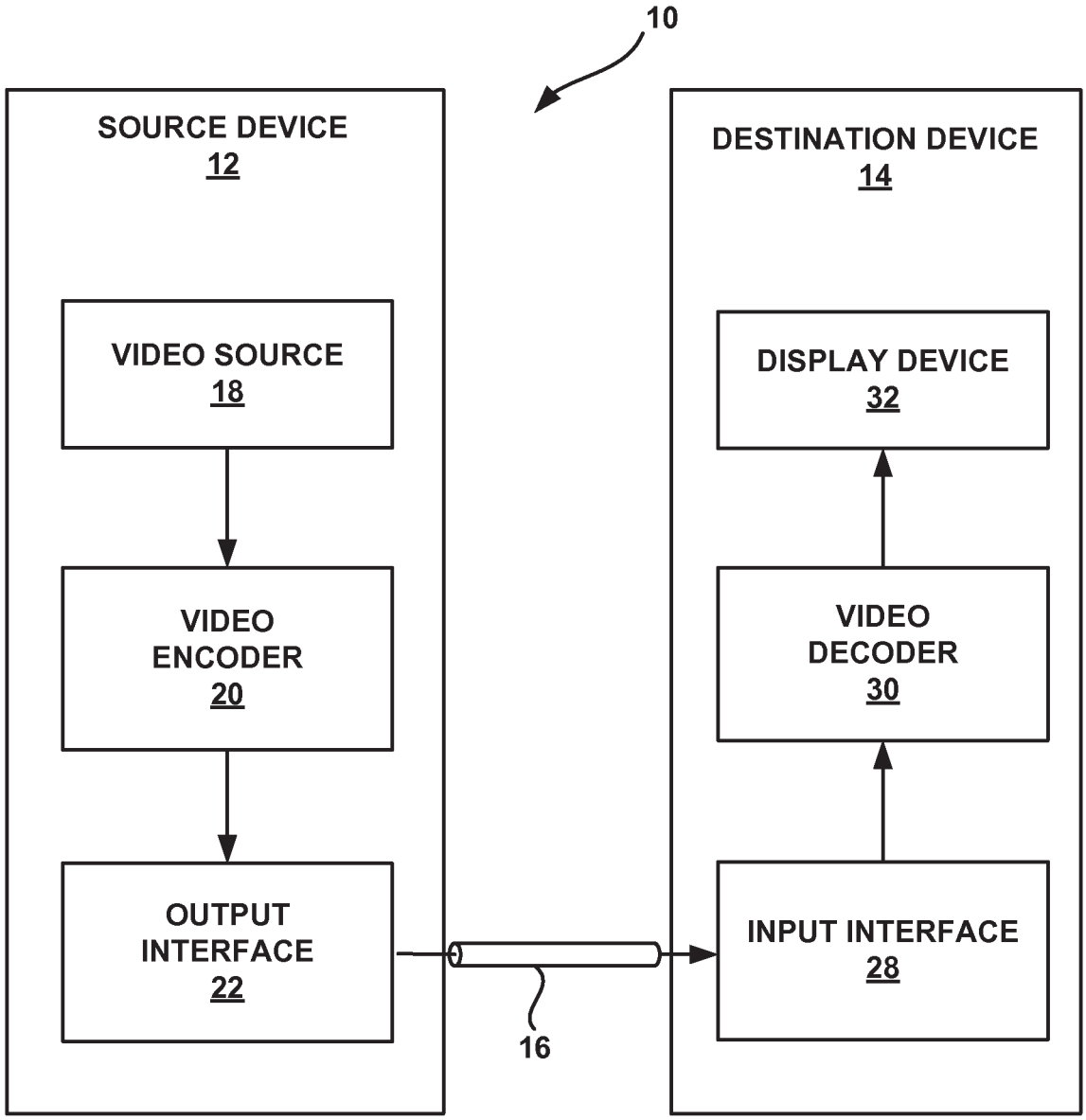
10
SOURCE DEVICE
12
VIDEO SOURCE
18
VIDEO
ENCODER
20
OUTPUT
INTERFACE
22
16
DESTINATION DEVICE
14
DISPLAY DEVICE
32
VIDEO
DECODER
30
INPUT INTERFACE
28

