Fig.1A

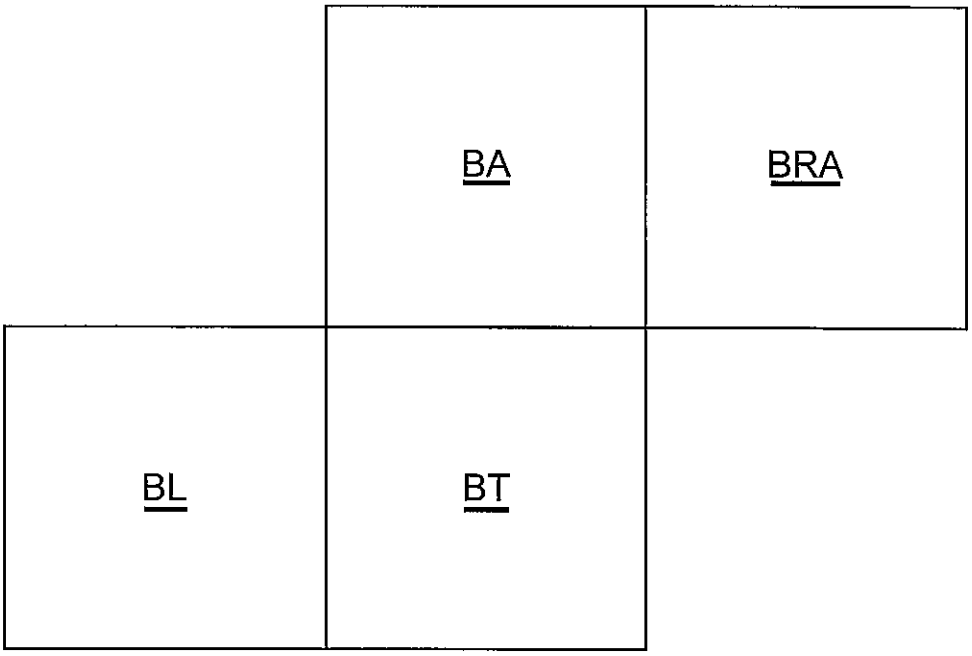
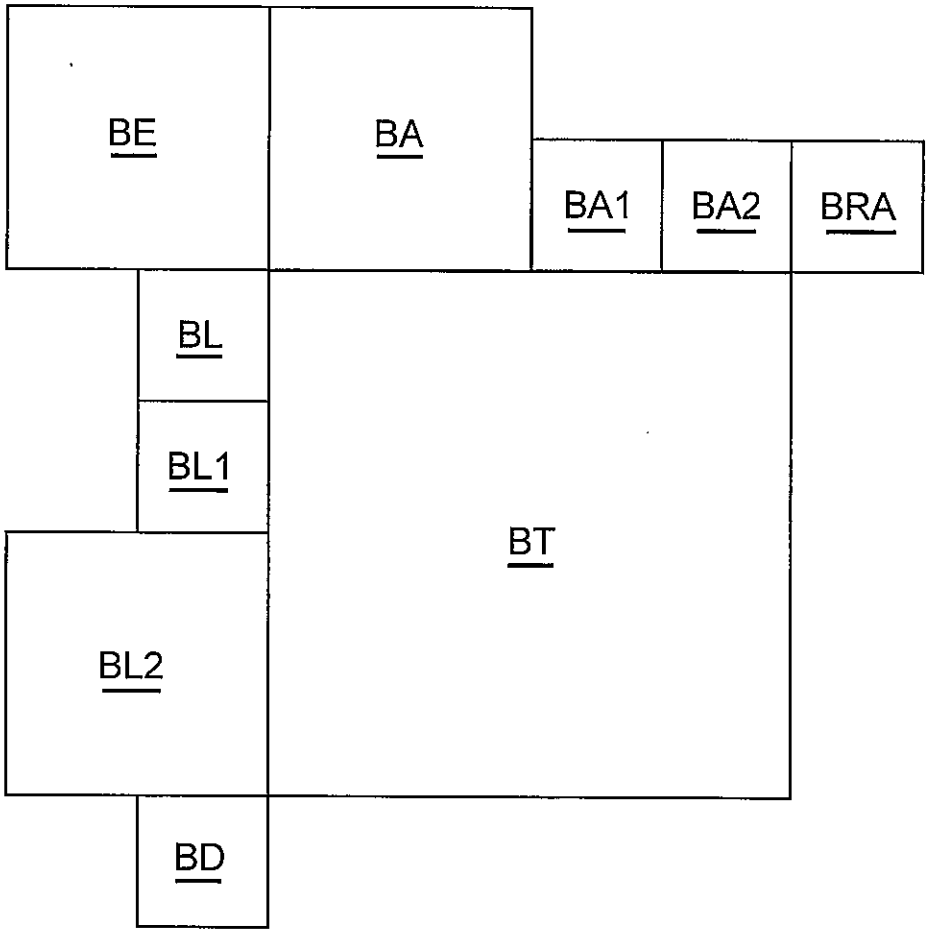


