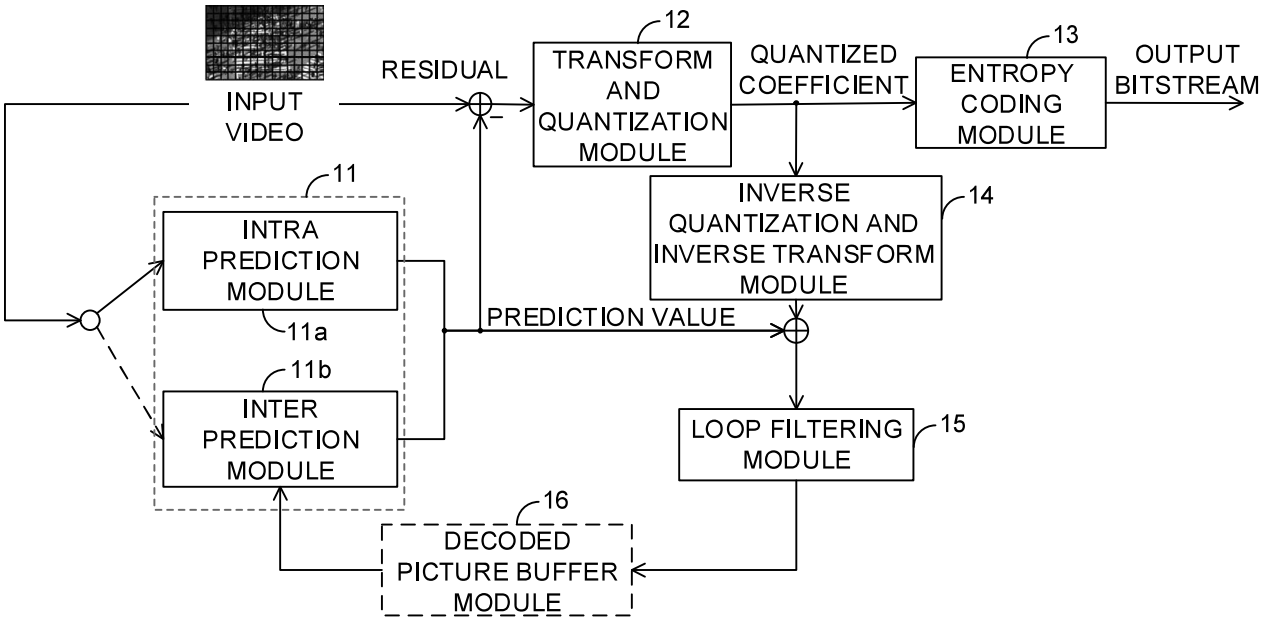

INPUT VIDEO
RESIDUAL
12
TRANSFORM AND QUANTIZATION MODULE
QUANTIZED COEFFICIENT
13
ENTROPY CODING MODULE
OUTPUT BITSTREAM
11
INTRA PREDICTION MODULE
11a
11b
INTER PREDICTION MODULE
INVERSE QUANTIZATION AND INVERSE TRANSFORM MODULE
14
PREDICTION VALUE
LOOP FILTERING MODULE
15
16
DECODED PICTURE BUFFER MODULE

