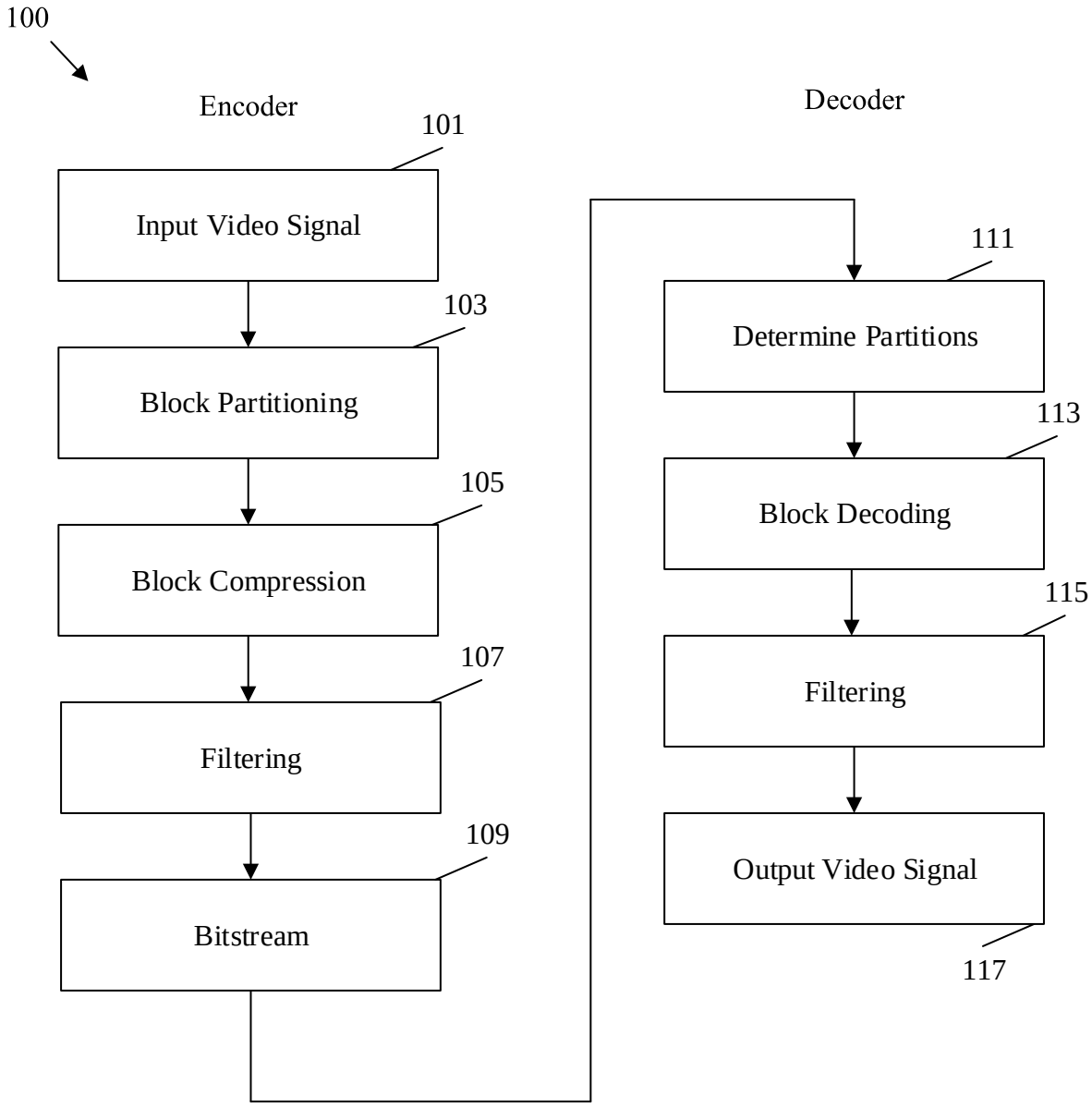

100
Encoder
Decoder
101
Input Video Signal
103
Block Partitioning
105
Block Compression
107
Filtering
109
Bitstream
111
Determine Partitions
113
Block Decoding
115
Filtering
Output Video Signal
117

