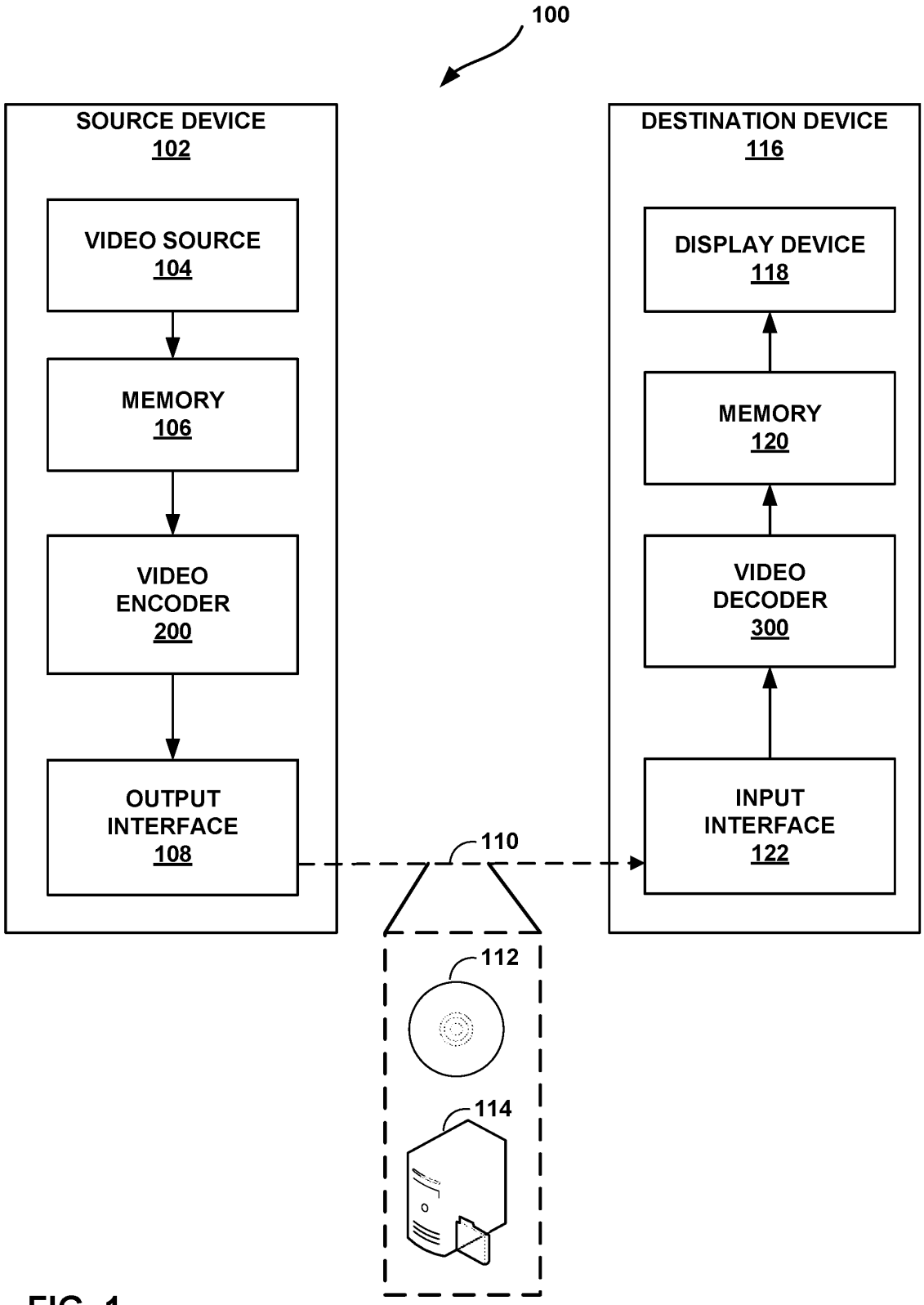
100
SOURCE DEVICE
102
VIDEO SOURCE
104
MEMORY
106
VIDEO
ENCODER
200
OUTPUT
INTERFACE
108
DESTINATION DEVICE
116
DISPLAY DEVICE
118
MEMORY
120
VIDEO
DECODER
300
INPUT
INTERFACE
122
110
112
114