Fig.1B



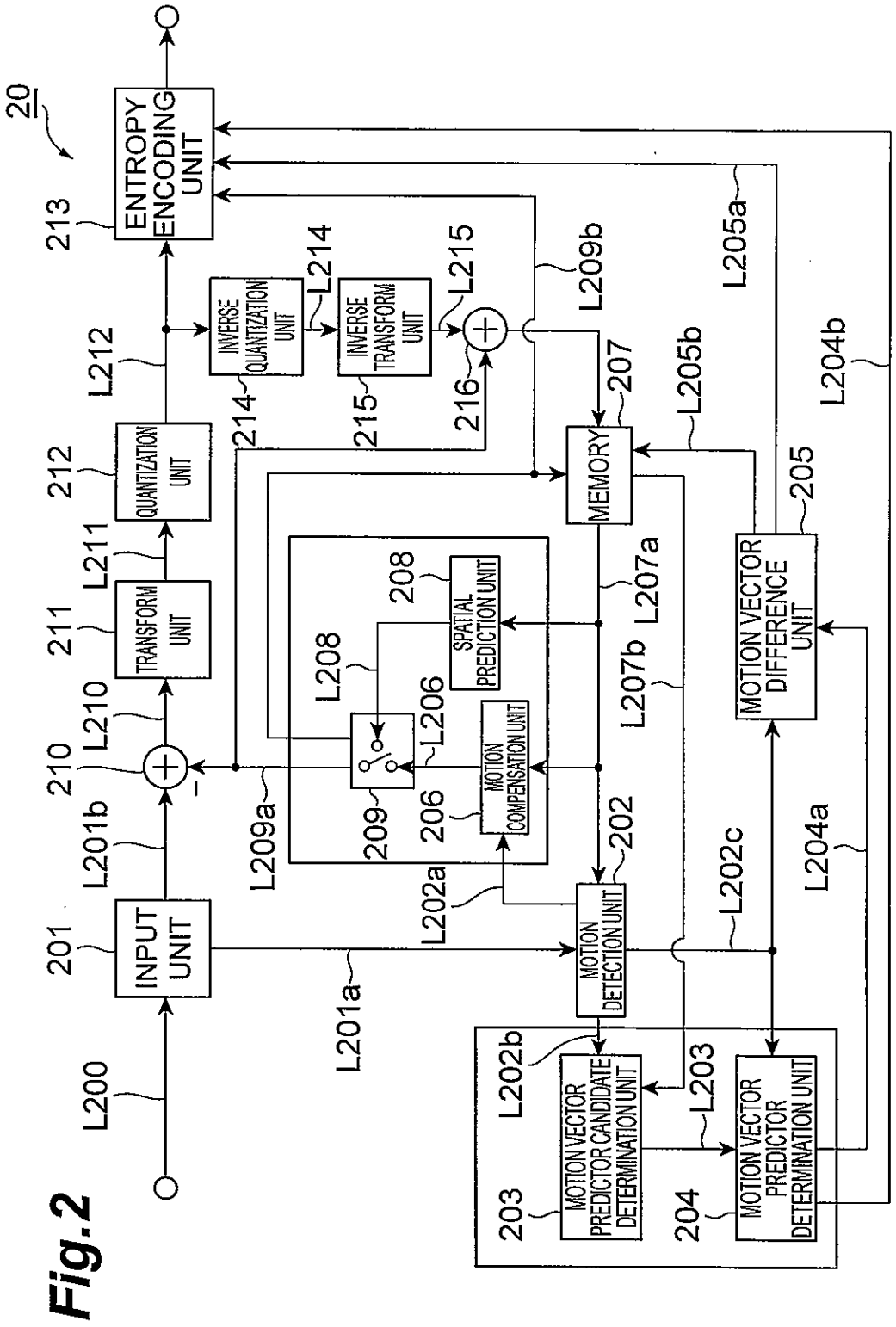