FIG. 1

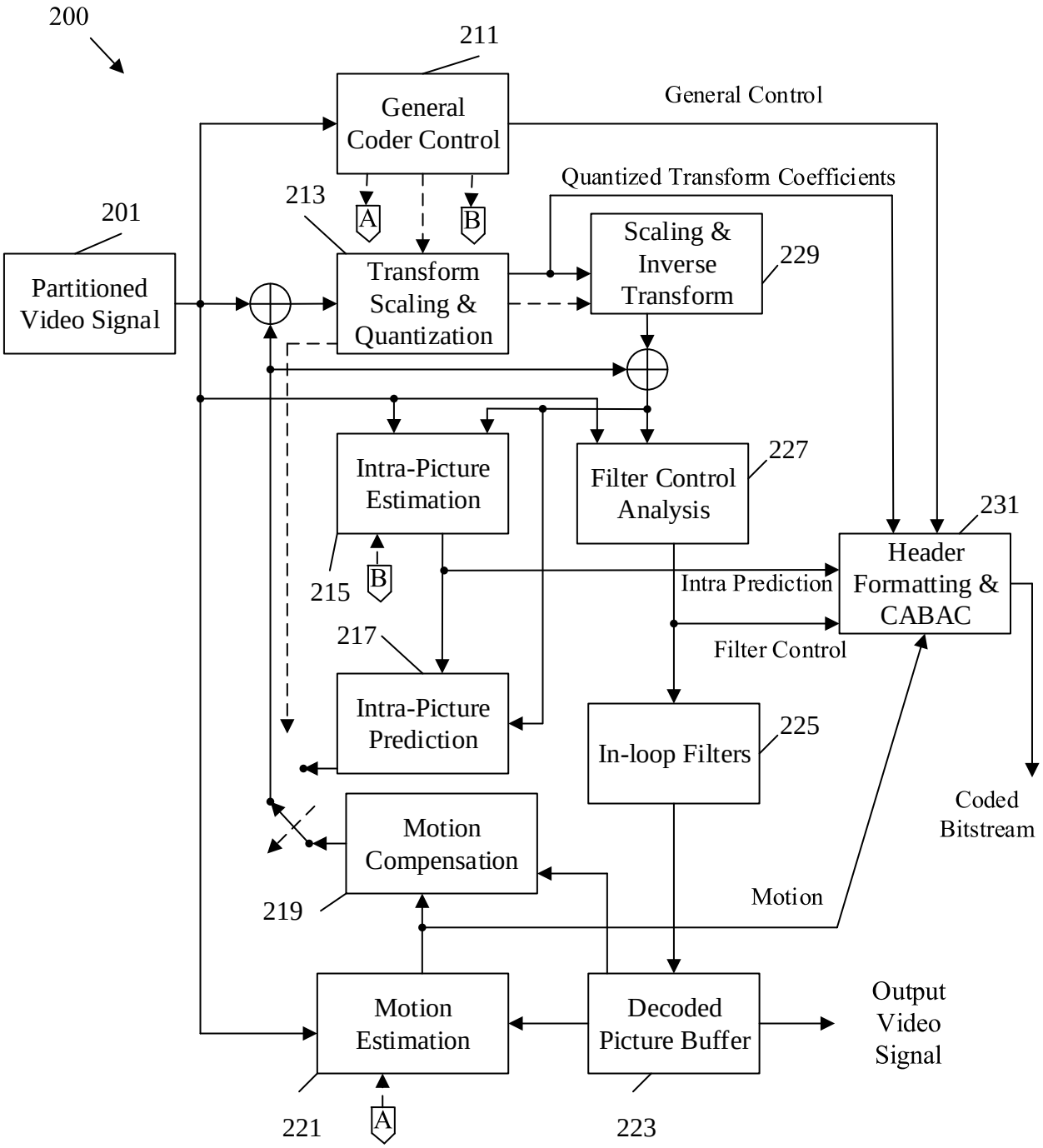

200
211
General Coder Control
General Control
Quantized Transform Coefficients
213
A
B
201
Partitioned Video Signal
Transform Scaling & Quantization
Scaling & Inverse Transform
229
Intra-Picture Estimation
Filter Control Analysis
227
231
Header Formatting & CABAC
215
B
Intra Prediction
Filter Control
217
Intra-Picture Prediction
In-loop Filters
225
Coded Bitstream
Motion Compensation
219
Motion
Motion Estimation
Decoded Picture Buffer
Output Video Signal
221
A
223