FIG. 1

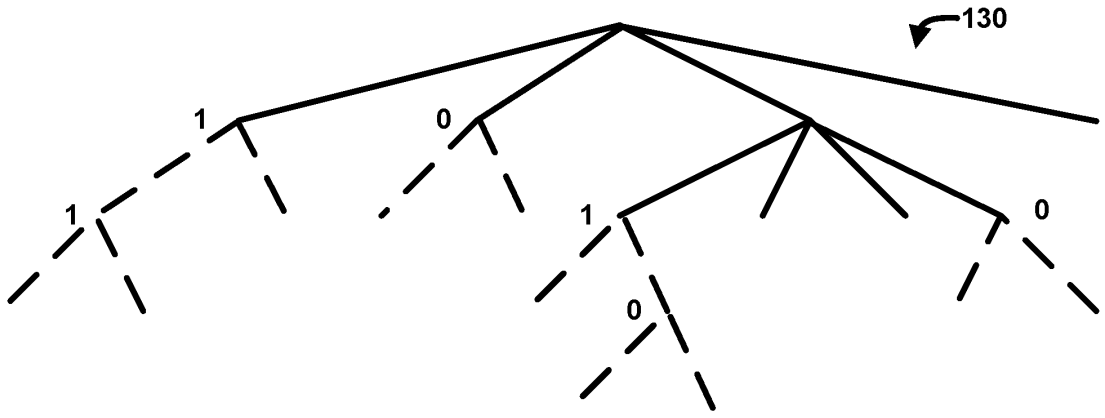

FIG. 2A

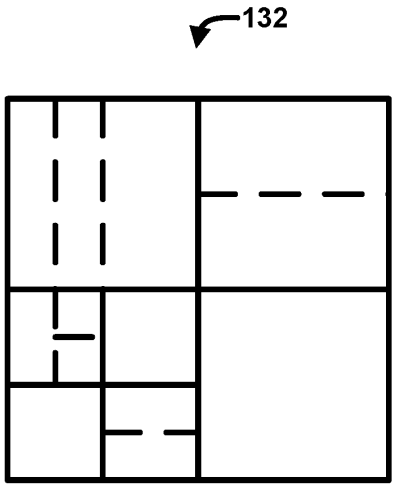

FIG. 2B

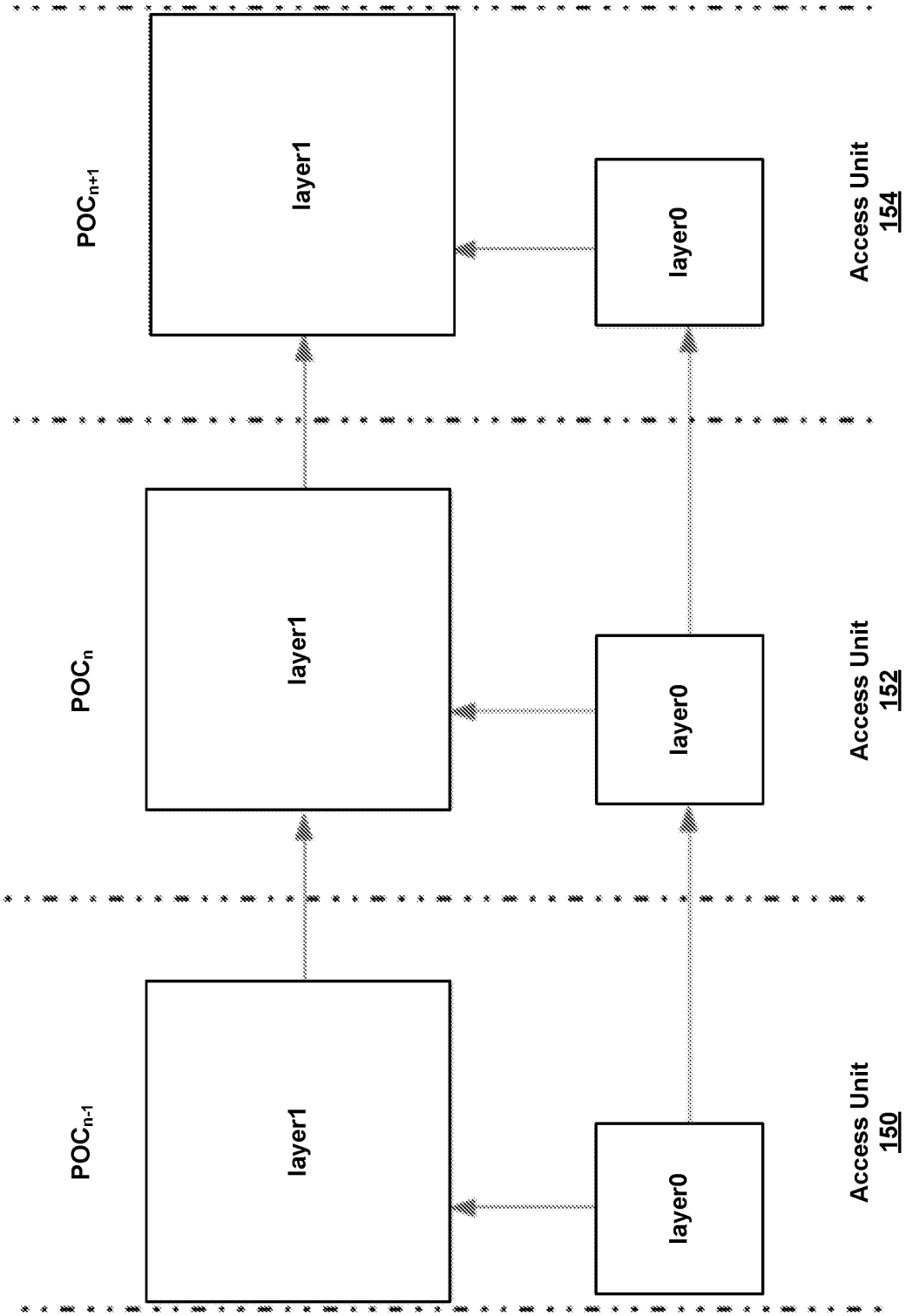
POC$_{n+1}$
layer1
layer0
Access Unit
154
POC$_n$
layer1
layer0
Access Unit
152
POC$_{n-1}$
layer1
layer0
Access Unit
150

