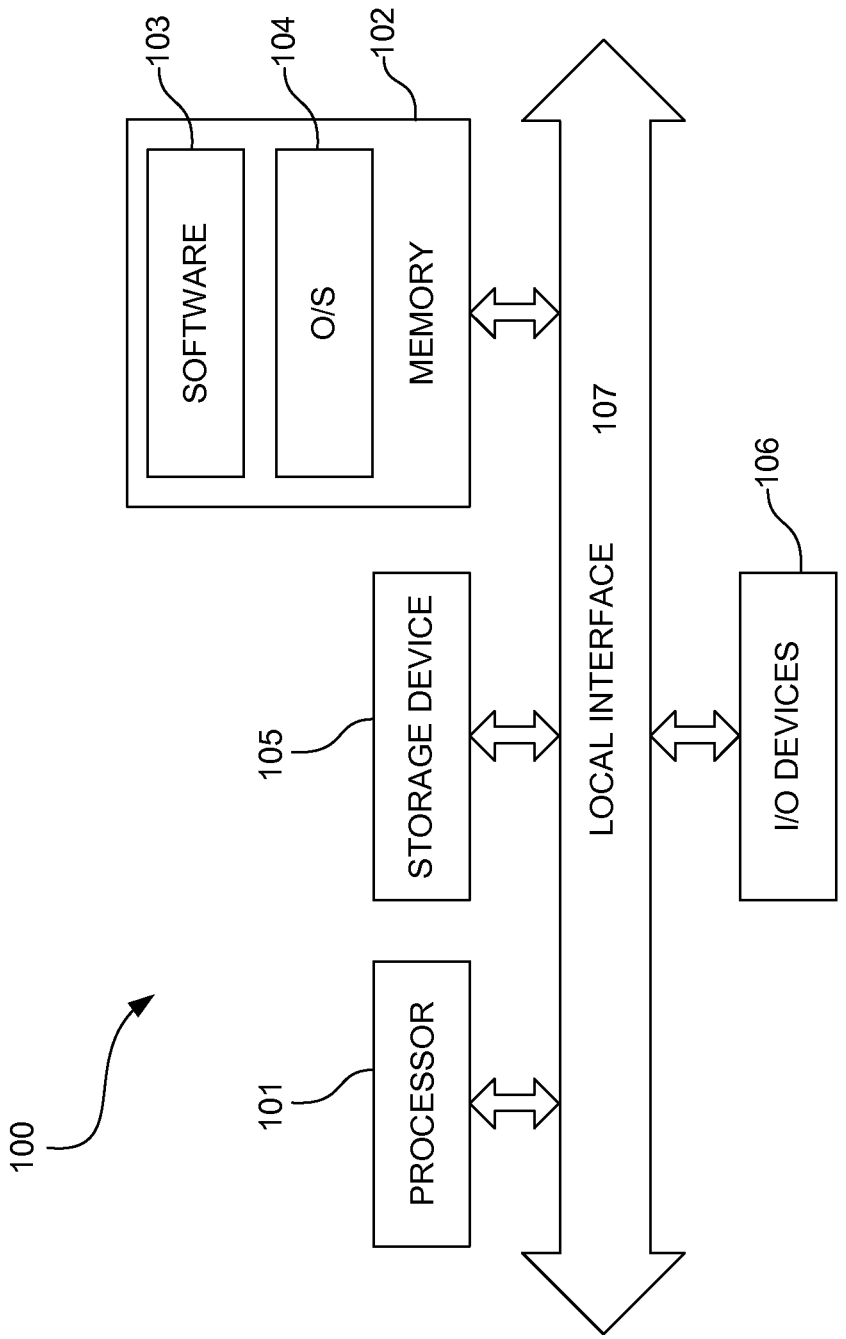
100
101
PROCESSOR
105
STORAGE DEVICE
LOCAL INTERFACE
107
106
I/O DEVICES
103
104
102
SOFTWARE
O/S
MEMORY