FIG. 2

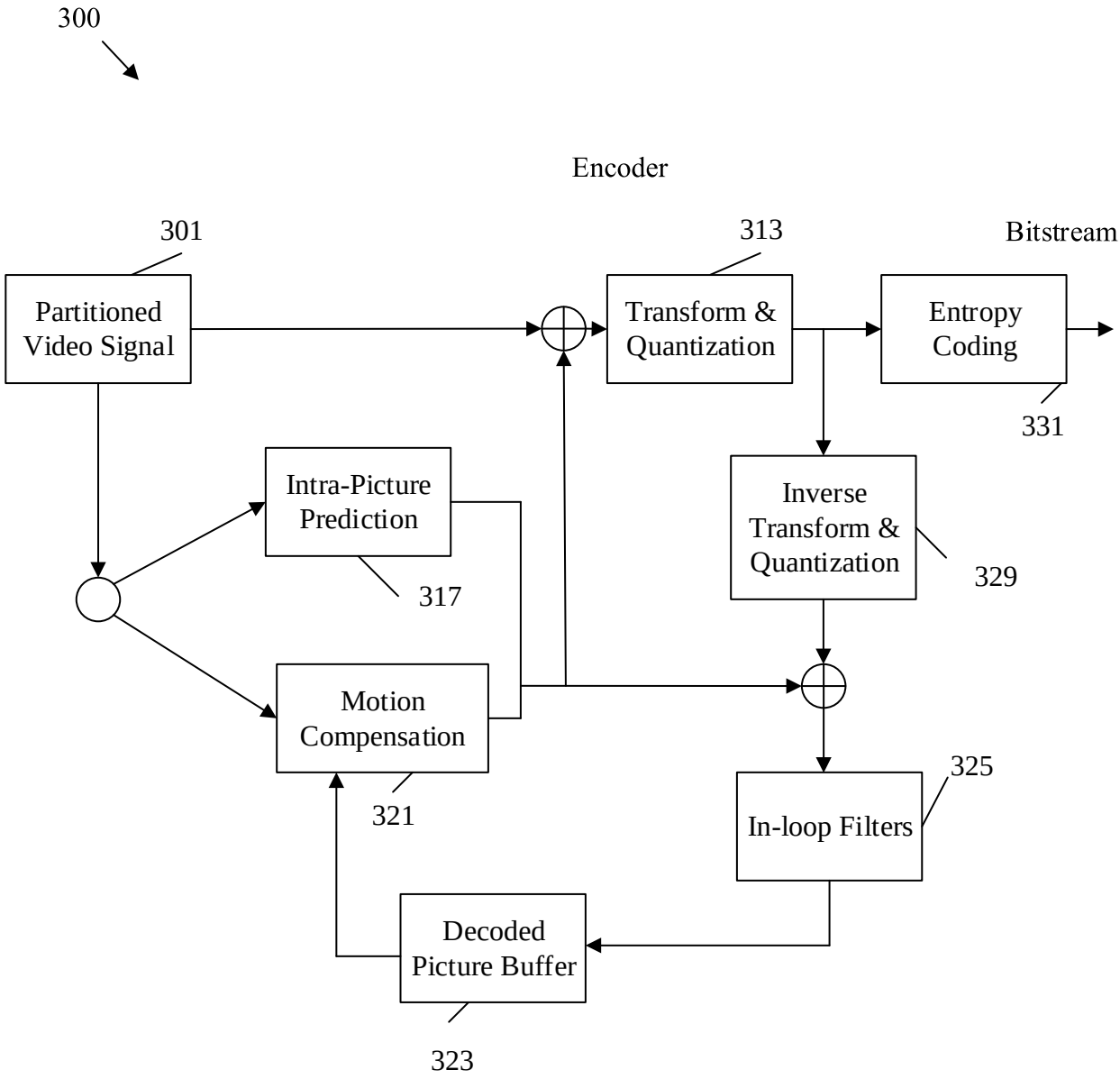

300
Encoder
301
Partitioned Video Signal
313
Transform & Quantization
Entropy Coding
Bitstream
331
Intra-Picture Prediction
317
Inverse Transform & Quantization
329
Motion Compensation
321
325
In-loop Filters
Decoded Picture Buffer
323

FIG. 3

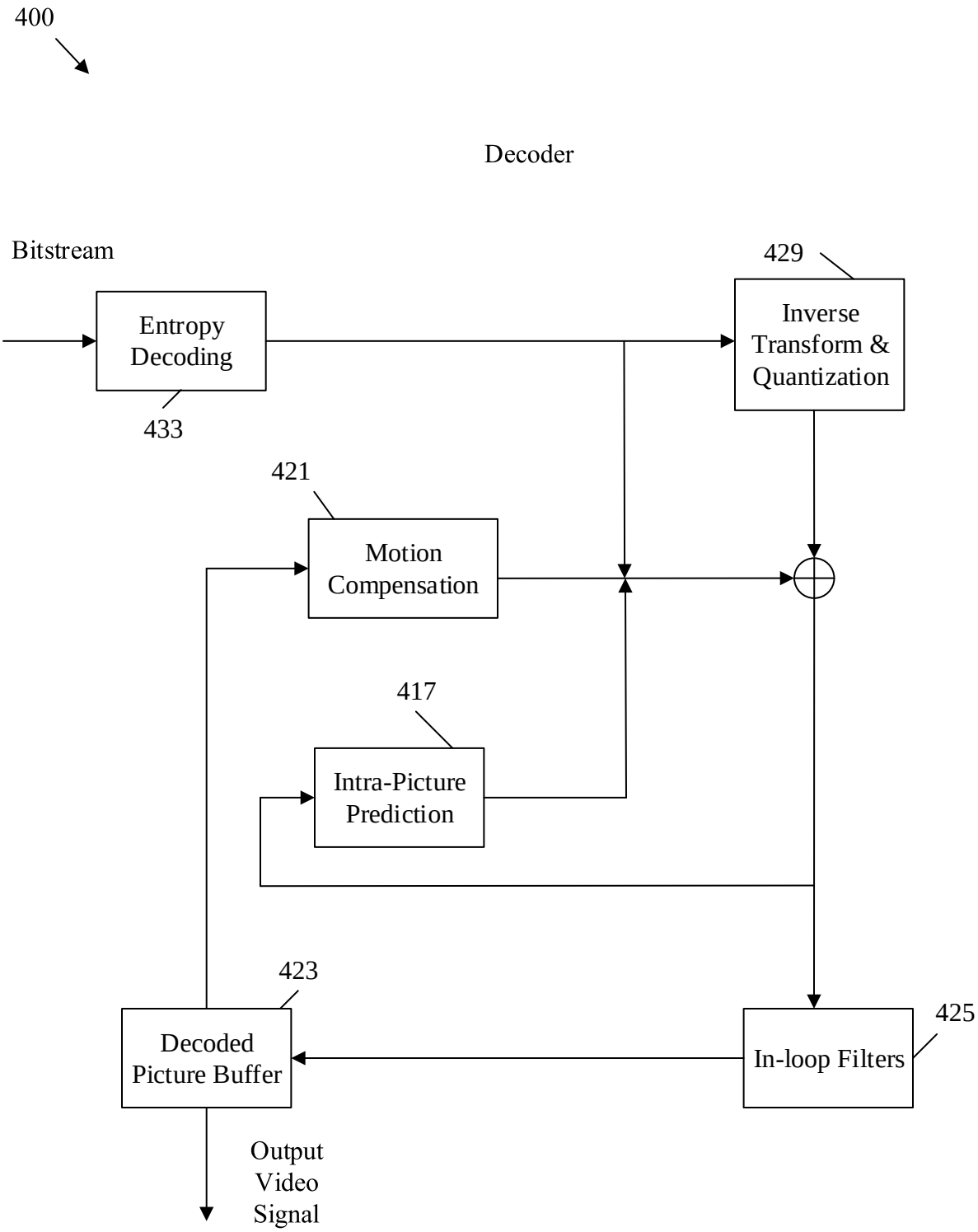

400
Decoder
Bitstream
Entropy Decoding
433
429
Inverse Transform & Quantization
421
Motion Compensation
417
Intra-Picture Prediction
423
Decoded Picture Buffer
425
In-loop Filters
Output Video Signal