FIG. 3

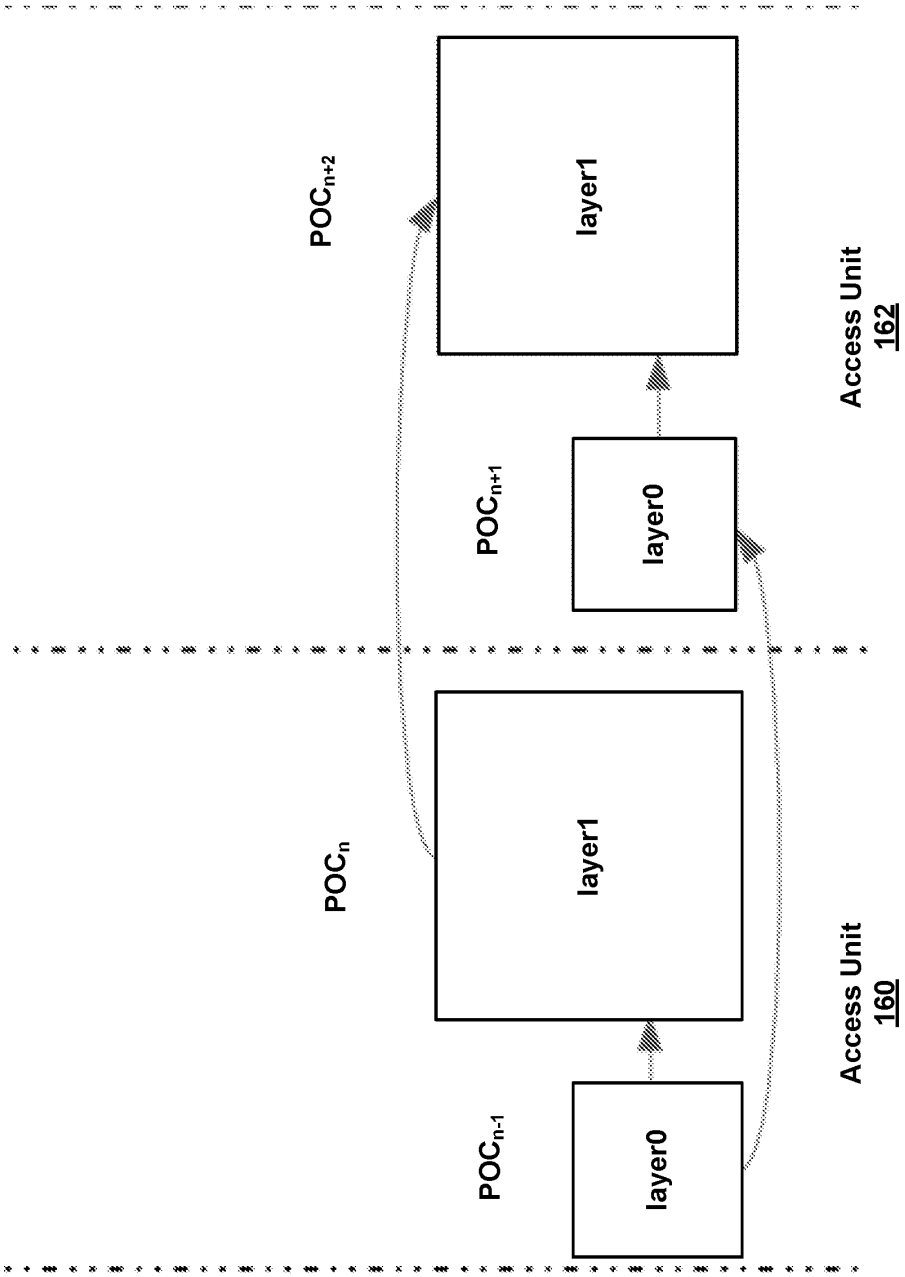
POC$_{n+2}$
layer1
Access Unit
162
POC$_{n+1}$
layer0
POC$_n$
layer1
Access Unit
160
POC$_{n-1}$
layer0