FIG. 1

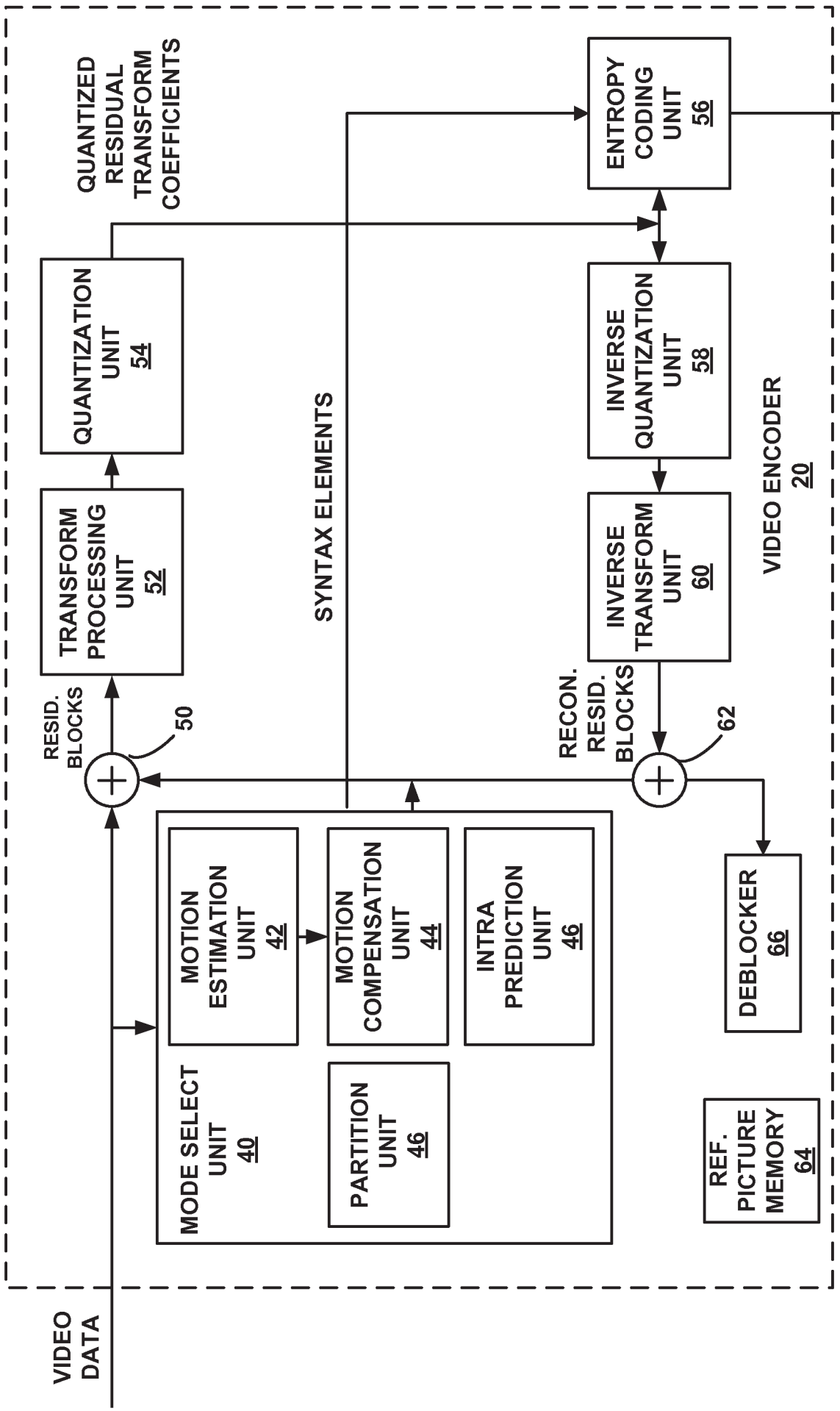
VIDEO DATA
VIDEO ENCODER 20
MODE SELECT UNIT 40
MOTION ESTIMATION UNIT 42
MOTION COMPENSATION UNIT 44
INTRA PREDICTION UNIT 46
PARTITION UNIT 46
RESID. BLOCKS
50
TRANSFORM PROCESSING UNIT 52
QUANTIZATION UNIT 54
QUANTIZED RESIDUAL TRANSFORM COEFFICIENTS
SYNTAX ELEMENTS
ENTROPY CODING UNIT 56
INVERSE QUANTIZATION UNIT 58
INVERSE TRANSFORM UNIT 60
RECON. RESID. BLOCKS
62
DEBLOCKER 66
REF. PICTURE MEMORY 64