FIG. 4

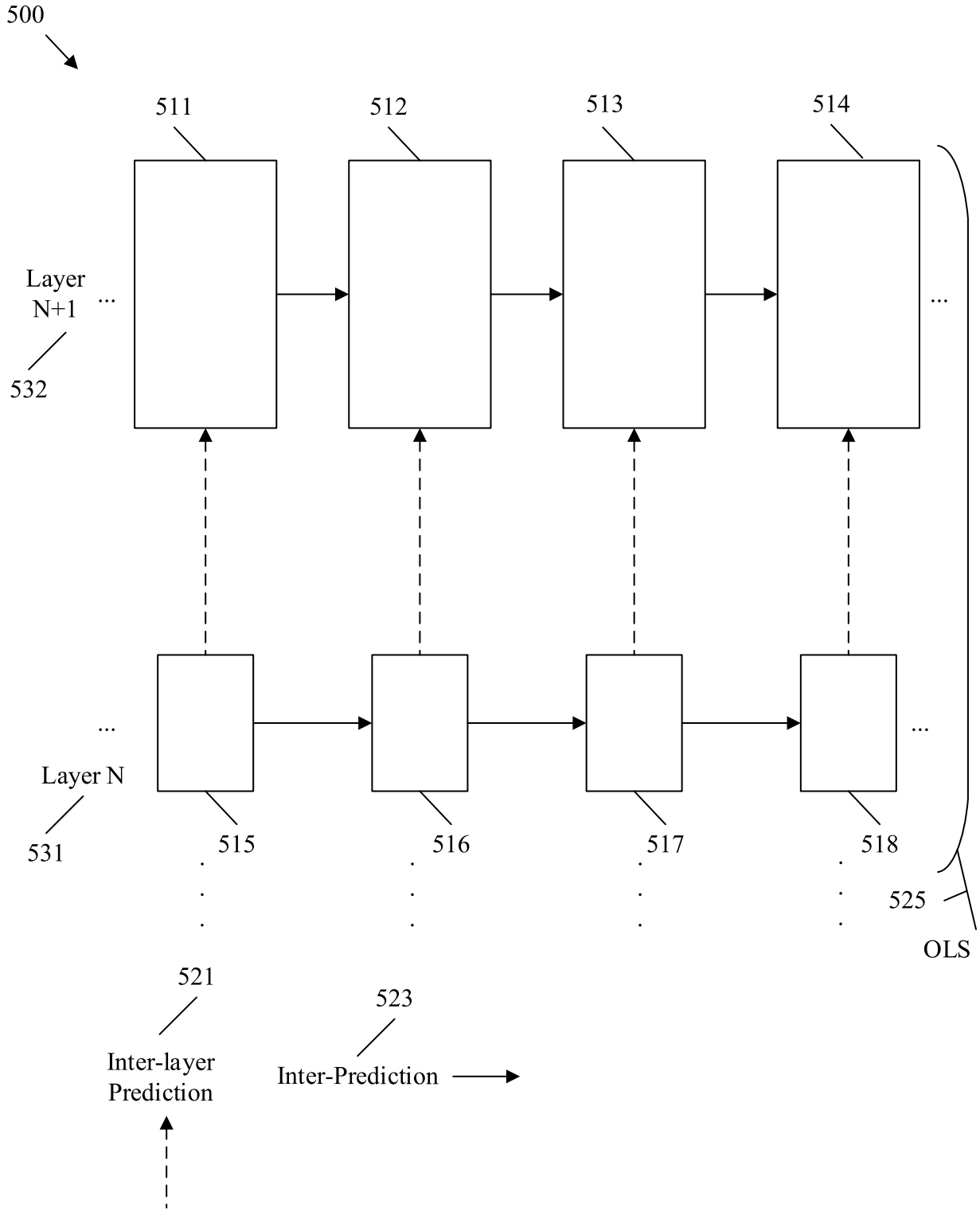

500
511
512
513
514
Layer N+1
532
...
Layer N
531
515
516
517
518
525
OLS
521
Inter-layer Prediction
523
Inter-Prediction