FIG. 1

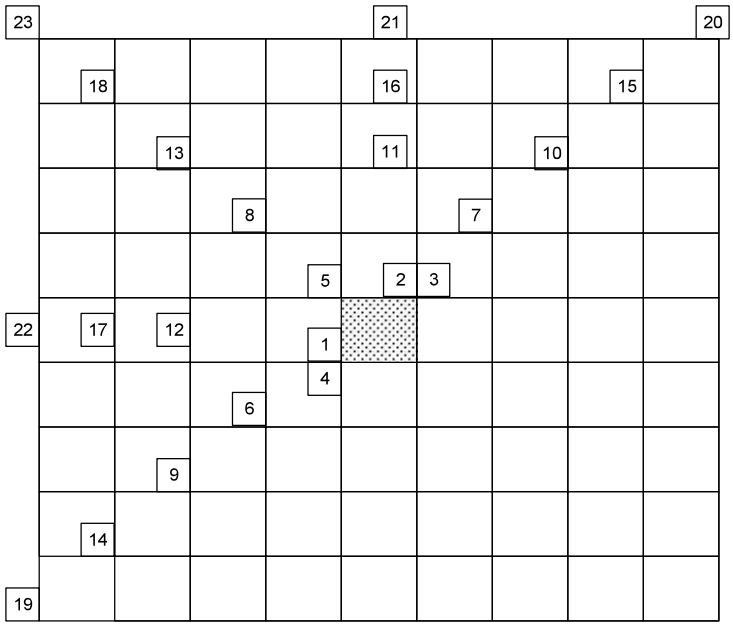

23
21
20
18
16
15
13
11
10
8
7
5
2
3
22
17
12
1
4
6
9
14
19

FIG. 2

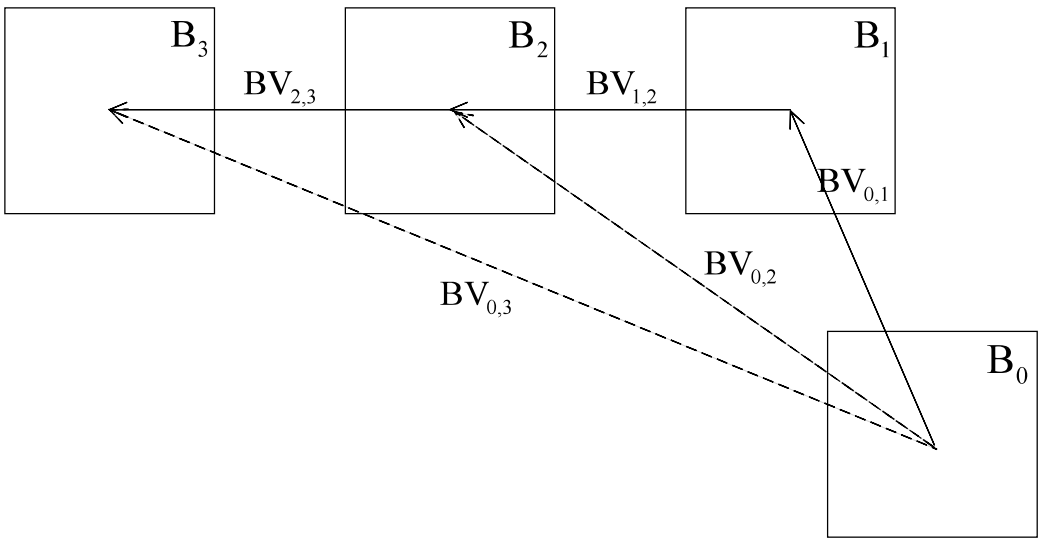


FIG. 3

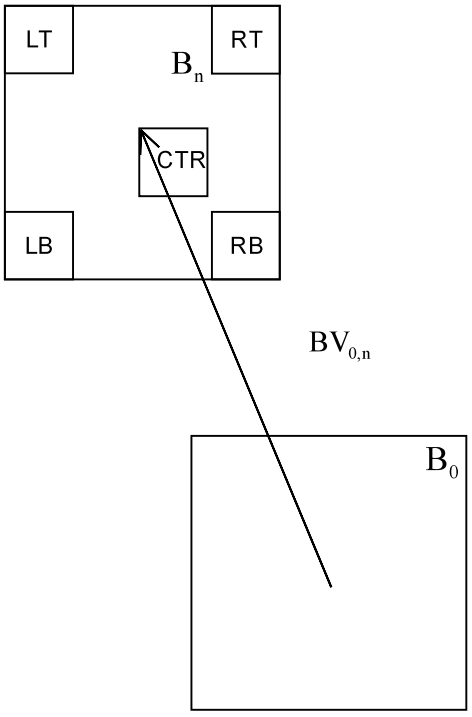


FIG. 4

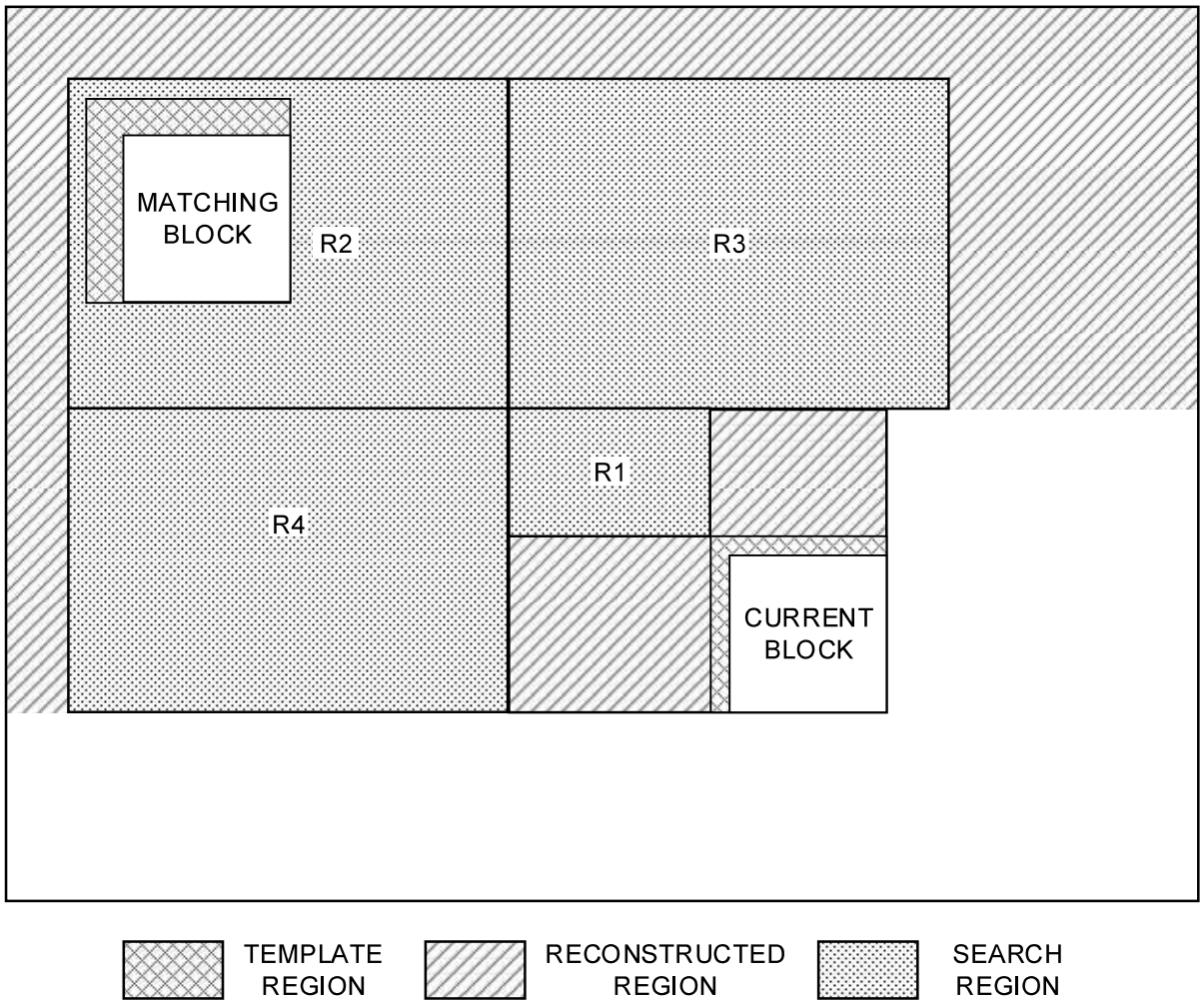

MATCHING BLOCK
R2
R3
R1
R4
CURRENT BLOCK
TEMPLATE REGION
RECONSTRUCTED REGION
SEARCH REGION

FIG. 5