FIG. 2

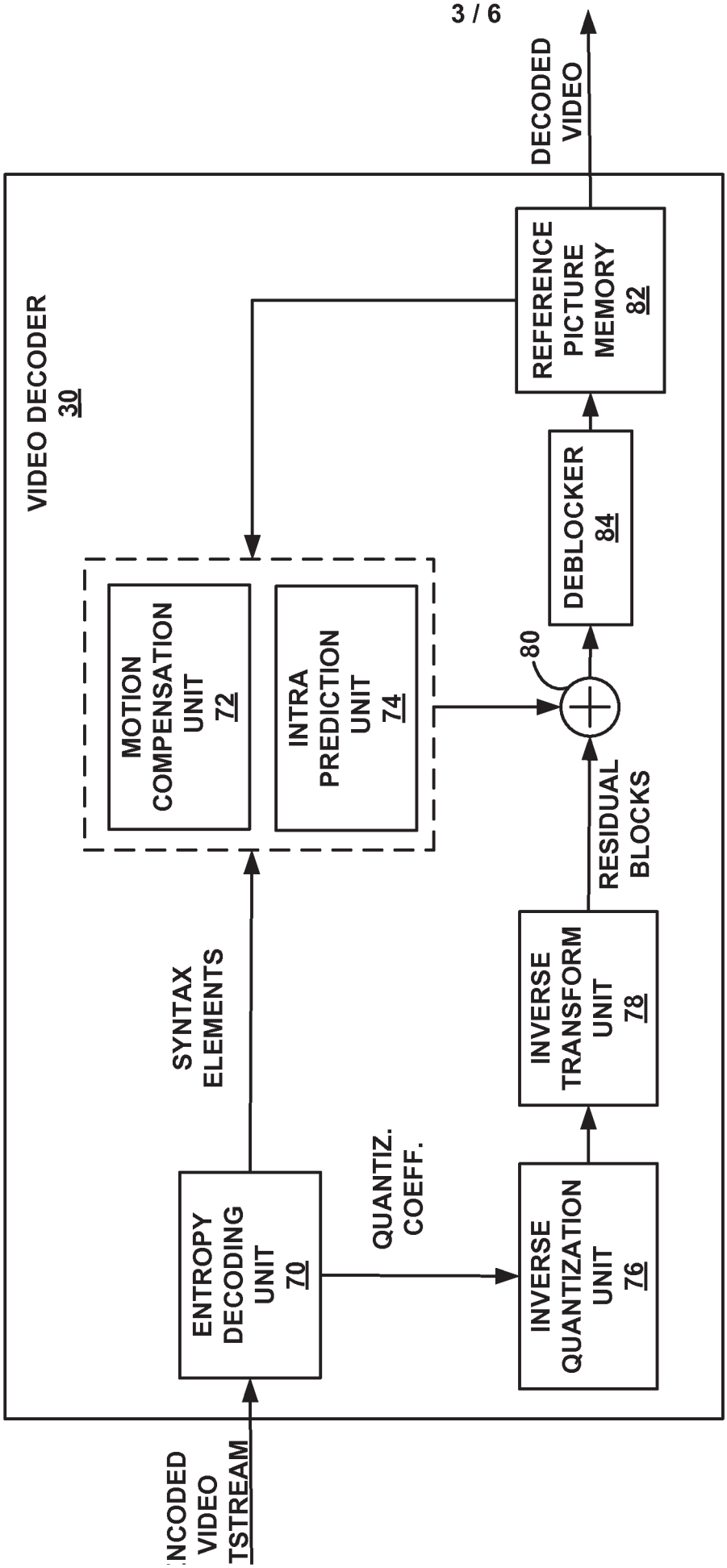
ENCODED VIDEO BITSTREAM
VIDEO DECODER 30
ENTROPY DECODING UNIT 70
SYNTAX ELEMENTS
MOTION COMPENSATION UNIT 72
INTRA PREDICTION UNIT 74
QUANTIZ. COEFF.
INVERSE QUANTIZATION UNIT 76
INVERSE TRANSFORM UNIT 78
RESIDUAL BLOCKS
80
DEBLOCKER 84
REFERENCE PICTURE MEMORY 82
DECODED VIDEO