FIG. 5

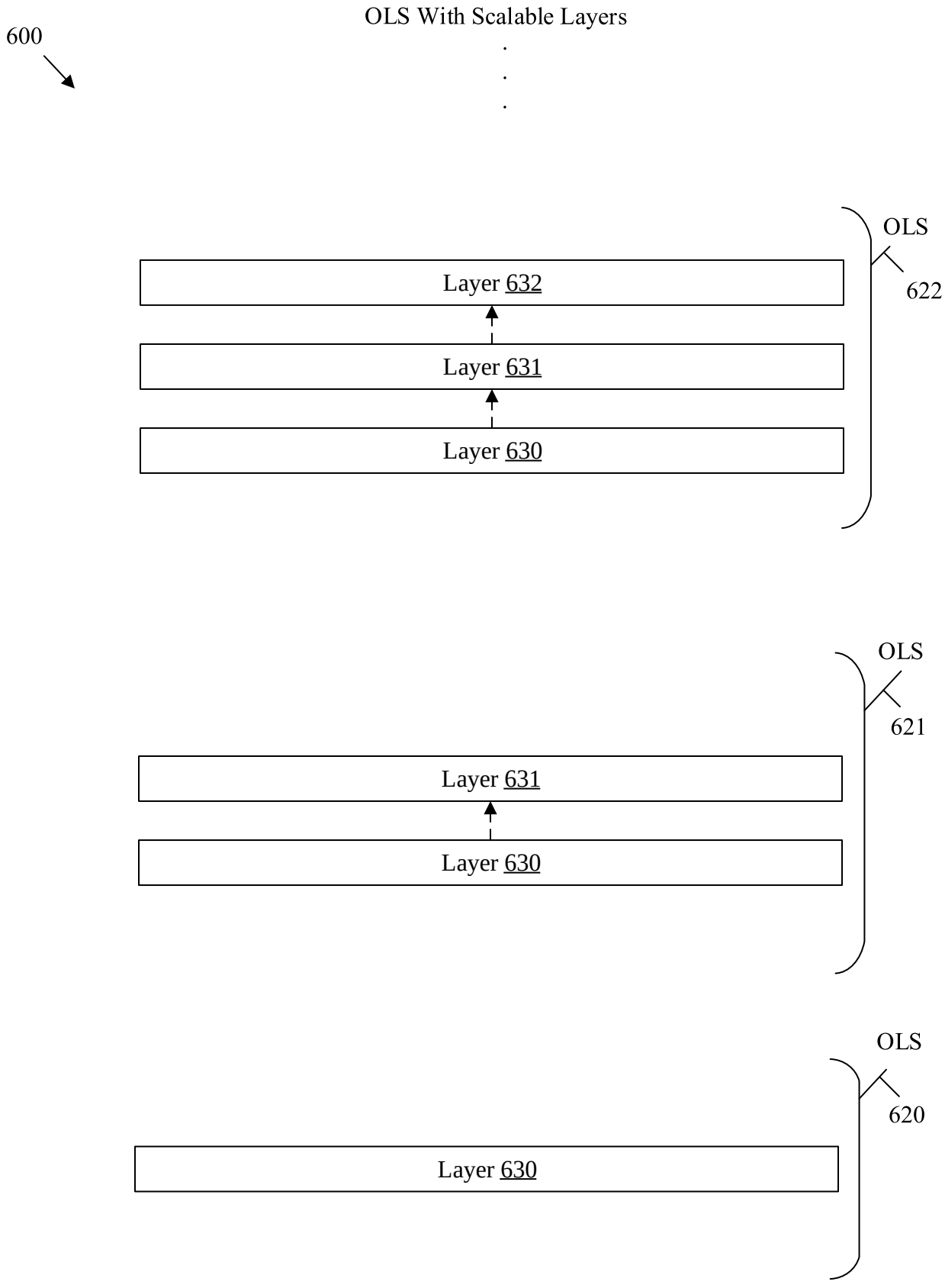

600
OLS With Scalable Layers
OLS
622
Layer 632
Layer 631
Layer 630
OLS
621
Layer 631
Layer 630
OLS
620
Layer 630

FIG. 6

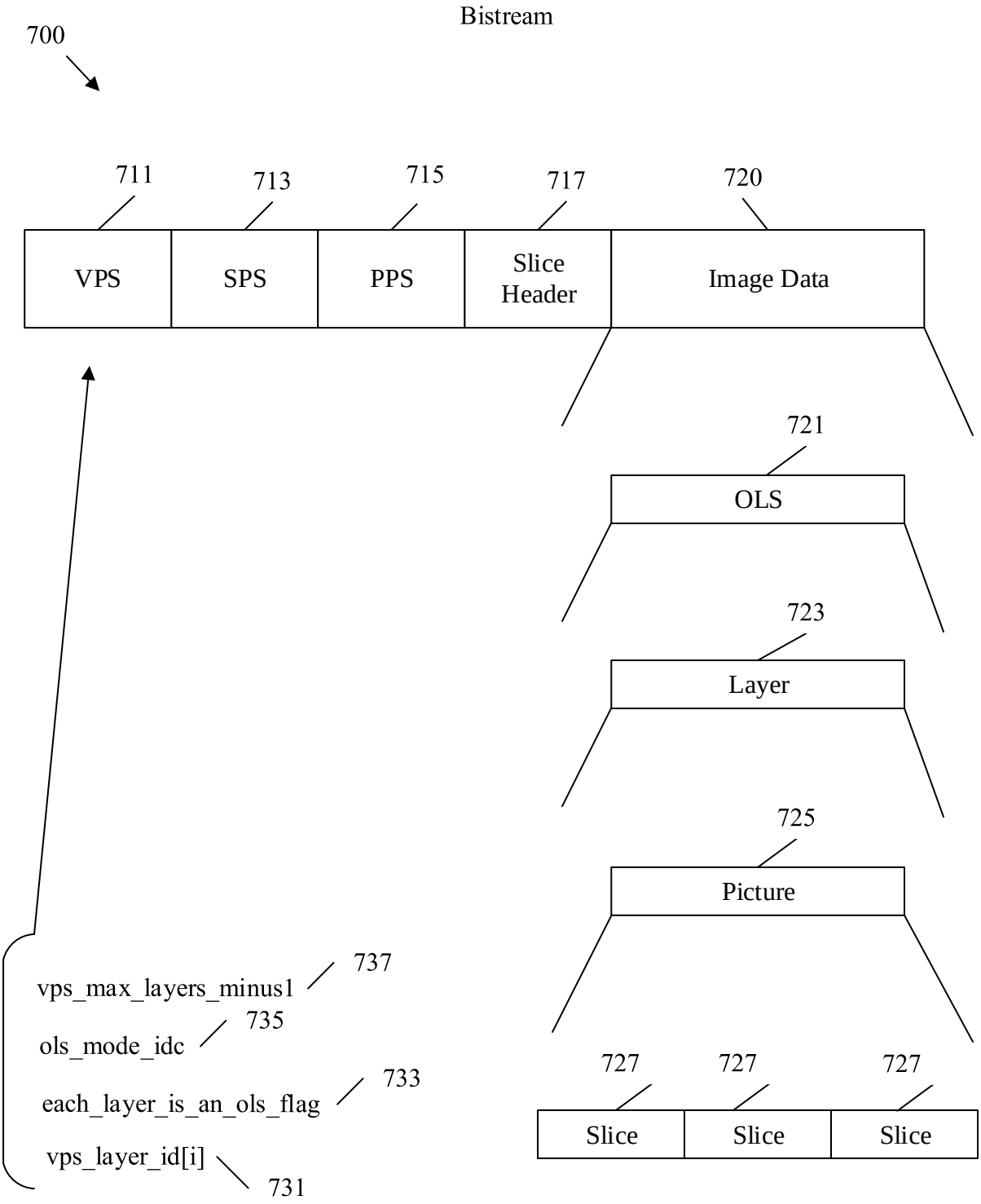

Bistream
700
711
713
715
717
720
VPS
SPS
PPS
Slice Header
Image Data
721
OLS
723
Layer
725
Picture
727
727
727
Slice
Slice
Slice
737
vps_max_layers_minus1
735
ols_mode_idc
733
each_layer_is_an_ols_flag
vps_layer_id[i]
731