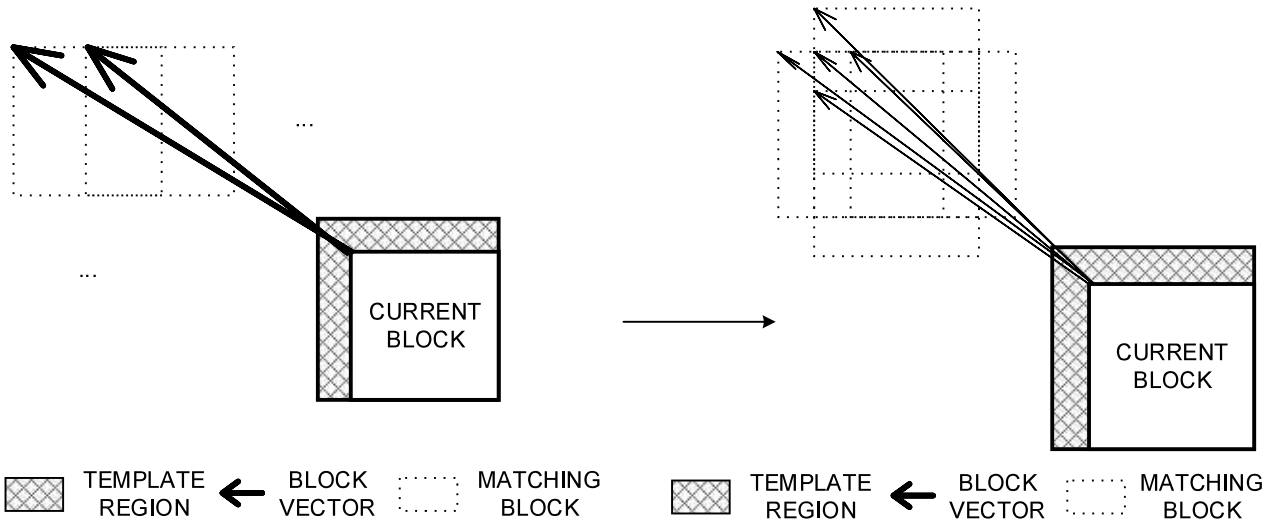


FIG. 6

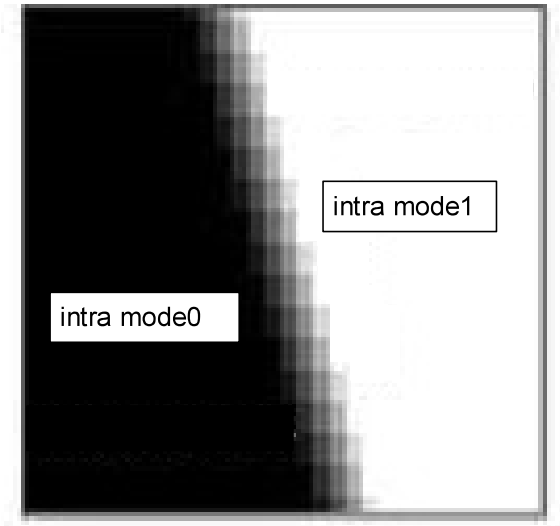


FIG. 7

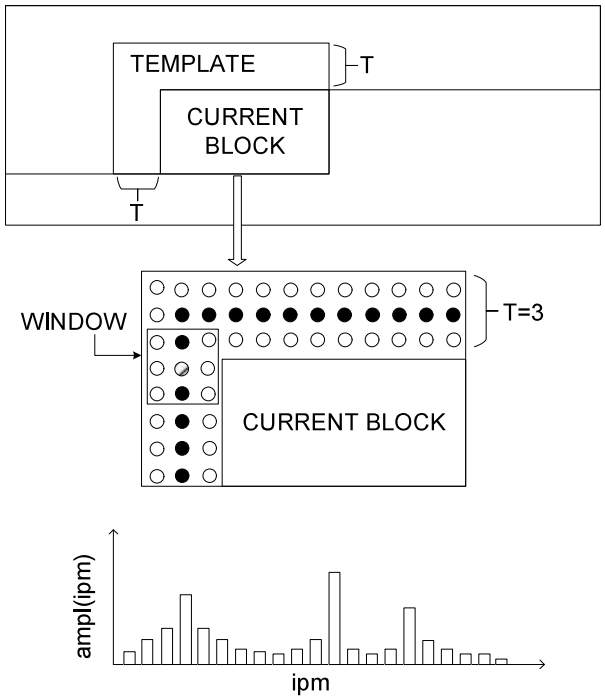


FIG. 8

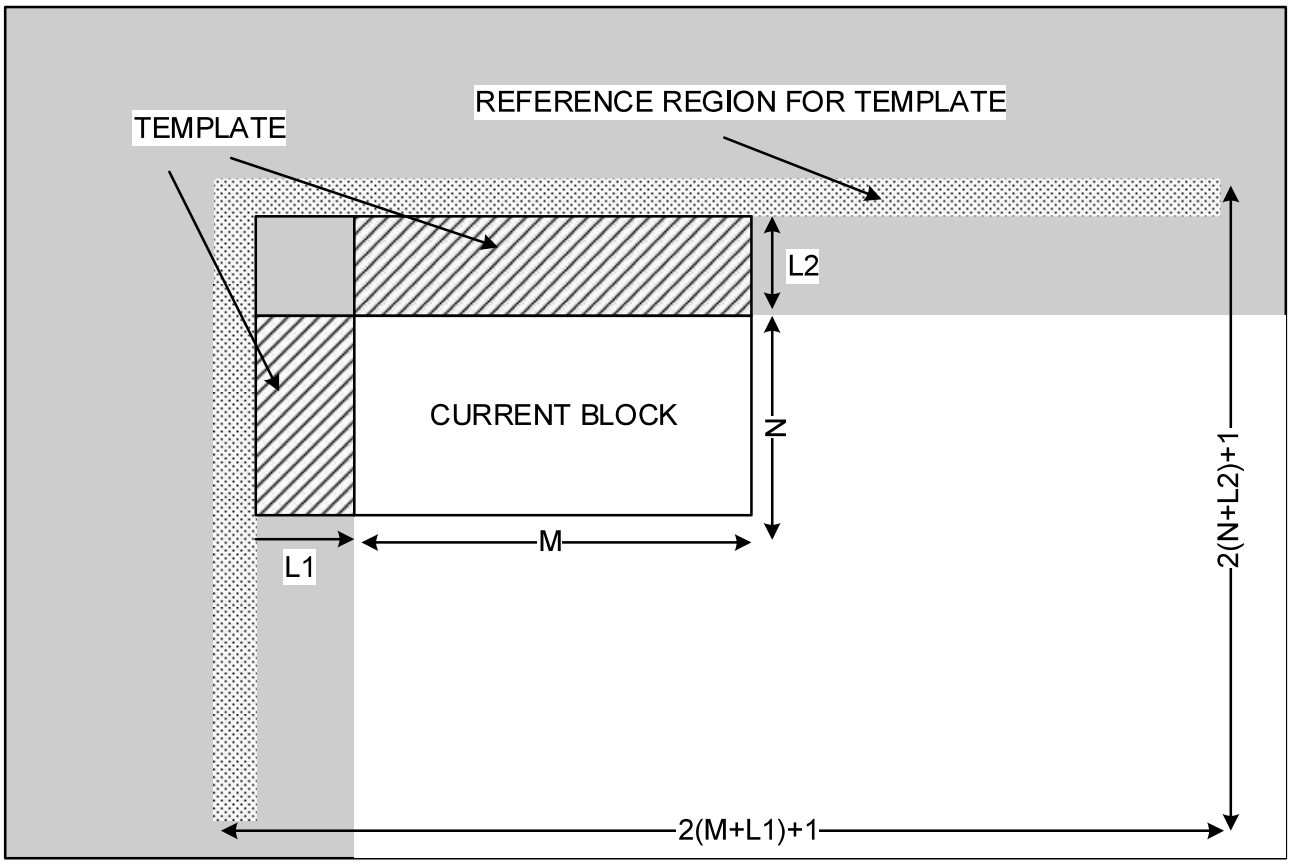

REFERENCE REGION FOR TEMPLATE
TEMPLATE
L2
CURRENT BLOCK
N
2(N+L2)+1
L1
M
2(M+L1)+1

FIG. 9

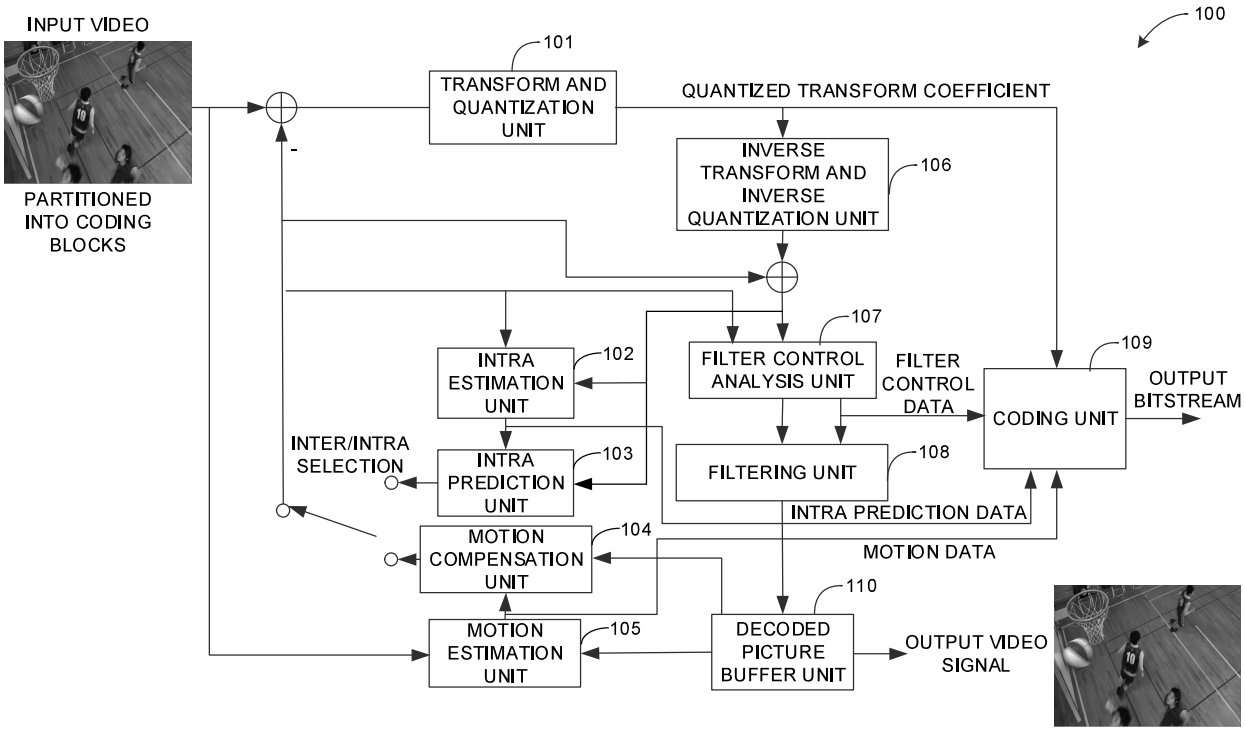

INPUT VIDEO
PARTITIONED INTO CODING BLOCKS