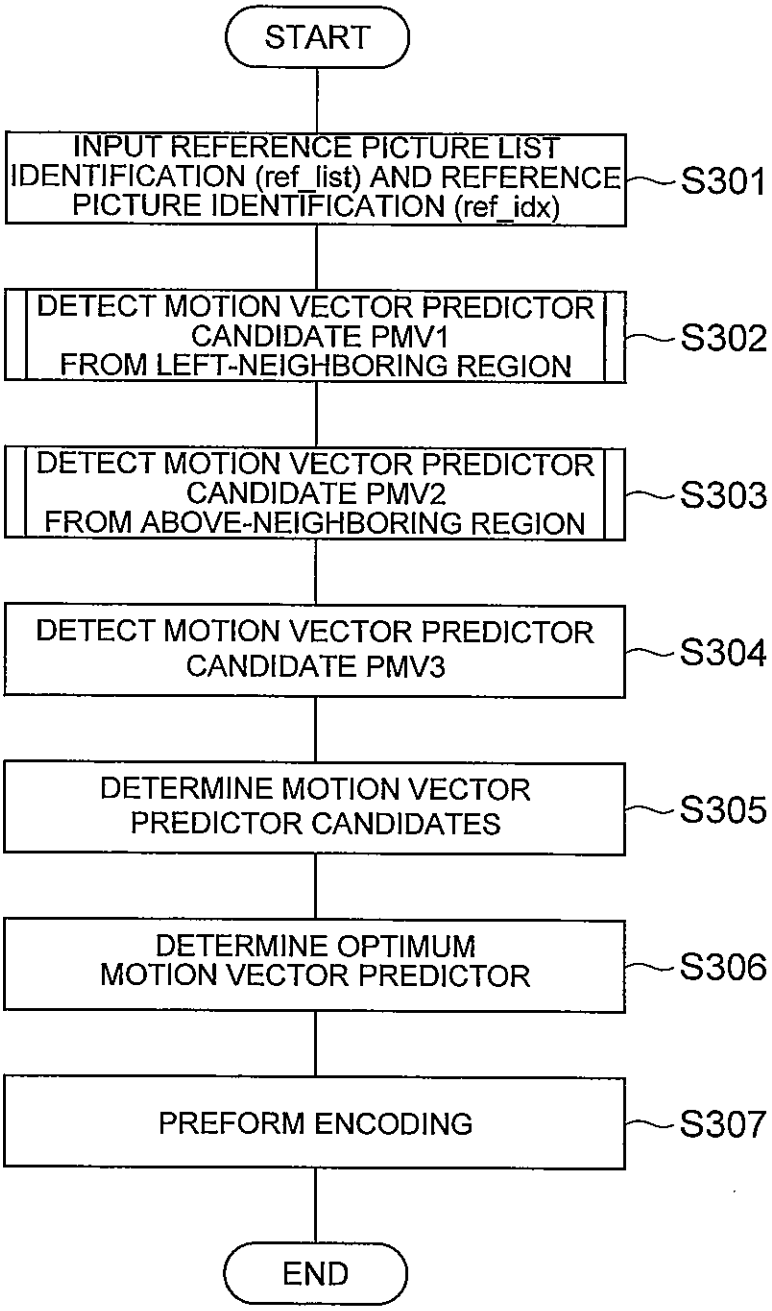