FIG. 7

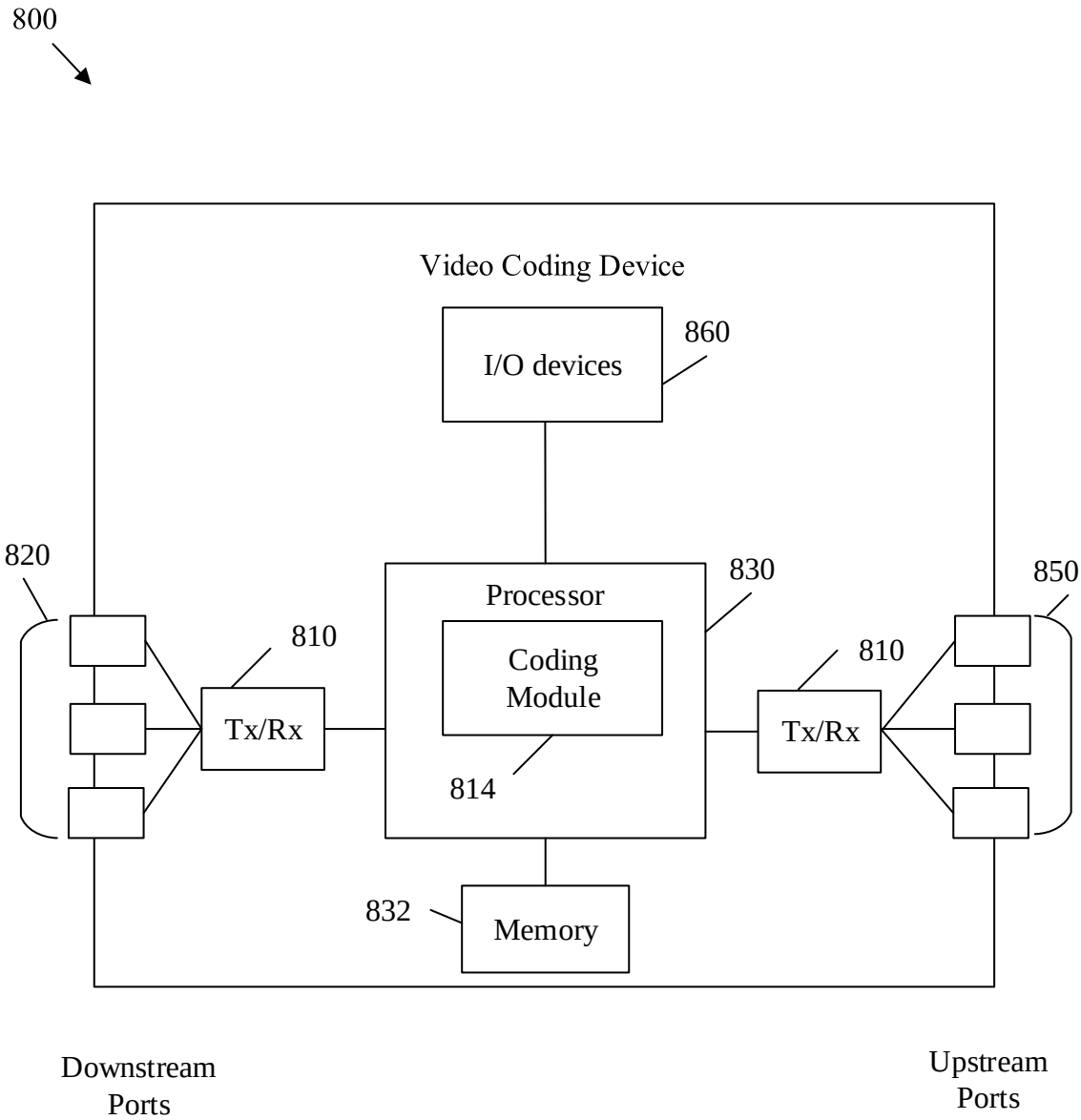

800
Video Coding Device
I/O devices
860
820
Processor
830
850
810
Coding
Module
810
Tx/Rx
Tx/Rx
814
832
Memory
Downstream
Ports
Upstream
Ports