Fig. 1

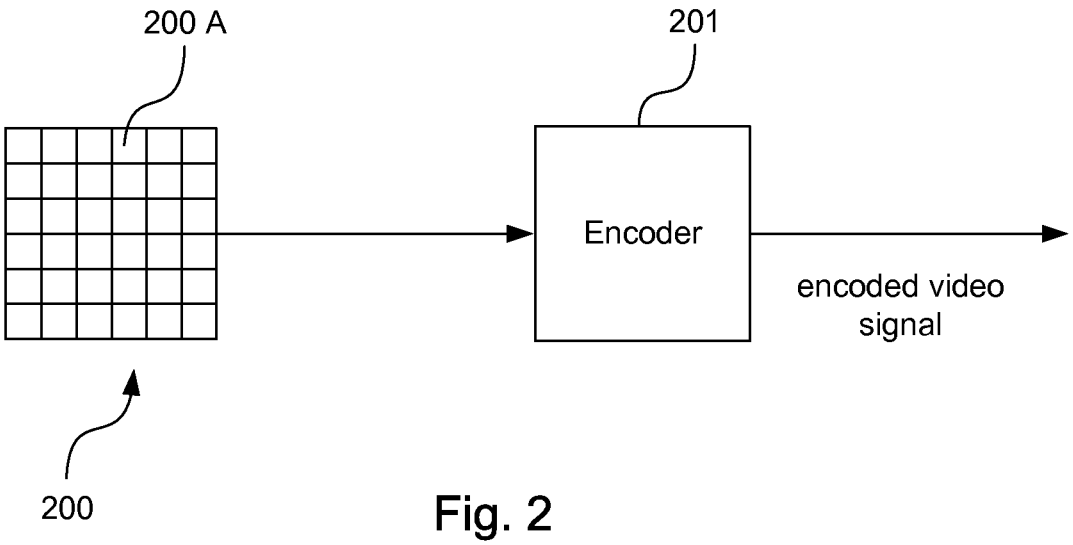
200 A
201
Encoder
encoded video signal
200

Fig. 2

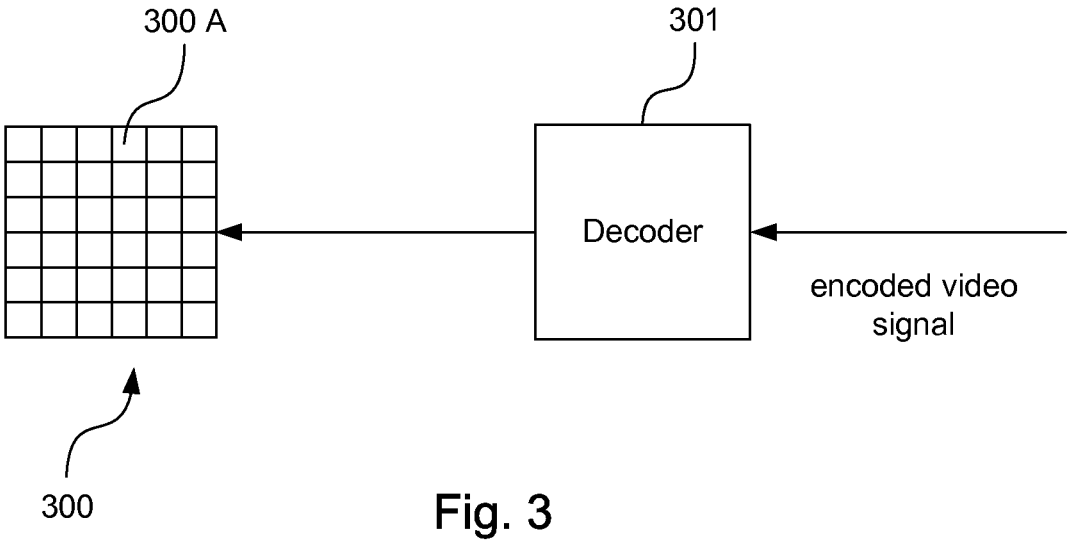
300 A
301
Decoder
encoded video signal
300

