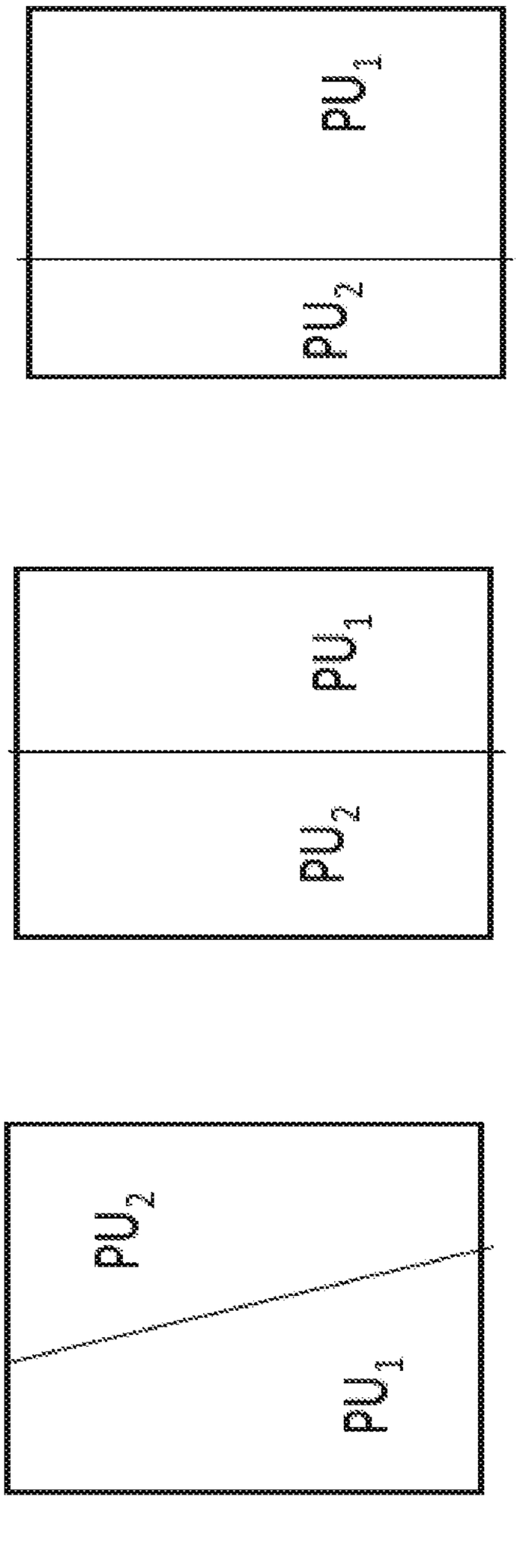


FIG. 8

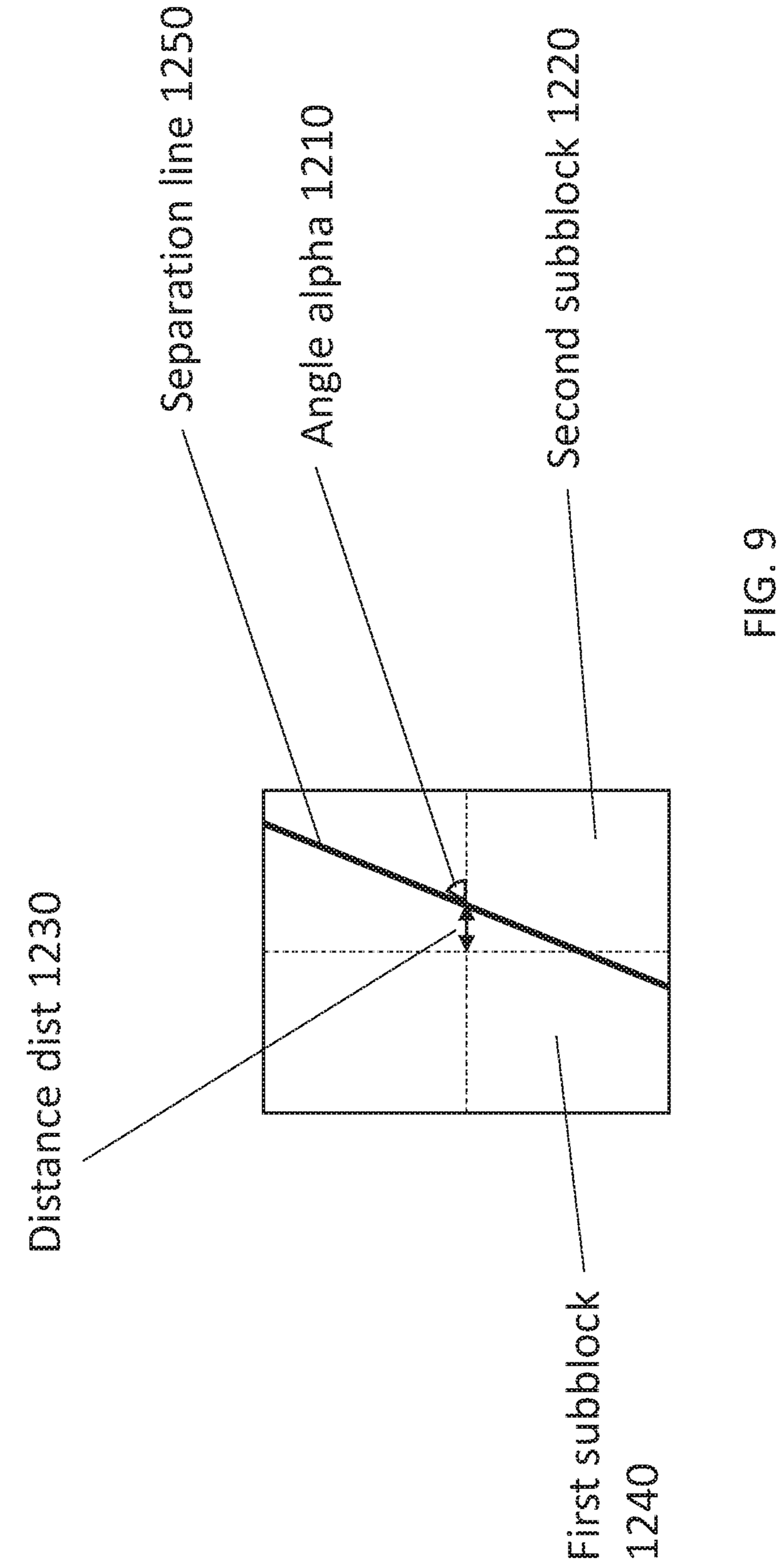

Separation line 1250
Angle alpha 1210
Second subblock 1220
Distance dist 1230
First subblock 1240