FIG. 3

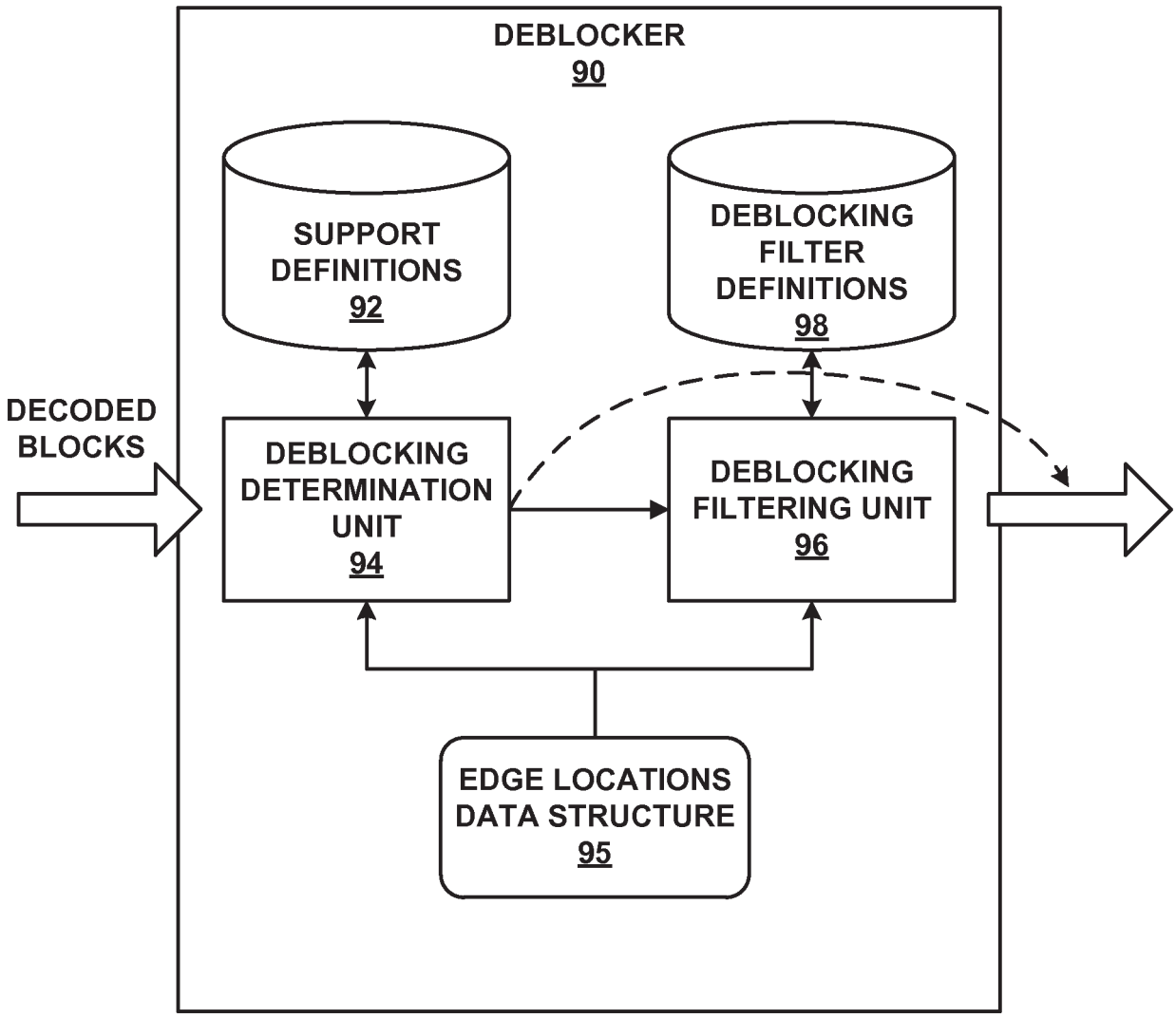
DEBLOCKER
90
SUPPORT DEFINITIONS
92
DEBLOCKING FILTER DEFINITIONS
98
DECODED BLOCKS
DEBLOCKING DETERMINATION UNIT
94
DEBLOCKING FILTERING UNIT
96
EDGE LOCATIONS DATA STRUCTURE
95