100
101
TRANSFORM AND QUANTIZATION UNIT
QUANTIZED TRANSFORM COEFFICIENT
INVERSE TRANSFORM AND INVERSE QUANTIZATION UNIT
106
107
INTRA ESTIMATION UNIT
102
FILTER CONTROL ANALYSIS UNIT
FILTER CONTROL DATA
109
CODING UNIT
OUTPUT BITSTREAM
INTER/INTRA SELECTION
INTRA PREDICTION UNIT
103
FILTERING UNIT
108
INTRA PREDICTION DATA
MOTION COMPENSATION UNIT
104
MOTION DATA
110
MOTION ESTIMATION UNIT
105
DECODED PICTURE BUFFER UNIT
OUTPUT VIDEO SIGNAL

FIG. 10

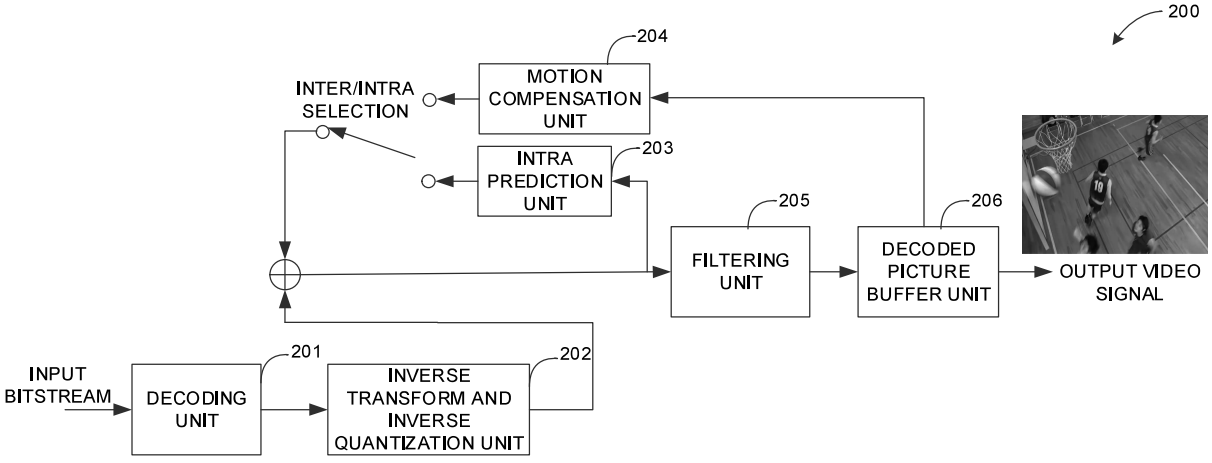

200
204
INTER/INTRA SELECTION
MOTION COMPENSATION UNIT
INTRA PREDICTION UNIT
203
205
206
FILTERING UNIT
DECODED PICTURE BUFFER UNIT
OUTPUT VIDEO SIGNAL
INPUT BITSTREAM
201
DECODING UNIT
202
INVERSE TRANSFORM AND INVERSE QUANTIZATION UNIT