FIG. 8

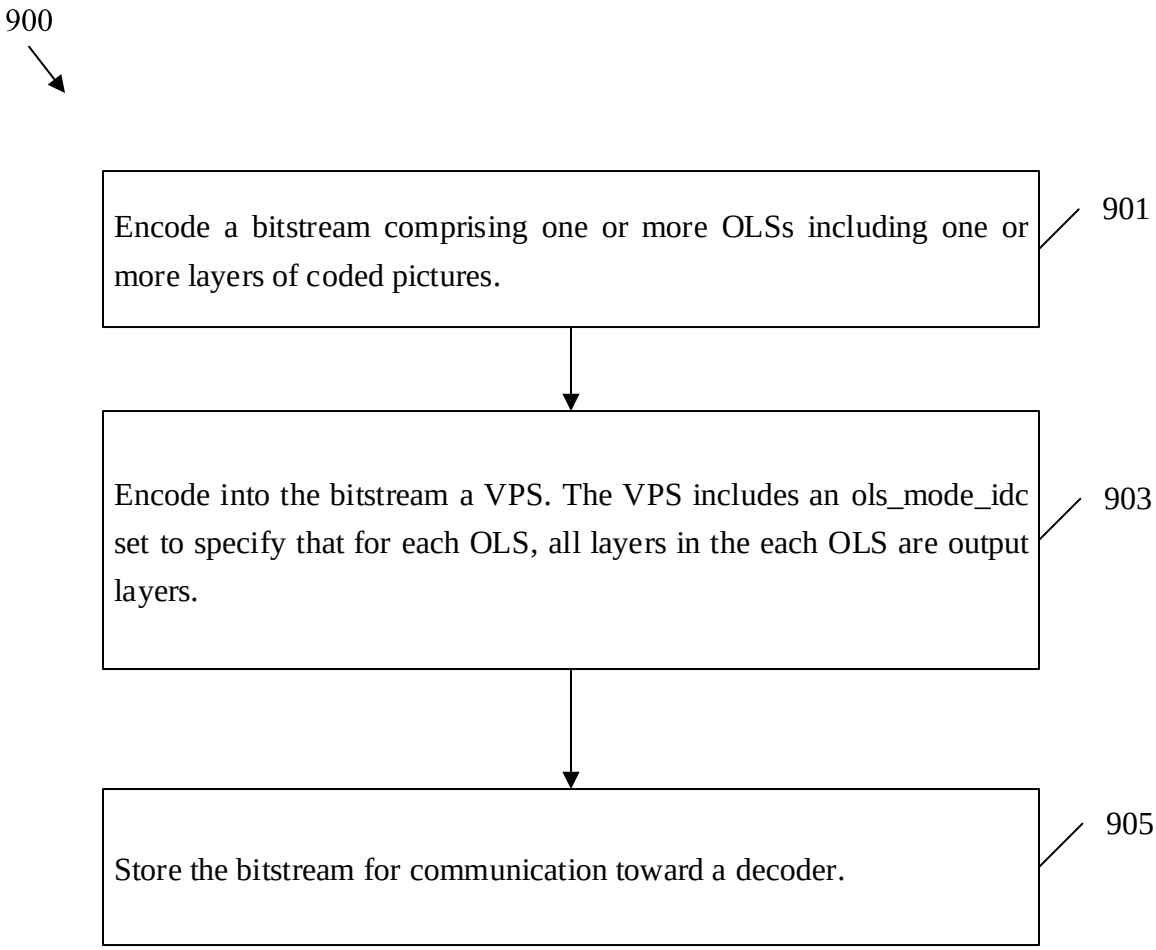

900
Encode a bitstream comprising one or more OLSs including one or more layers of coded pictures.
901
Encode into the bitstream a VPS. The VPS includes an ols_mode_idc set to specify that for each OLS, all layers in the each OLS are output layers.
903
Store the bitstream for communication toward a decoder.
905