FIG. 4

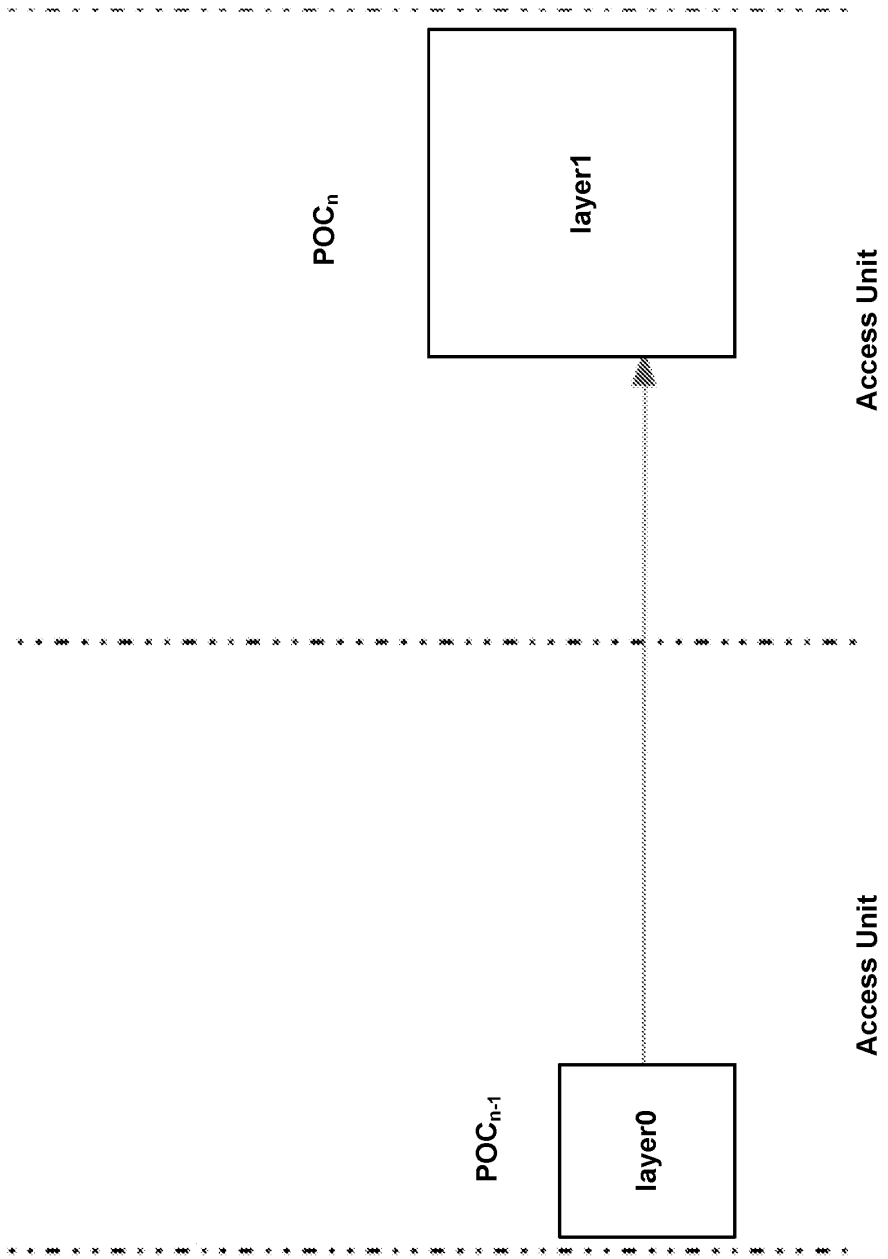

FIG. 5

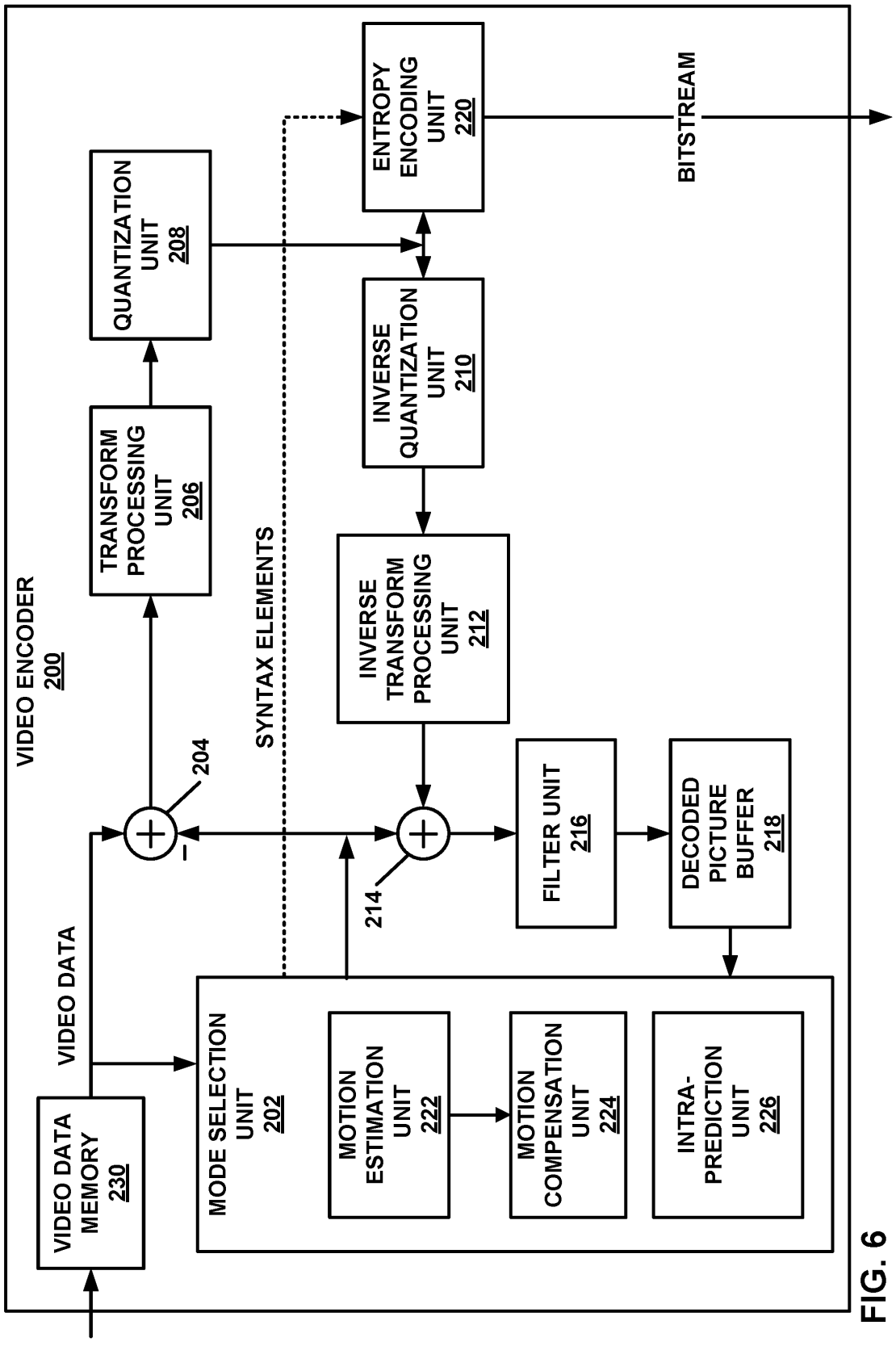
VIDEO ENCODER
200
VIDEO DATA MEMORY
230
VIDEO DATA
MODE SELECTION UNIT
202
MOTION ESTIMATION UNIT
222
MOTION COMPENSATION UNIT
224
INTRA-PREDICTION UNIT
226
204
214
TRANSFORM PROCESSING UNIT
206
QUANTIZATION UNIT
208
INVERSE QUANTIZATION UNIT
210
INVERSE TRANSFORM PROCESSING UNIT
212
FILTER UNIT
216
DECODED PICTURE BUFFER
218
SYNTAX ELEMENTS
ENTROPY ENCODING UNIT
220
BITSTREAM