FIG. 11

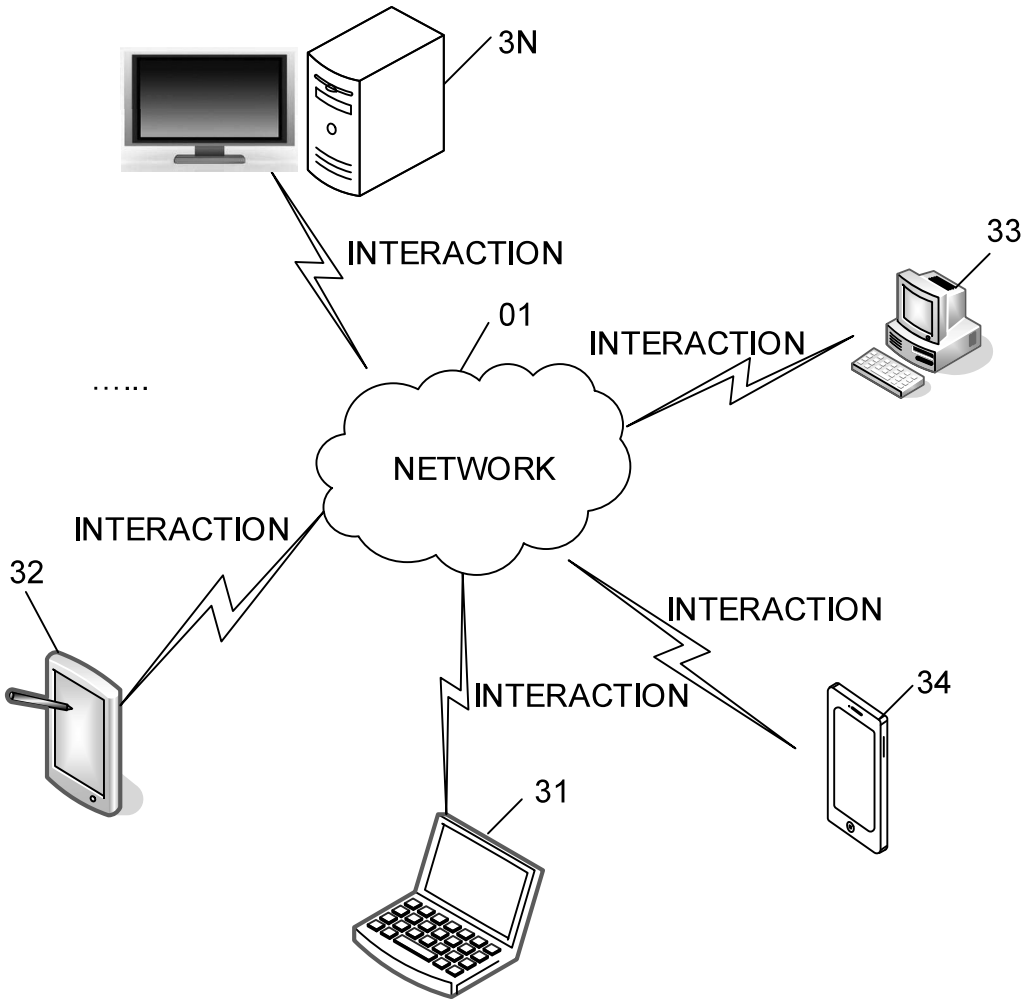

3N
INTERACTION
01
33
INTERACTION
……
NETWORK
INTERACTION
32
INTERACTION
INTERACTION
34
31

FIG. 12

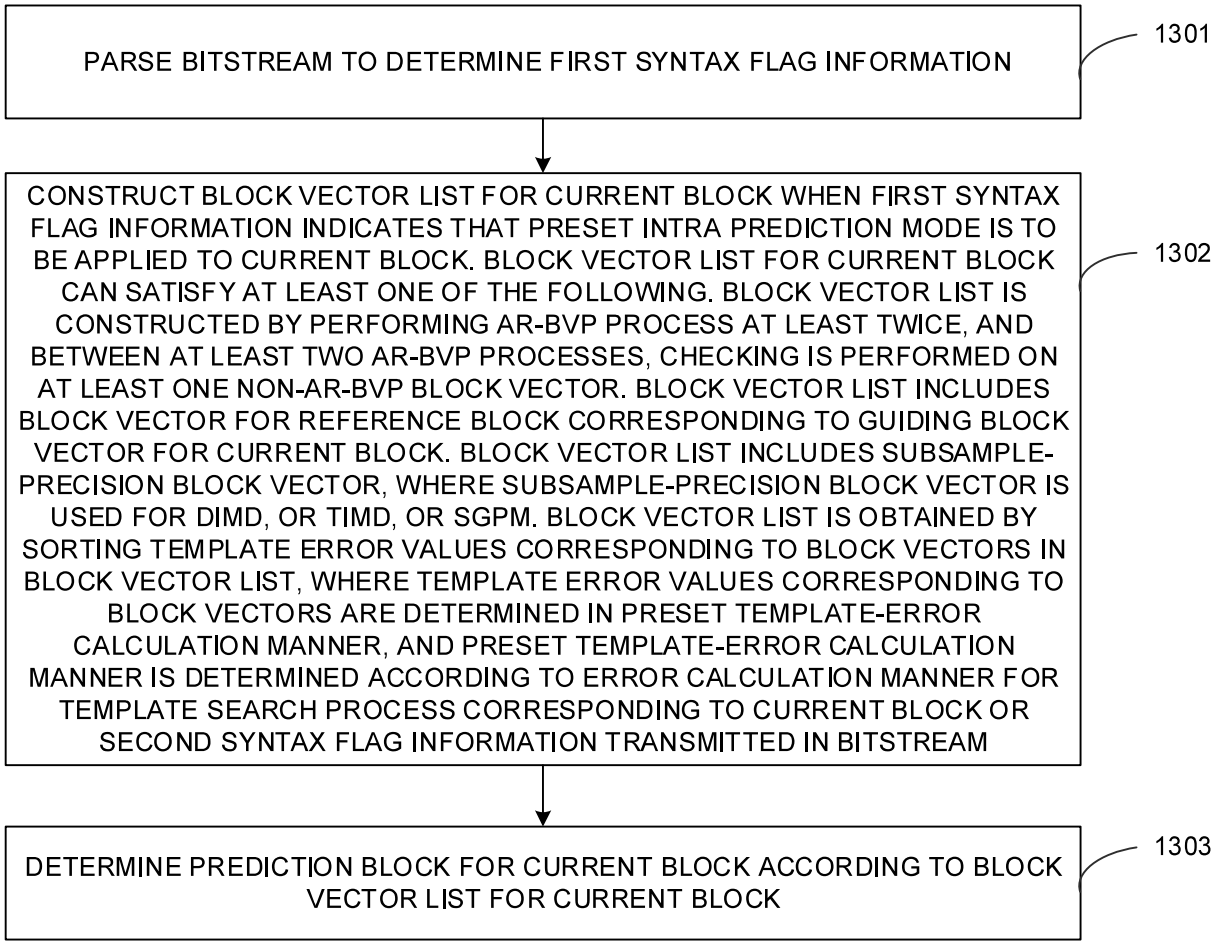

PARSE BITSTREAM TO DETERMINE FIRST SYNTAX FLAG INFORMATION
1301
CONSTRUCT BLOCK VECTOR LIST FOR CURRENT BLOCK WHEN FIRST SYNTAX FLAG INFORMATION INDICATES THAT PRESET INTRA PREDICTION MODE IS TO BE APPLIED TO CURRENT BLOCK. BLOCK VECTOR LIST FOR CURRENT BLOCK CAN SATISFY AT LEAST ONE OF THE FOLLOWING. BLOCK VECTOR LIST IS CONSTRUCTED BY PERFORMING AR-BVP PROCESS AT LEAST TWICE, AND BETWEEN AT LEAST TWO AR-BVP PROCESSES, CHECKING IS PERFORMED ON AT LEAST ONE NON-AR-BVP BLOCK VECTOR. BLOCK VECTOR LIST INCLUDES BLOCK VECTOR FOR REFERENCE BLOCK CORRESPONDING TO GUIDING BLOCK VECTOR FOR CURRENT BLOCK. BLOCK VECTOR LIST INCLUDES SUBSAMPLE-PRECISION BLOCK VECTOR, WHERE SUBSAMPLE-PRECISION BLOCK VECTOR IS USED FOR DIMD, OR TIMD, OR SGPM. BLOCK VECTOR LIST IS OBTAINED BY SORTING TEMPLATE ERROR VALUES CORRESPONDING TO BLOCK VECTORS IN BLOCK VECTOR LIST, WHERE TEMPLATE ERROR VALUES CORRESPONDING TO BLOCK VECTORS ARE DETERMINED IN PRESET TEMPLATE-ERROR CALCULATION MANNER, AND PRESET TEMPLATE-ERROR CALCULATION MANNER IS DETERMINED ACCORDING TO ERROR CALCULATION MANNER FOR TEMPLATE SEARCH PROCESS CORRESPONDING TO CURRENT BLOCK OR SECOND SYNTAX FLAG INFORMATION TRANSMITTED IN BITSTREAM
1302
DETERMINE PREDICTION BLOCK FOR CURRENT BLOCK ACCORDING TO BLOCK VECTOR LIST FOR CURRENT BLOCK
1303