FIG. 9

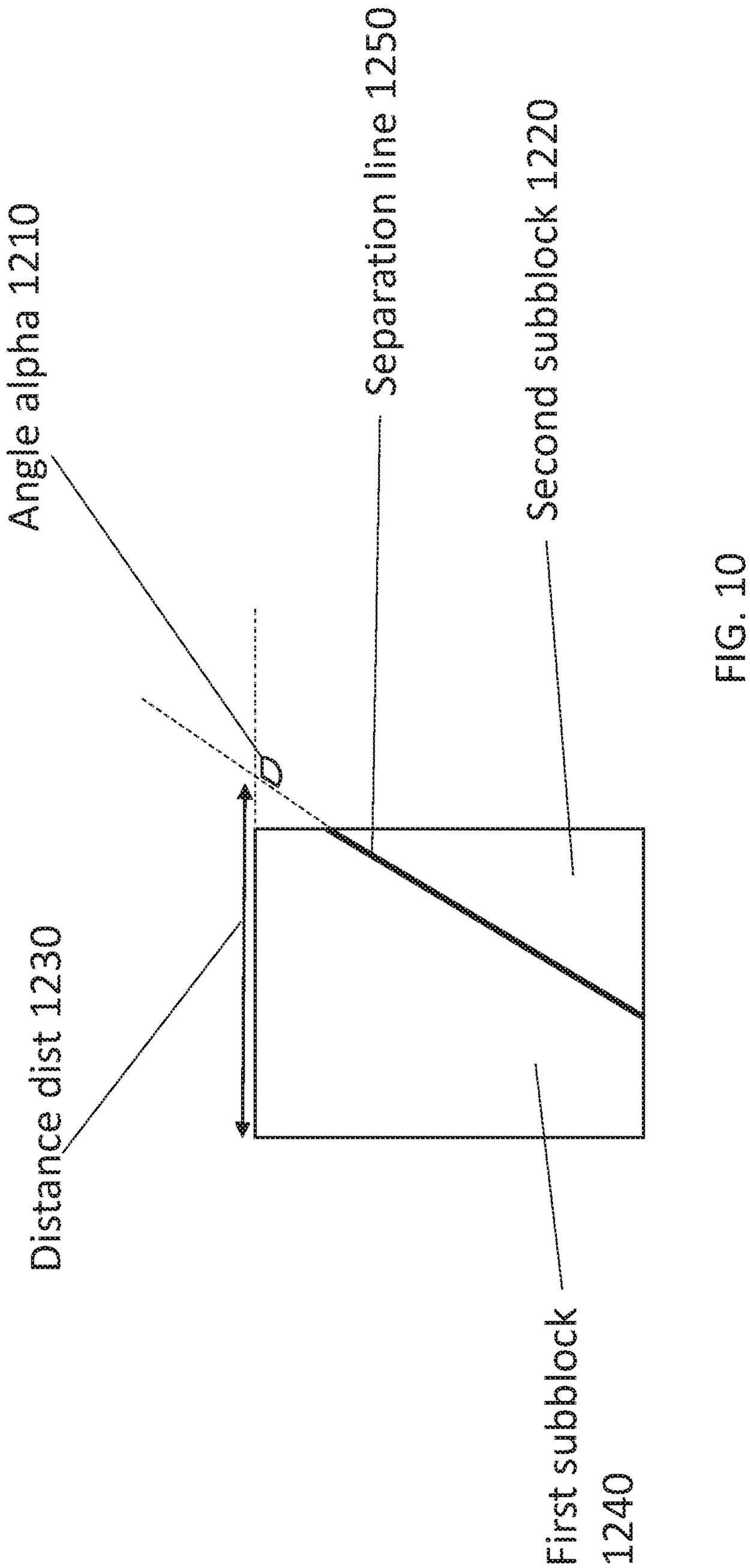

Angle alpha 1210
Separation line 1250
Second subblock 1220
D
Distance dist 1230
First subblock 1240