FIG. 6

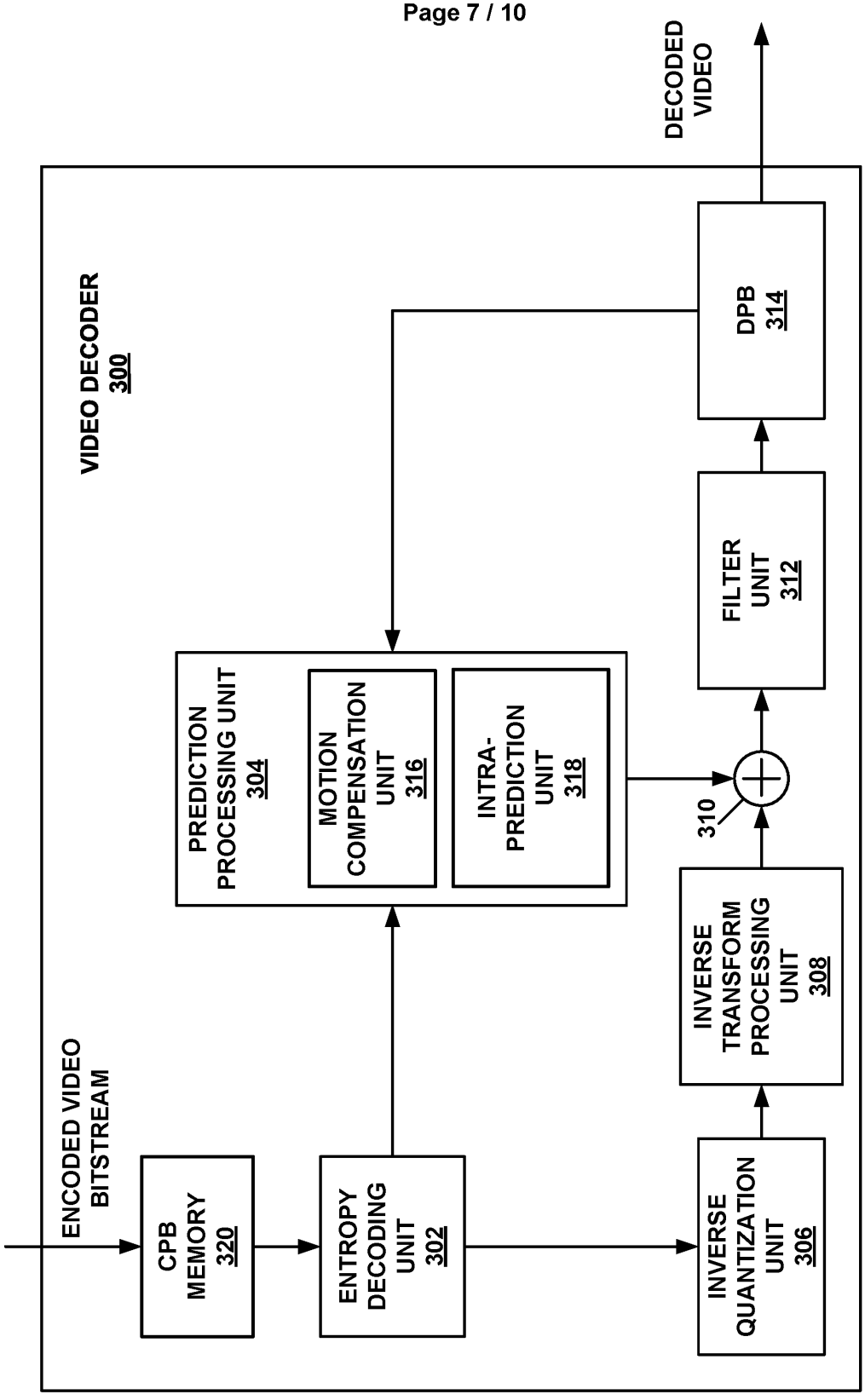
DECODED VIDEO
VIDEO DECODER 300
DPB 314
FILTER UNIT 312
PREDICTION PROCESSING UNIT 304
MOTION COMPENSATION UNIT 316
INTRA-PREDICTION UNIT 318
310
INVERSE TRANSFORM PROCESSING UNIT 308
INVERSE QUANTIZATION UNIT 306
ENTROPY DECODING UNIT 302
CPB MEMORY 320
ENCODED VIDEO BITSTREAM