Fig. 3

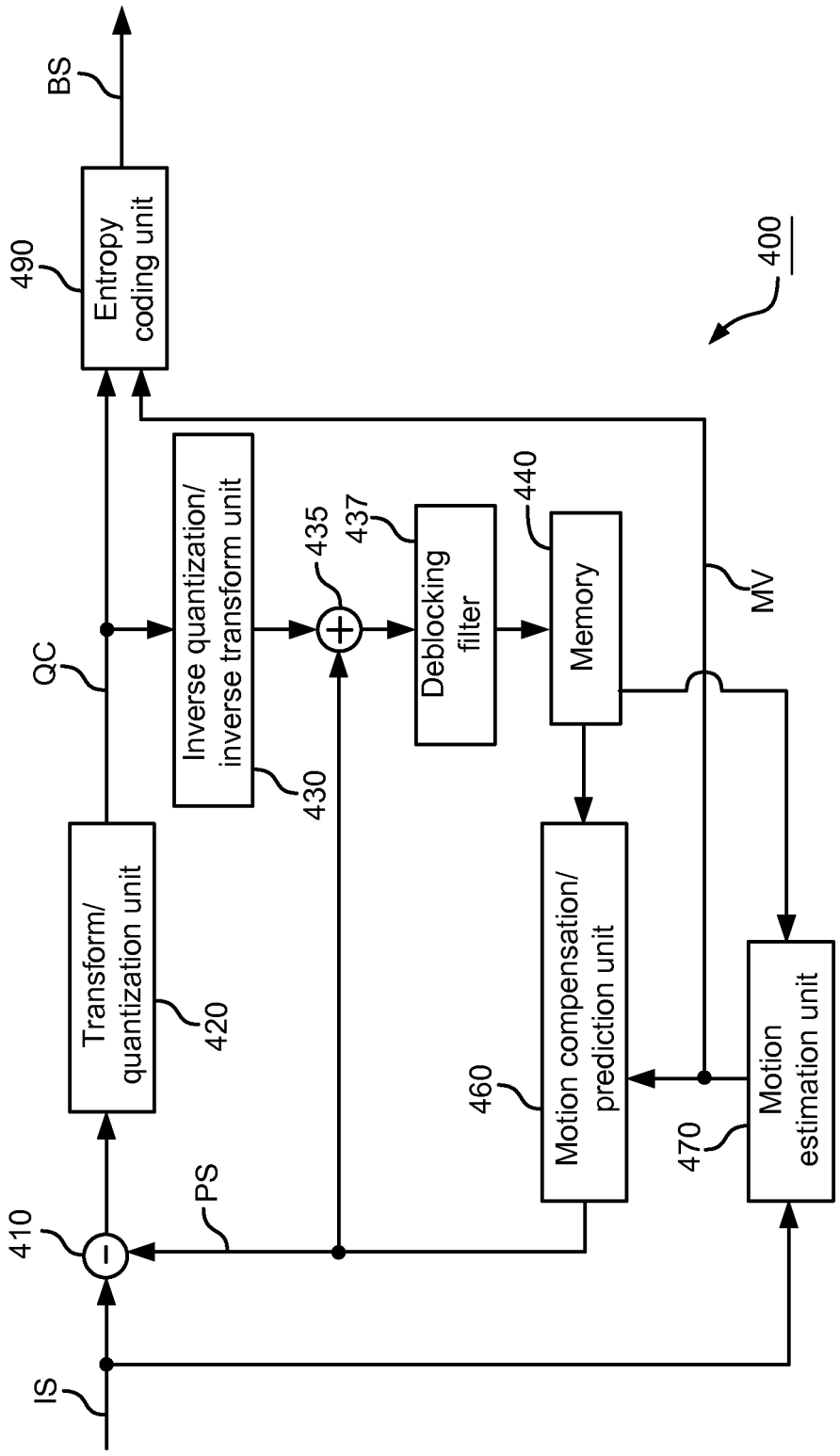
BS
490
Entropy coding unit
400
QC
Inverse quantization/ inverse transform unit
435
437
Deblocking filter
440
Memory
MV
430
Transform/ quantization unit
420
460
Motion compensation/ prediction unit
470
Motion estimation unit
410
PS
IS