FIG. 10

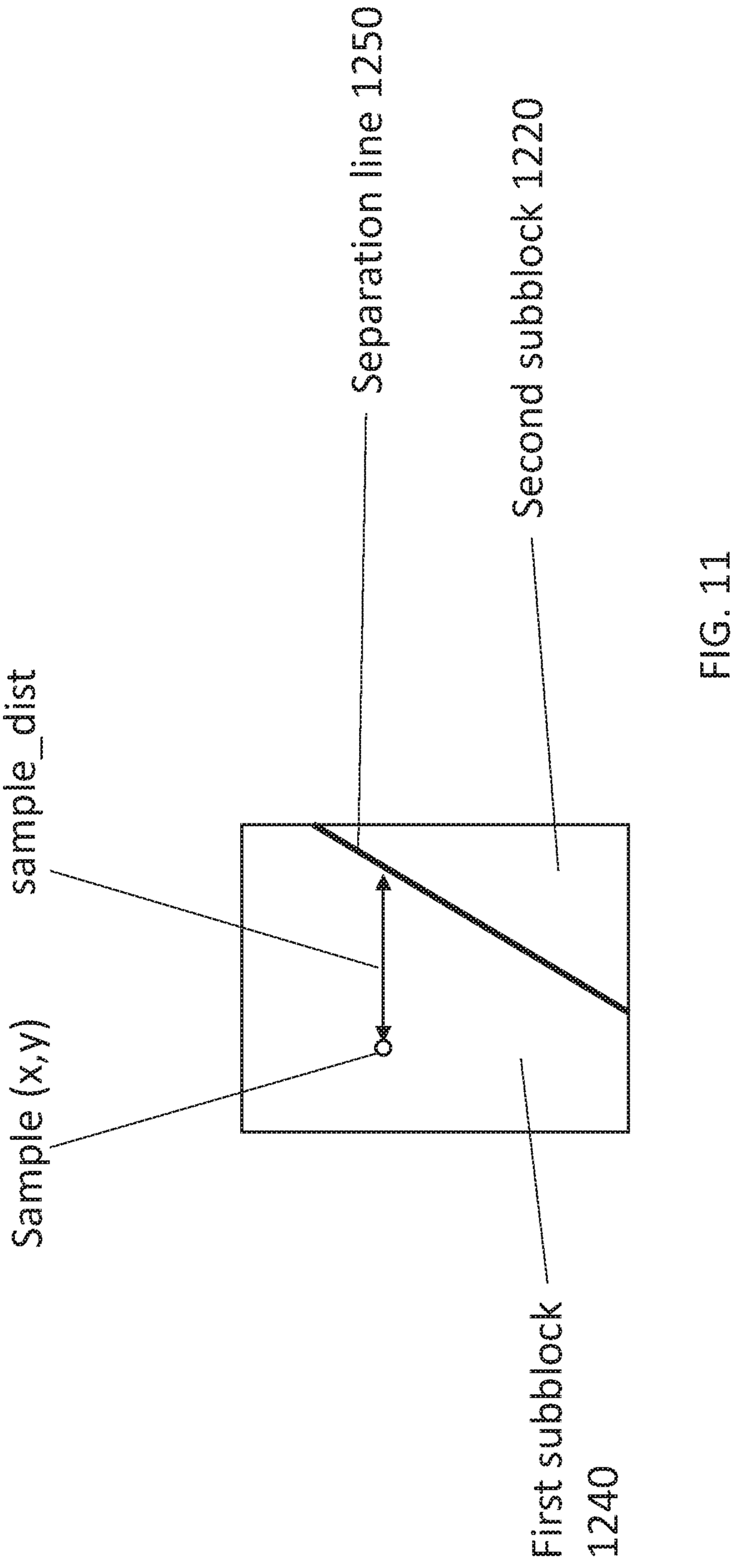

Separation line 1250
Second subblock 1220
sample_dist
Sample (x,y)
First subblock 1240