FIG. 7

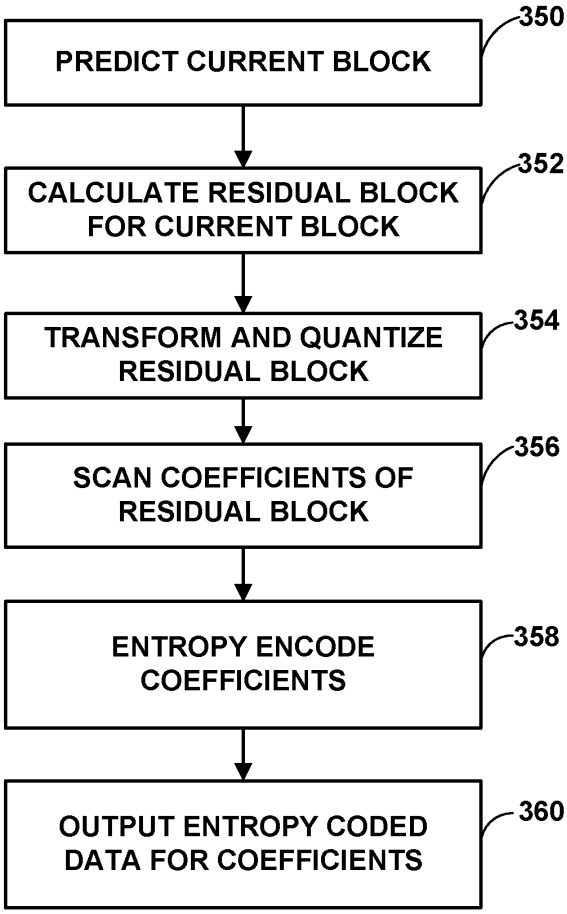
PREDICT CURRENT BLOCK
350
CALCULATE RESIDUAL BLOCK FOR CURRENT BLOCK
352
TRANSFORM AND QUANTIZE RESIDUAL BLOCK
354
SCAN COEFFICIENTS OF RESIDUAL BLOCK
356
ENTROPY ENCODE COEFFICIENTS
358
OUTPUT ENTROPY CODED DATA FOR COEFFICIENTS
360

FIG. 8

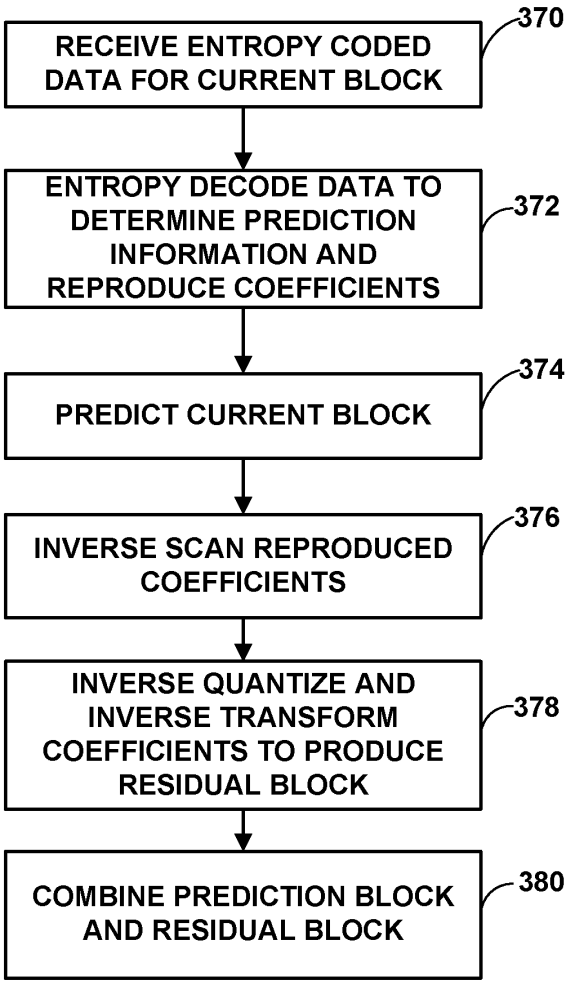
RECEIVE ENTROPY CODED DATA FOR CURRENT BLOCK
370
ENTROPY DECODE DATA TO DETERMINE PREDICTION INFORMATION AND REPRODUCE COEFFICIENTS
372
PREDICT CURRENT BLOCK
374
INVERSE SCAN REPRODUCED COEFFICIENTS
376
INVERSE QUANTIZE AND INVERSE TRANSFORM COEFFICIENTS TO PRODUCE RESIDUAL BLOCK
378
COMBINE PREDICTION BLOCK AND RESIDUAL BLOCK
380