FIG. 4

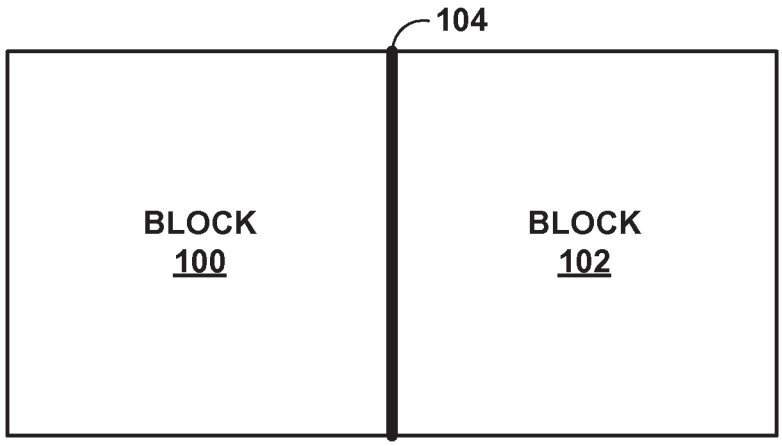

FIG. 5

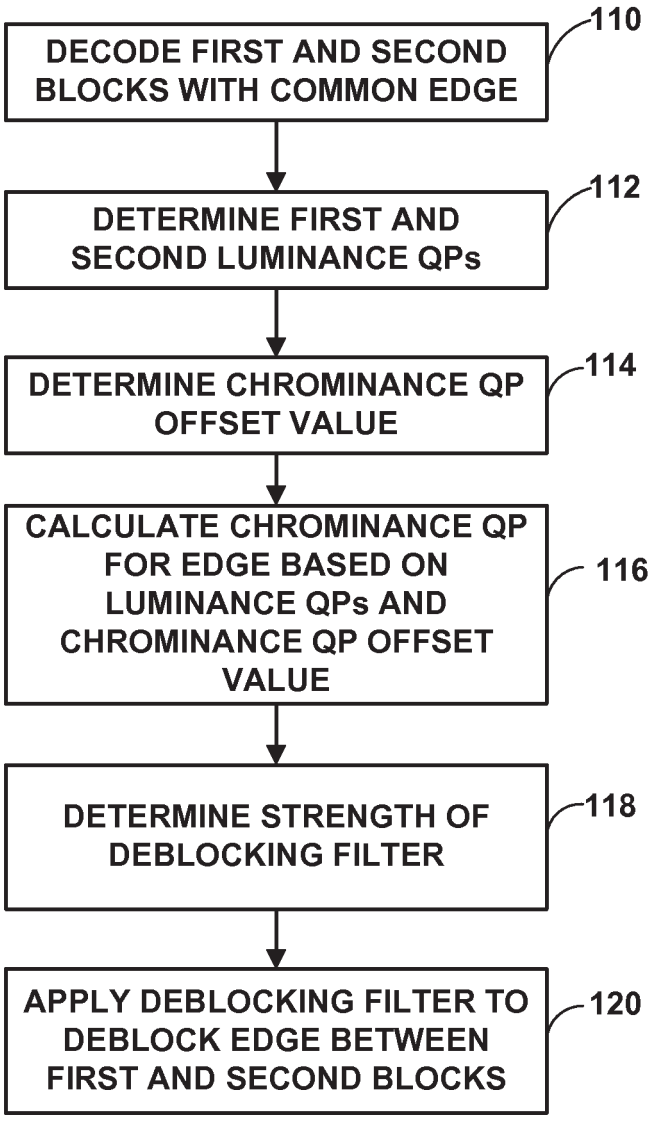
DECODE FIRST AND SECOND BLOCKS WITH COMMON EDGE
110
DETERMINE FIRST AND SECOND LUMINANCE QPs
112
DETERMINE CHROMINANCE QP OFFSET VALUE
114
CALCULATE CHROMINANCE QP FOR EDGE BASED ON LUMINANCE QPs AND CHROMINANCE QP OFFSET VALUE
116
DETERMINE STRENGTH OF DEBLOCKING FILTER
118
APPLY DEBLOCKING FILTER TO DEBLOCK EDGE BETWEEN FIRST AND SECOND BLOCKS
120

FIG. 6