FIG. 11

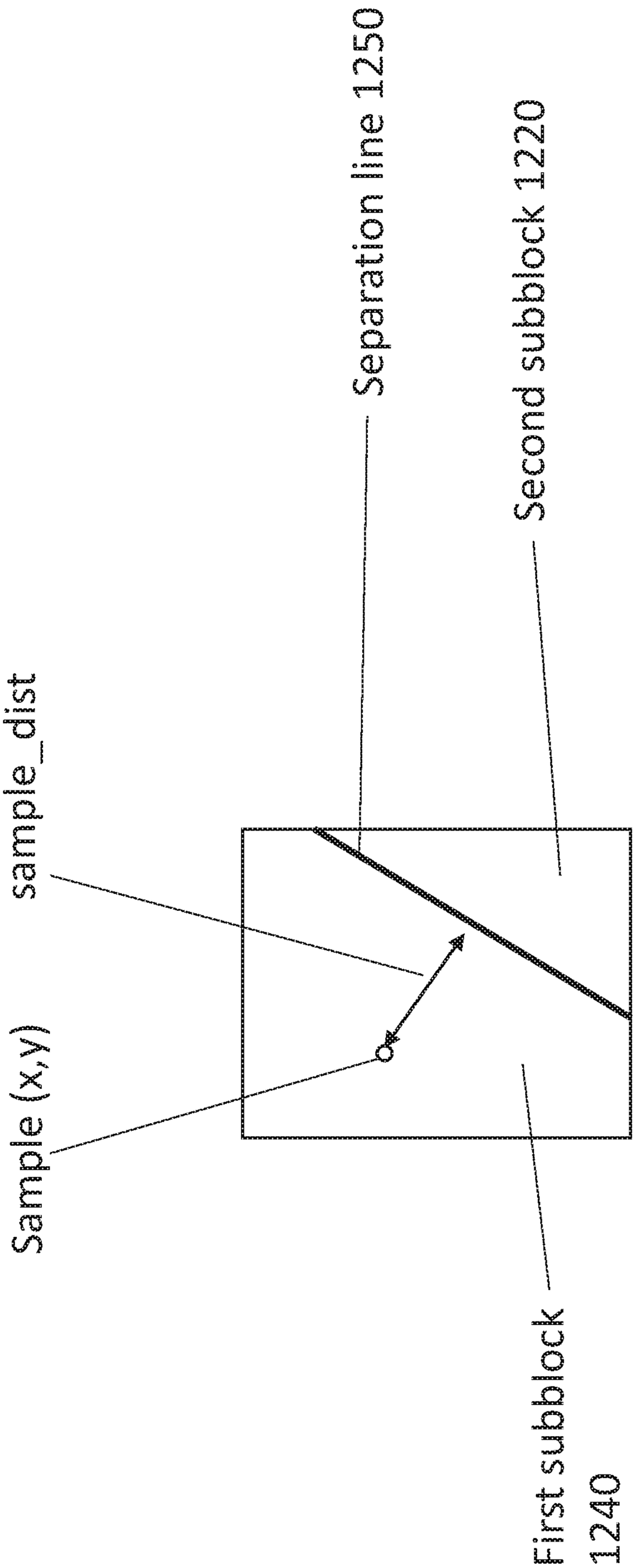

First subblock 1240
Sample (x,y)
sample_dist
Separation line 1250
Second subblock 1220