FIG. 9

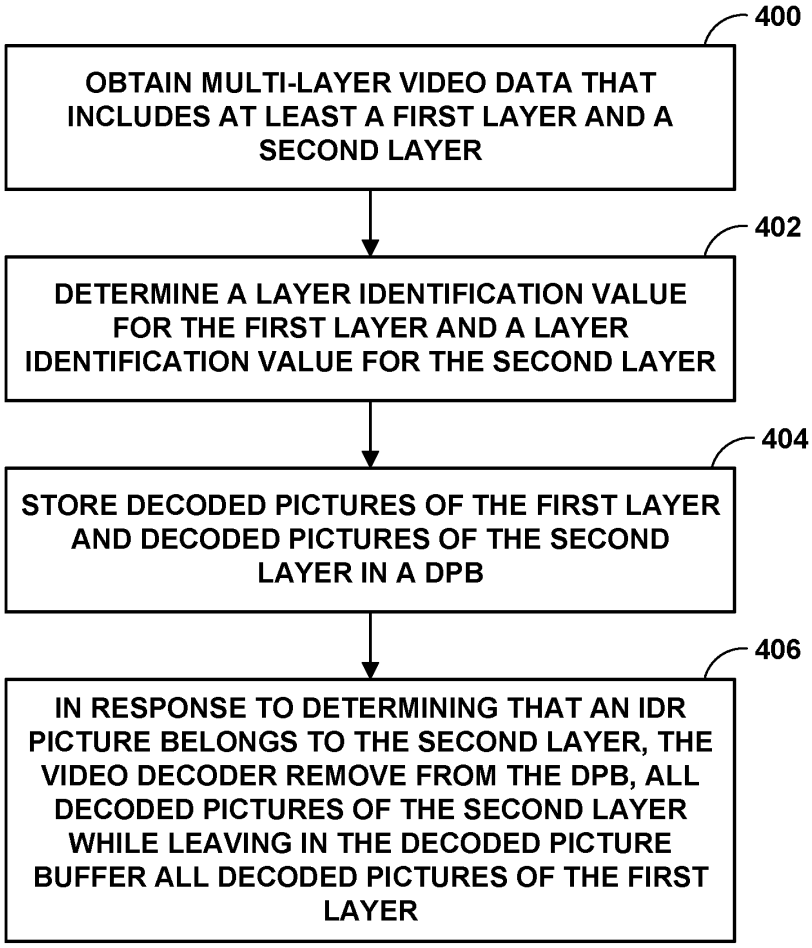
400
OBTAIN MULTI-LAYER VIDEO DATA THAT INCLUDES AT LEAST A FIRST LAYER AND A SECOND LAYER
402
DETERMINE A LAYER IDENTIFICATION VALUE FOR THE FIRST LAYER AND A LAYER IDENTIFICATION VALUE FOR THE SECOND LAYER
404
STORE DECODED PICTURES OF THE FIRST LAYER AND DECODED PICTURES OF THE SECOND LAYER IN A DPB
406
IN RESPONSE TO DETERMINING THAT AN IDR PICTURE BELONGS TO THE SECOND LAYER, THE VIDEO DECODER REMOVE FROM THE DPB, ALL DECODED PICTURES OF THE SECOND LAYER WHILE LEAVING IN THE DECODED PICTURE BUFFER ALL DECODED PICTURES OF THE FIRST LAYER

FIG. 10