FIG. 13

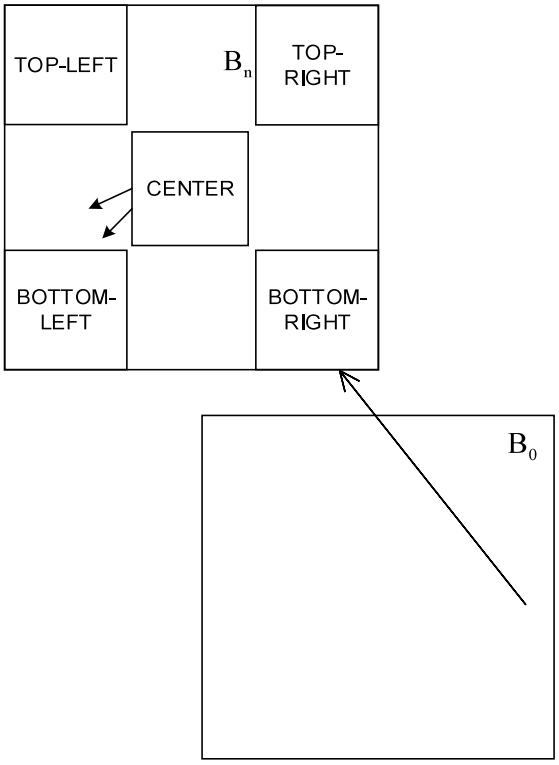

TOP-LEFT
B_n
TOP-RIGHT
CENTER
BOTTOM-LEFT
BOTTOM-RIGHT
B_0

FIG. 14

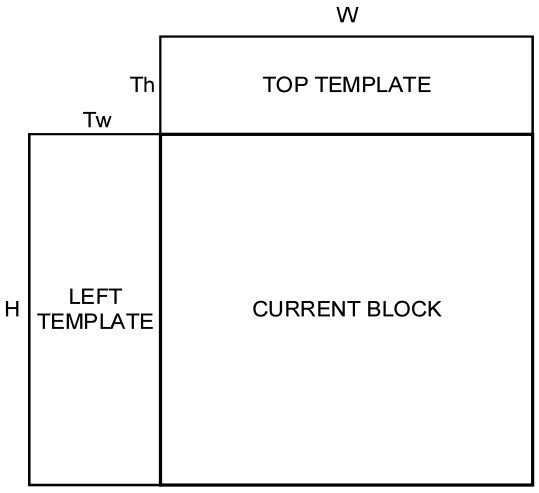

W
Th
TOP TEMPLATE
Tw
H
LEFT TEMPLATE
CURRENT BLOCK

FIG. 15

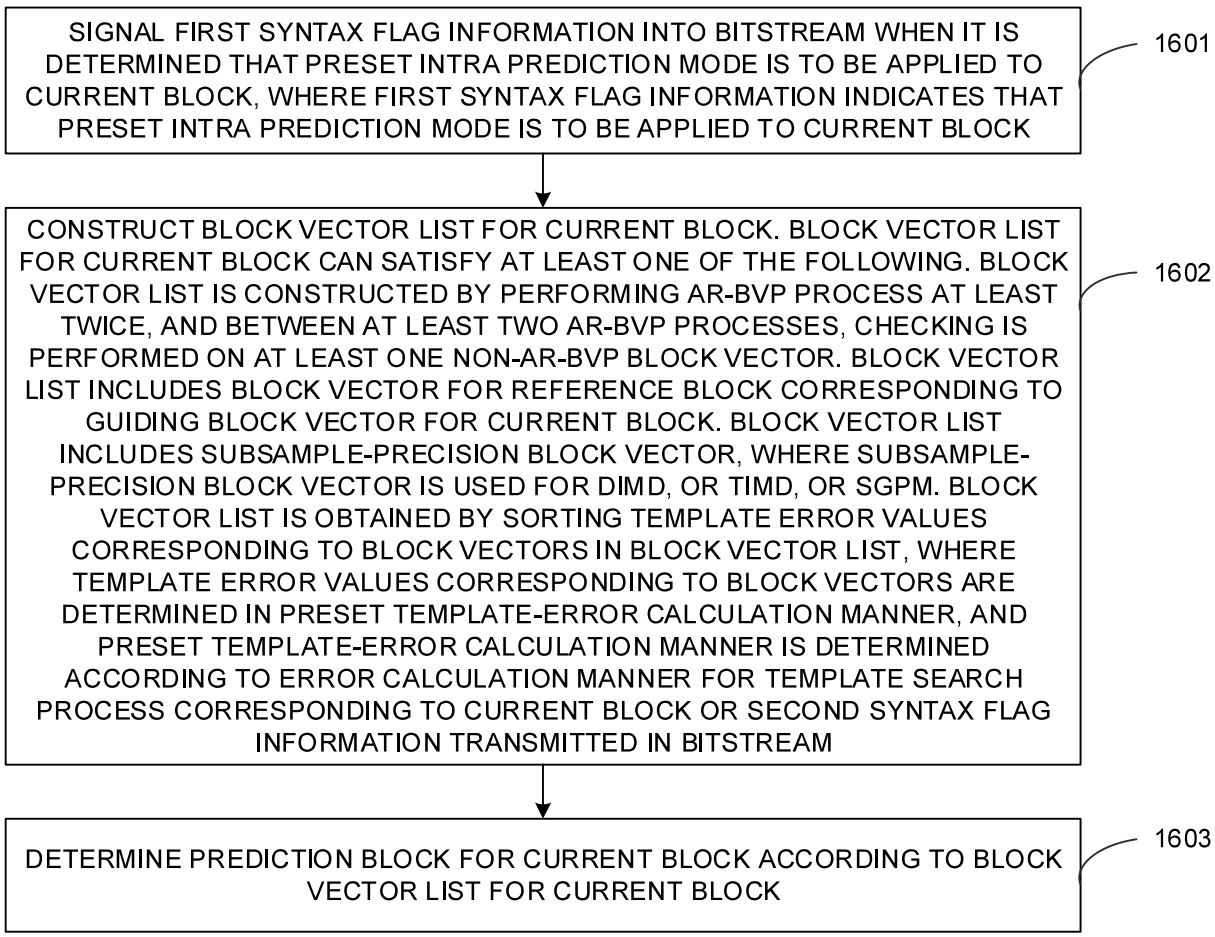