FIG. 12

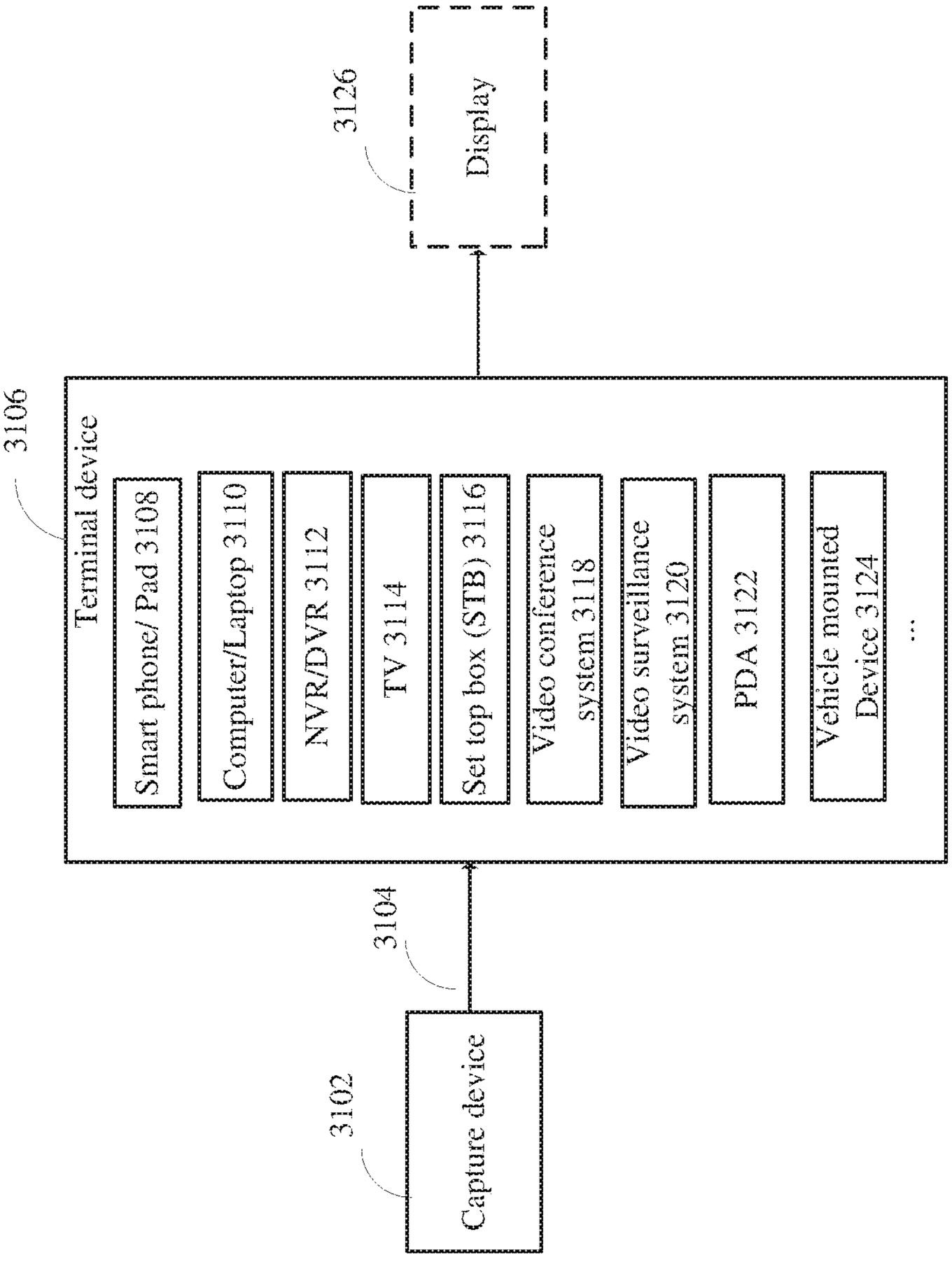

3126
Display
3106
Terminal device
Smart phone/ Pad 3108
Computer/Laptop 3110
NVR/DVR 3112
TV 3114
Set top box (STB) 3116
Video conference system 3118
Video surveillance system 3120
PDA 3122
Vehicle mounted Device 3124
...
3104
3102
Capture device