20
ENTROPY ENCODING UNIT
213
INVERSE QUANTIZATION UNIT
L214
INVERSE TRANSFORM UNIT
L215
L212
214
215
216
L209b
L205a
L204b
207
MEMORY
L205b
QUANTIZATION UNIT
212
TRANSFORM UNIT
211
L211
208
SPATIAL PREDICTION UNIT
L208
L206
MOTION COMPENSATION UNIT
L207a
L207b
MOTION VECTOR DIFFERENCE UNIT
205
210
L210
209
206
L209a
202
L202a
L202c
L204a
INPUT UNIT
201
L201b
L201a
MOTION DETECTION UNIT
L200
L202b
L203
MOTION VECTOR PREDICTOR CANDIDATE DETERMINATION UNIT
MOTION VECTOR PREDICTOR DETERMINATION UNIT
203
204

Fig.2

Fig.3


START
INPUT REFERENCE PICTURE LIST IDENTIFICATION (ref_list) AND REFERENCE PICTURE IDENTIFICATION (ref_idx)
S301
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMV1 FROM LEFT-NEIGHBORING REGION
S302
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMV2 FROM ABOVE-NEIGHBORING REGION
S303
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMV3
S304
DETERMINE MOTION VECTOR PREDICTOR CANDIDATES
S305
DETERMINE OPTIMUM MOTION VECTOR PREDICTOR
S306
PREFORM ENCODING
S307
END

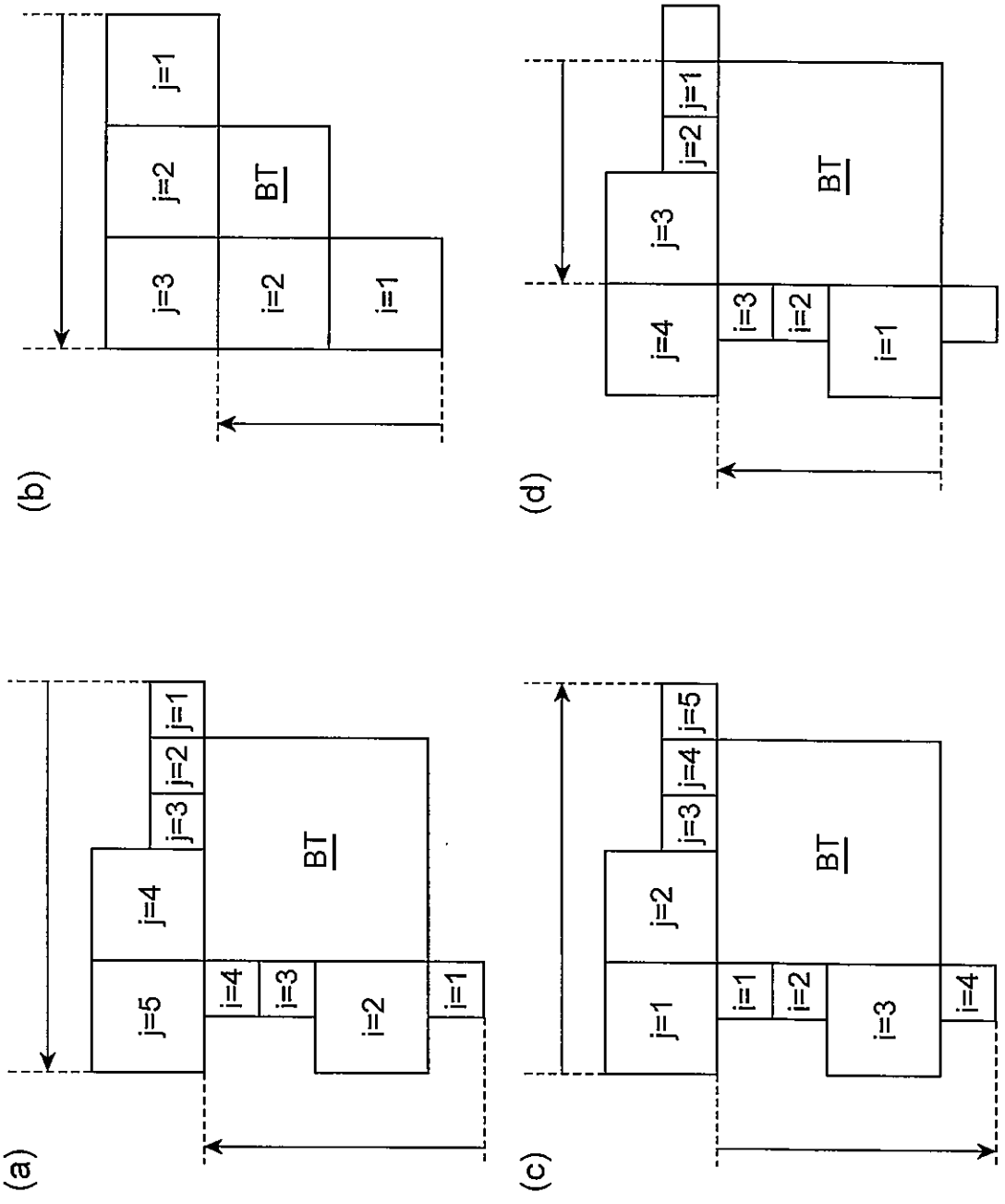

(a)
j=5
j=4
j=3
j=2
j=1
i=4
i=3
i=2
i=1
BT
(b)
j=3
j=2
j=1
i=2
i=1
BT
(c)
j=1
j=2
j=3
j=4
j=5
i=1
i=2
i=3
i=4
BT
(d)
j=4
j=3
j=2
j=1
i=3
i=2
i=1
BT