FIG. 4

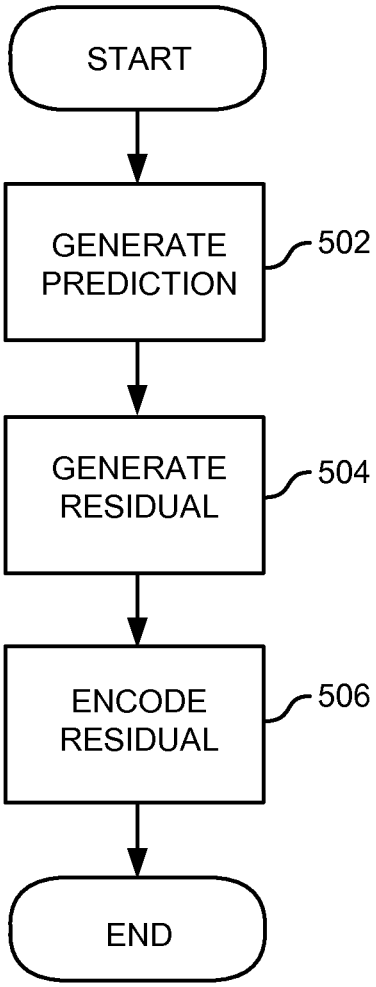
START
GENERATE PREDICTION
502
GENERATE RESIDUAL
504
ENCODE RESIDUAL
506
END

Fig. 5

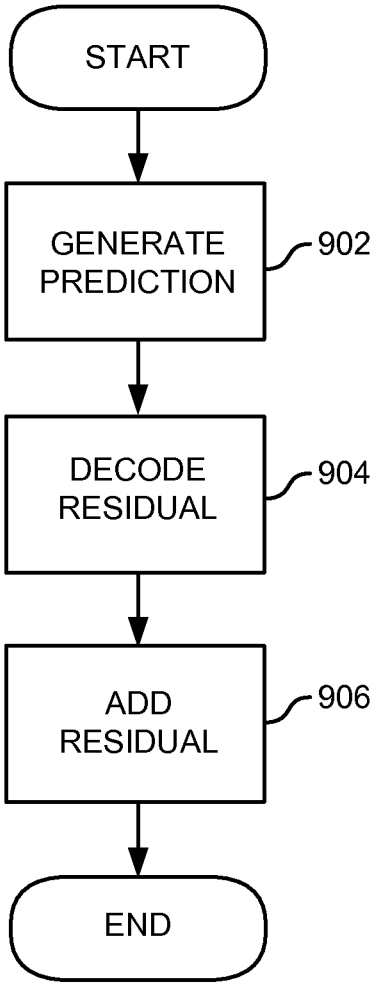
START
GENERATE PREDICTION
902
DECODE RESIDUAL
904
ADD RESIDUAL
906
END

Fig. 9

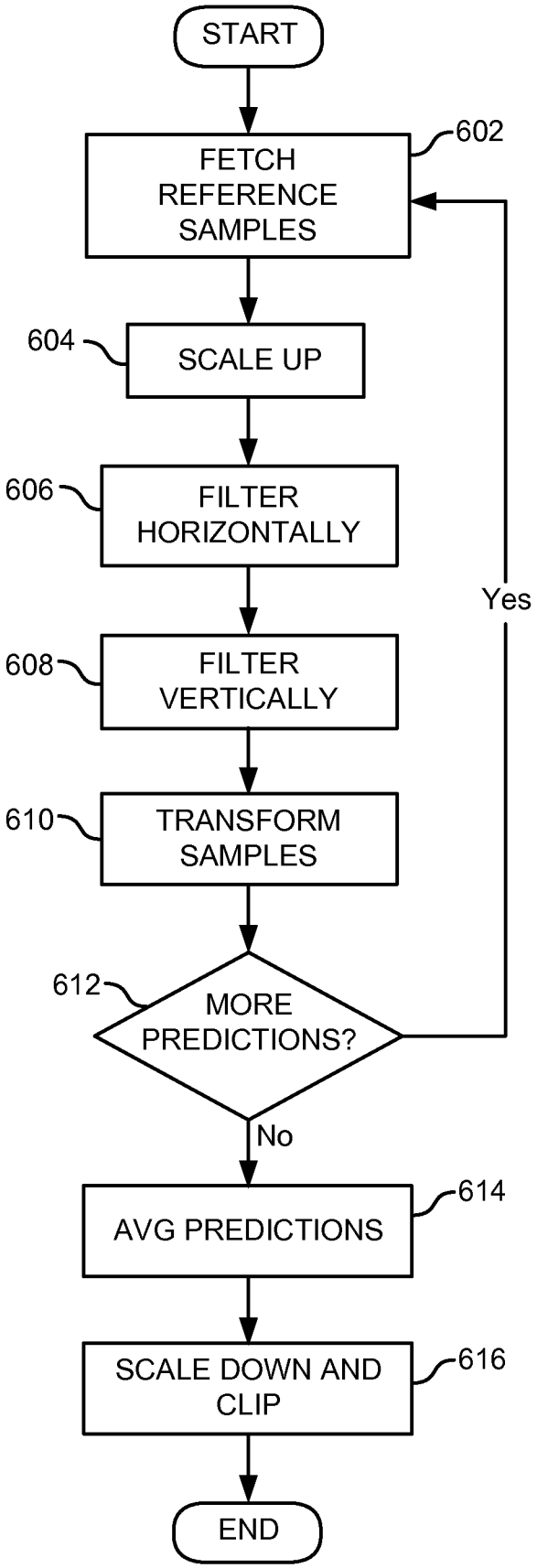
START
FETCH REFERENCE SAMPLES
602
604
SCALE UP
606
FILTER HORIZONTALLY
608
FILTER VERTICALLY
610
TRANSFORM SAMPLES
612
MORE PREDICTIONS?
Yes
No
AVG PREDICTIONS
614
SCALE DOWN AND CLIP
616
END

Fig. 6

$A_{-1,-1}$				$A_{0,-1}$	$a_{0,-1}$	$b_{0,-1}$	$c_{0,-1}$	$A_{1,-1}$			$A_{2,-1}$
$A_{-1,0}$				$A_{0,0}$	$a_{0,0}$	$b_{0,0}$	$c_{0,0}$	$A_{1,0}$			$A_{2,0}$
$d_{-1,0}$				$d_{0,0}$	$e_{0,0}$	$f_{0,0}$	$g_{0,0}$	$d_{1,0}$			$d_{2,0}$
$h_{-1,0}$				$h_{0,0}$	$i_{0,0}$	$j_{0,0}$	$k_{0,0}$	$h_{1,0}$			$h_{2,0}$
$n_{-1,0}$				$n_{0,0}$	$p_{0,0}$	$q_{0,0}$	$r_{0,0}$	$n_{1,0}$			$n_{2,0}$
$A_{-1,1}$				$A_{0,1}$	$a_{0,1}$	$b_{0,1}$	$c_{0,1}$	$A_{1,1}$			$A_{2,1}$
$A_{-1,2}$				$A_{0,2}$	$a_{0,2}$	$b_{0,2}$	$c_{0,2}$	$A_{1,2}$			$A_{2,2}$