Fig. 13

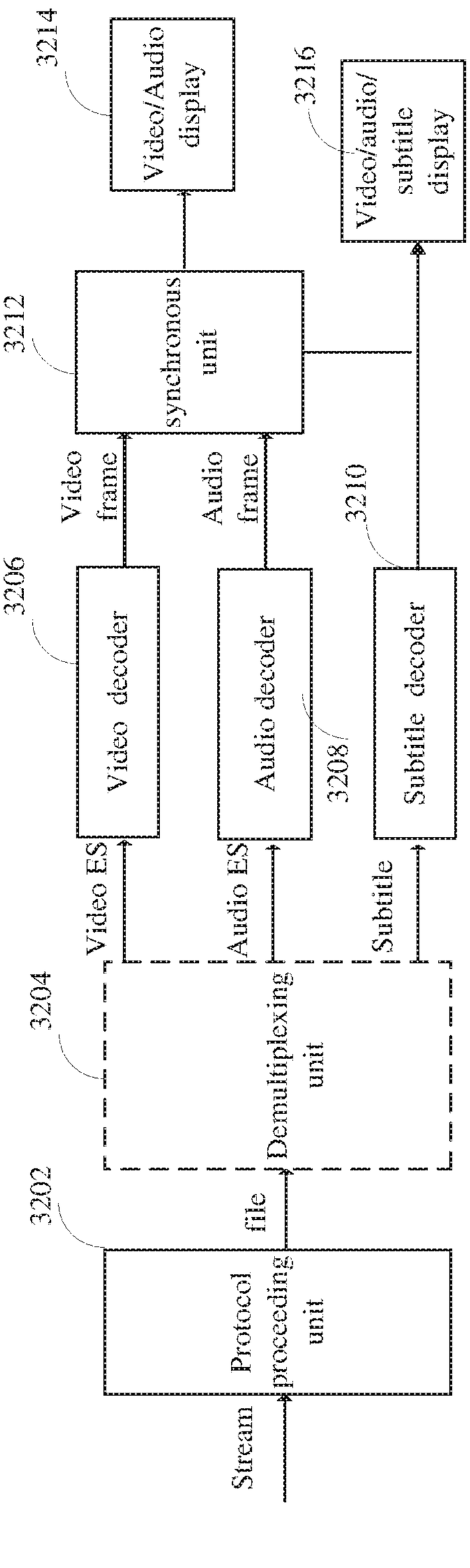

Stream file
Protocol proceeding unit
3202
Demultiplexing unit
3204
Video ES
Audio ES
Subtitle
Video decoder
3206
Audio decoder
3208
Subtitle decoder
3210
Video frame
Audio frame
synchronous unit
3212
Video/Audio display
3214
Video/audio/ subtitle display
3216

Fig. 14

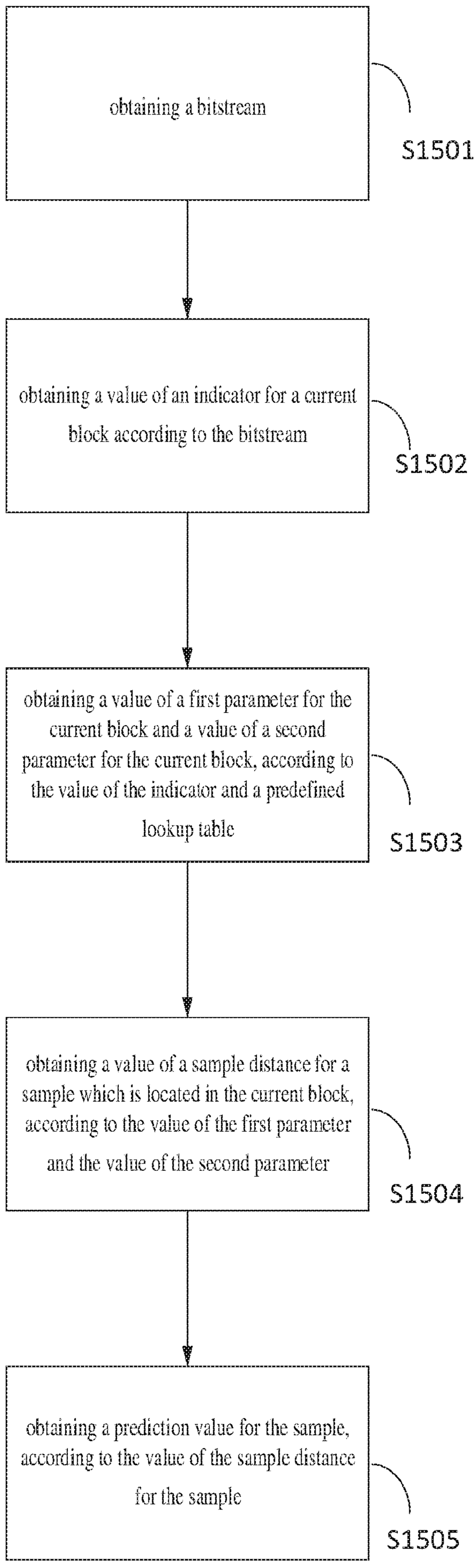

obtaining a bitstream
S1501
obtaining a value of an indicator for a current block according to the bitstream
S1502
obtaining a value of a first parameter for the current block and a value of a second parameter for the current block, according to the value of the indicator and a predefined lookup table
S1503
obtaining a value of a sample distance for a sample which is located in the current block, according to the value of the first parameter and the value of the second parameter
S1504
obtaining a prediction value for the sample, according to the value of the sample distance for the sample
S1505