Fig.4

Fig.5

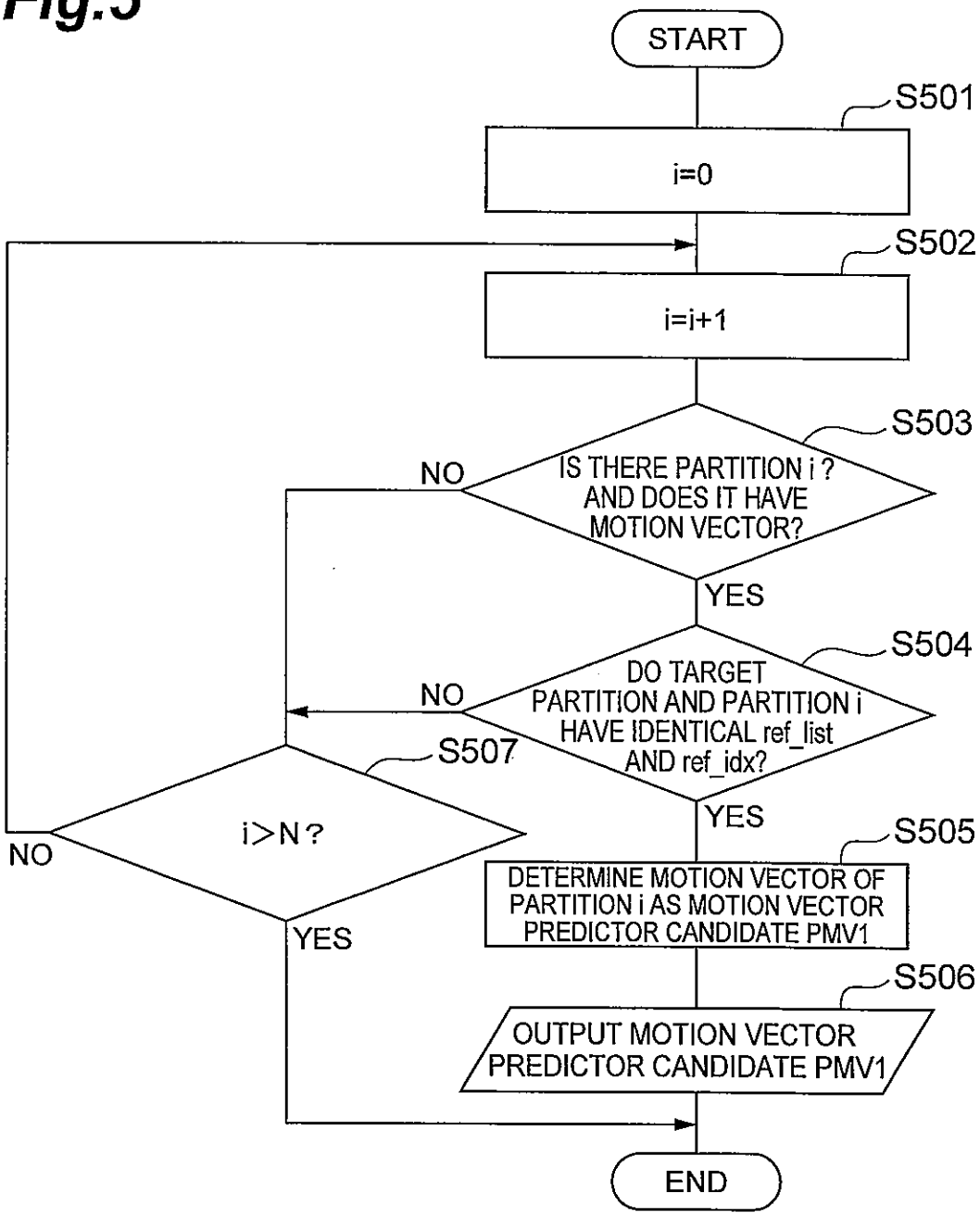

START
S501
i=0
S502
i=i+1
S503
IS THERE PARTITION i ?
AND DOES IT HAVE
MOTION VECTOR?
NO
YES
S504
DO TARGET
PARTITION AND PARTITION i
HAVE IDENTICAL ref_list
AND ref_idx?
NO
YES
S505
DETERMINE MOTION VECTOR OF
PARTITION i AS MOTION VECTOR
PREDICTOR CANDIDATE PMV1
S506
OUTPUT MOTION VECTOR
PREDICTOR CANDIDATE PMV1
S507
i>N ?
NO
YES
END