FIG. 16

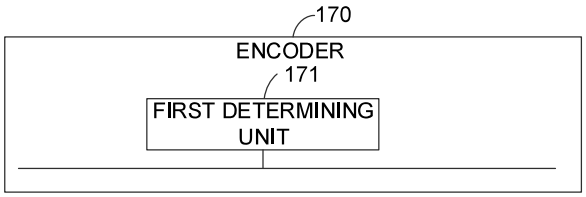


FIG. 17

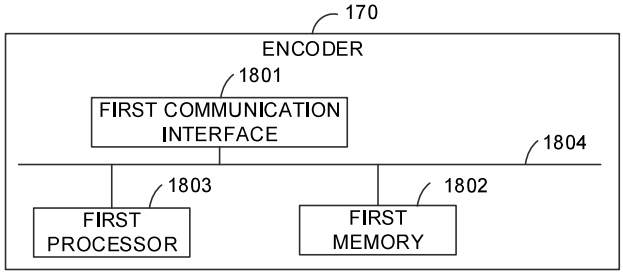


FIG. 18

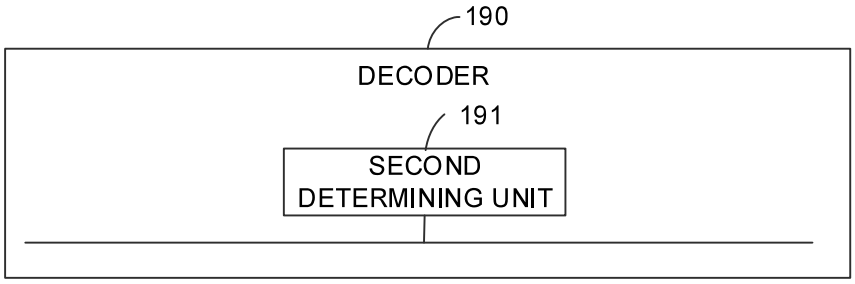


FIG. 19

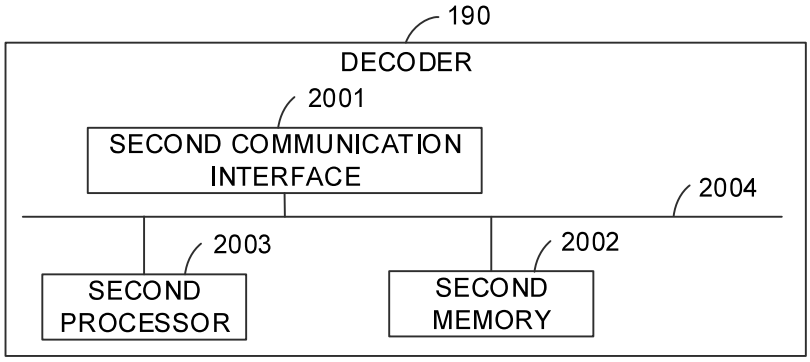


FIG. 20

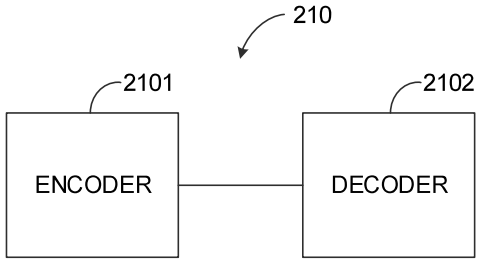


FIG. 21