FIG.15

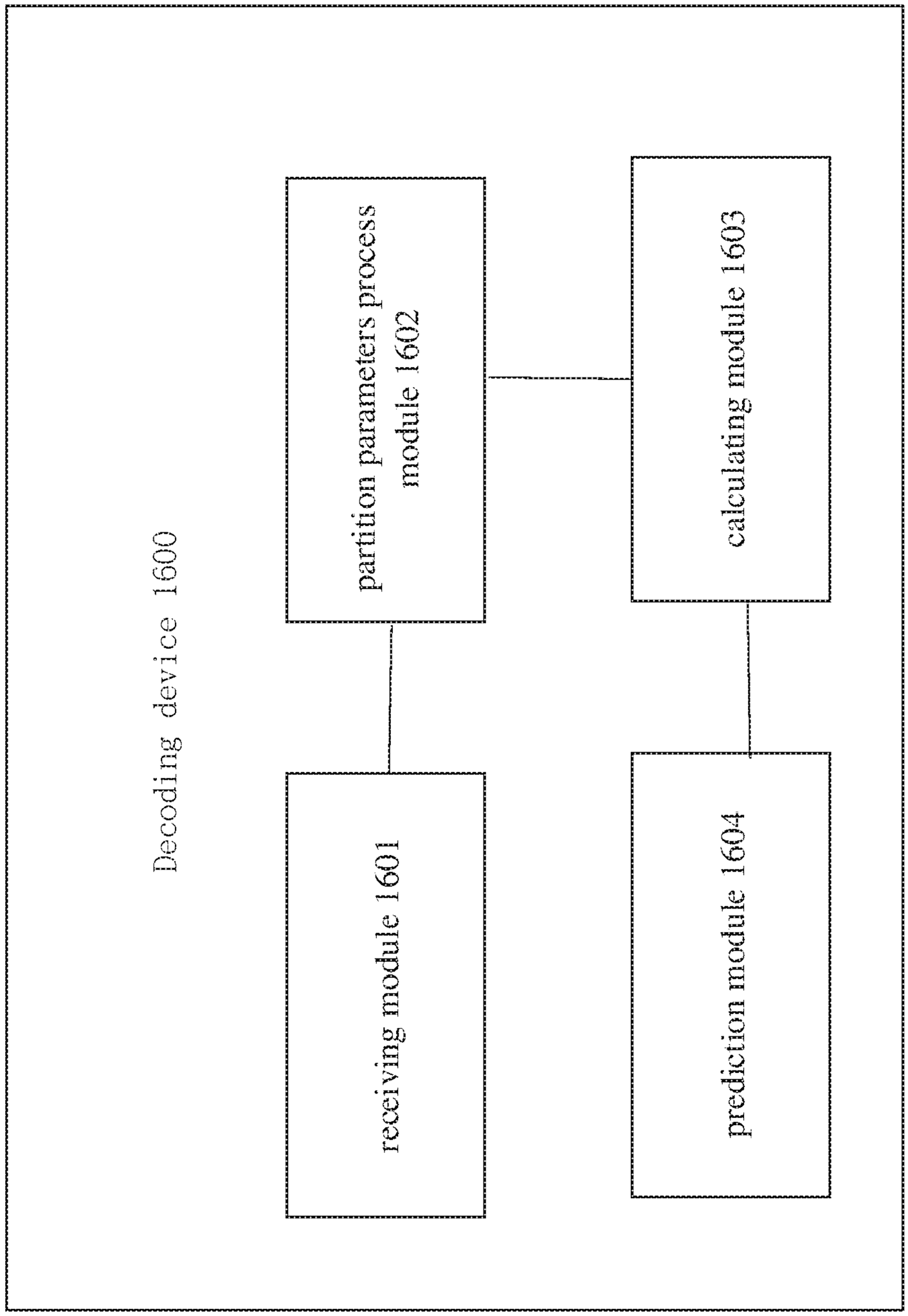

Decoding device 1600
receiving module 1601
partition parameters process module 1602
calculating module 1603
prediction module 1604

FIG.16