FIG. 9

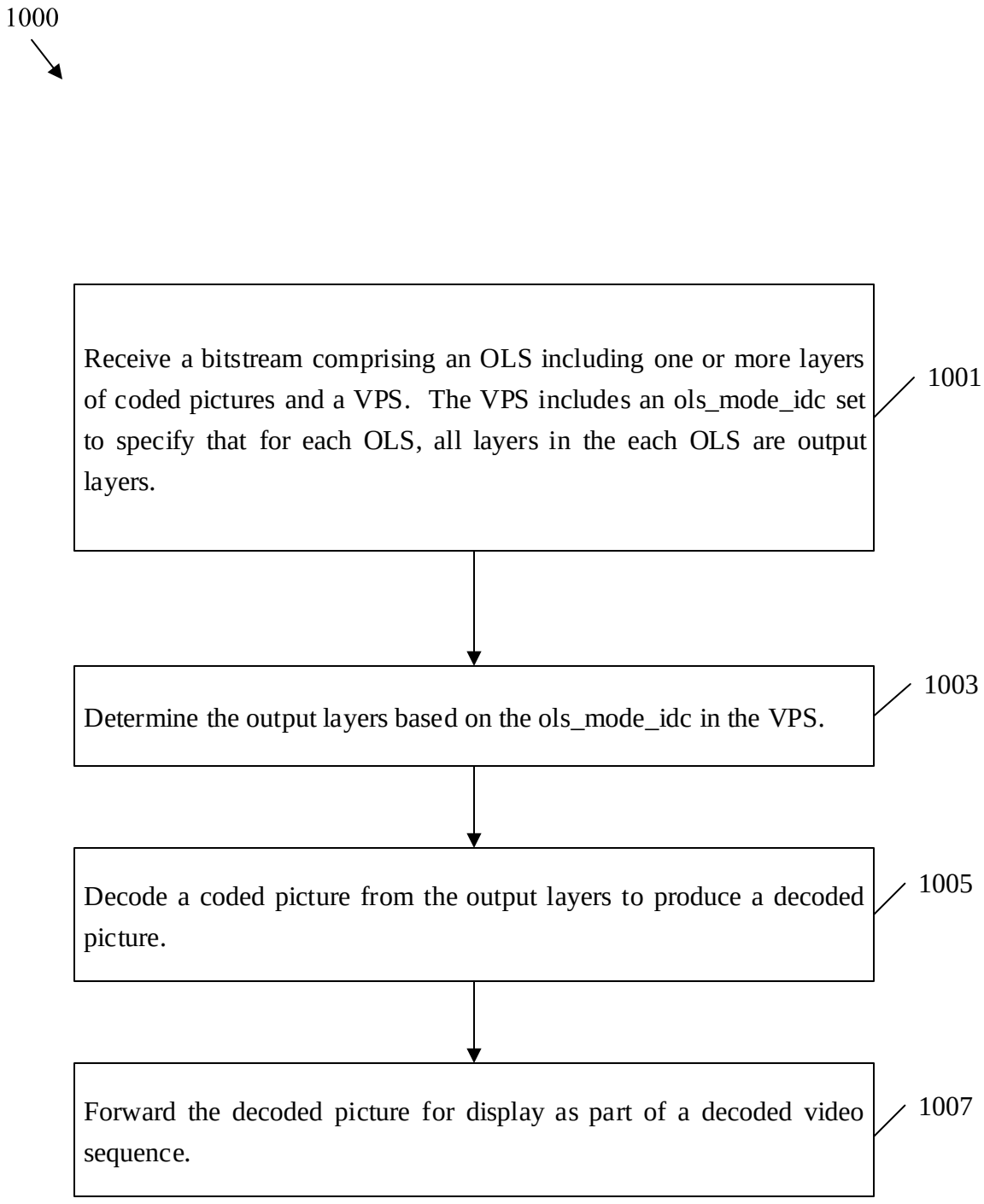

1000
Receive a bitstream comprising an OLS including one or more layers of coded pictures and a VPS. The VPS includes an ols_mode_idc set to specify that for each OLS, all layers in the each OLS are output layers.
1001
Determine the output layers based on the ols_mode_idc in the VPS.
1003
Decode a coded picture from the output layers to produce a decoded picture.
1005
Forward the decoded picture for display as part of a decoded video sequence.
1007

FIG. 10

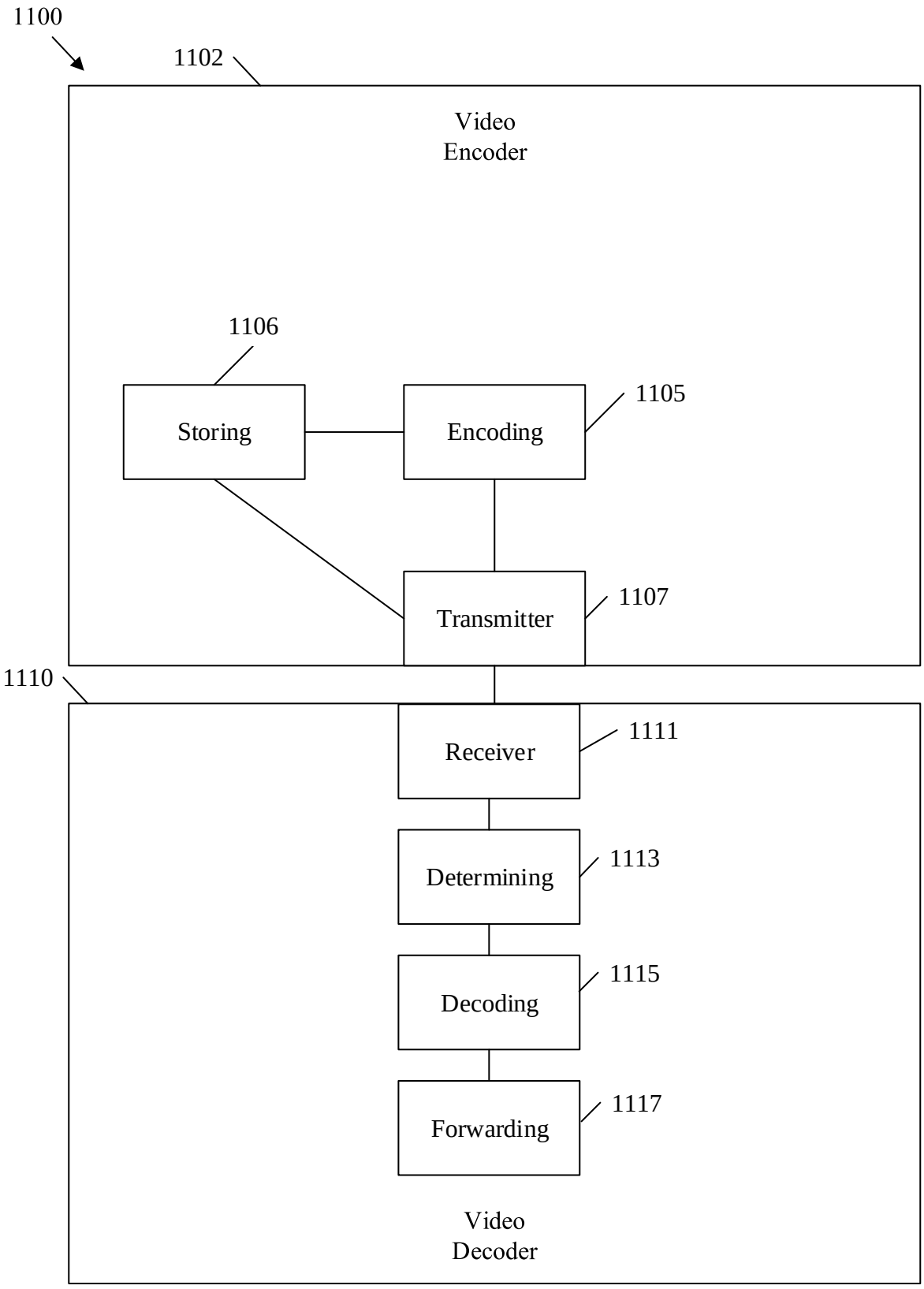

1100
1102
Video
Encoder
1106
Storing
Encoding
1105
Transmitter
1107
1110
Receiver
1111
Determining
1113
Decoding
1115
Forwarding
1117
Video
Decoder

FIG. 11