Fig. 7

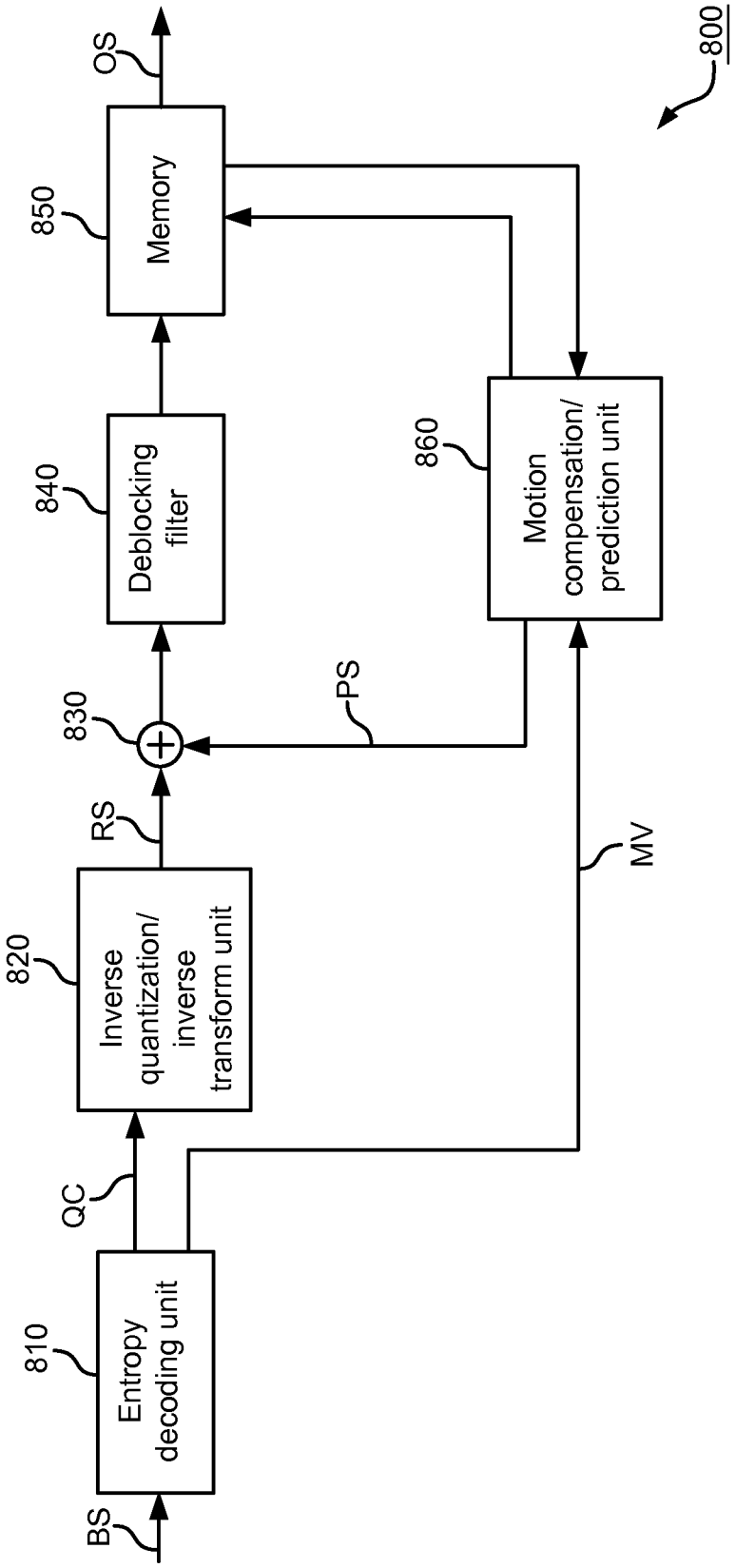
800
OS
850
Memory
840
Deblocking filter
860
Motion compensation/ prediction unit
830
PS
RS
820
Inverse quantization/ inverse transform unit
MV
QC
810
Entropy decoding unit
BS

Fig. 8