Fig.6

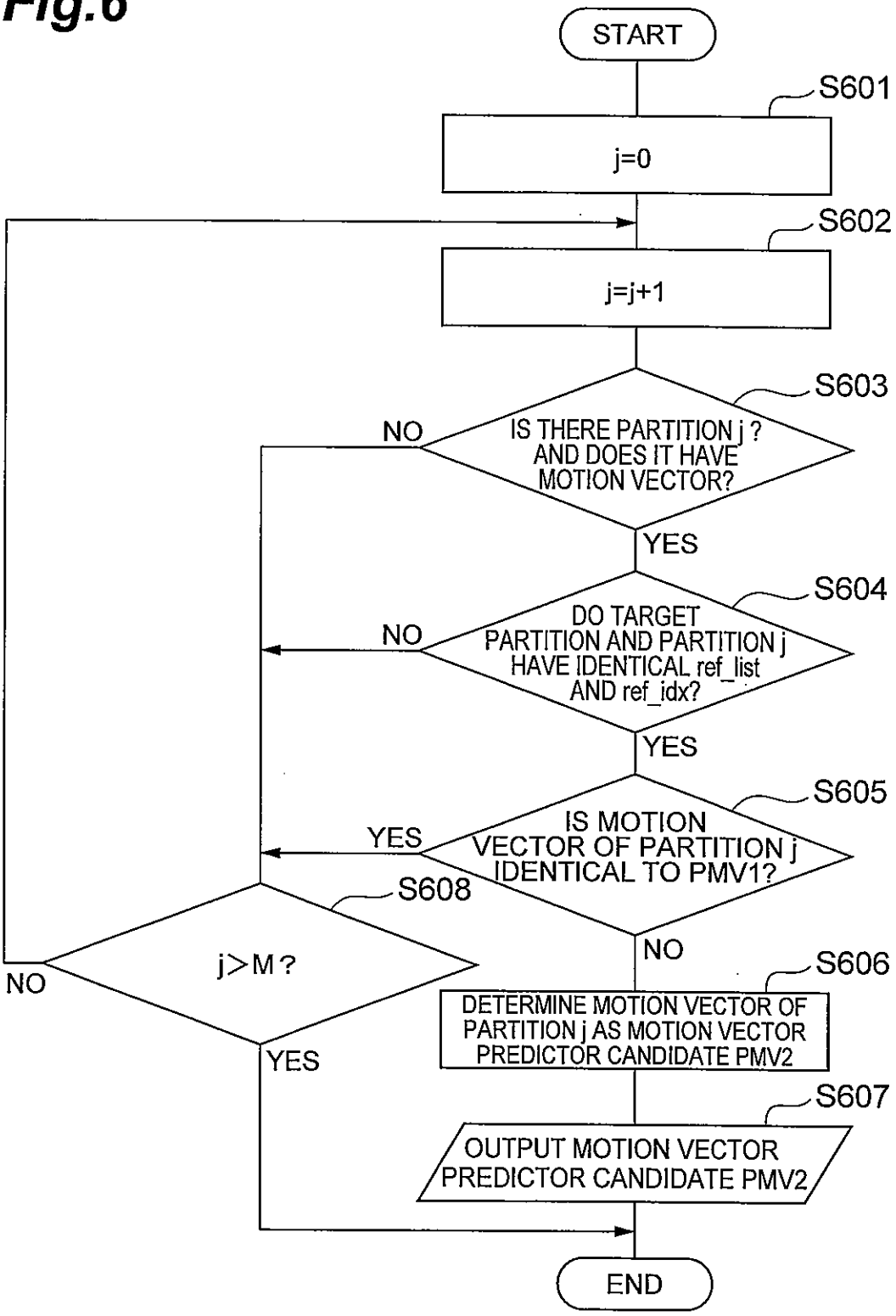

START
S601
j=0
S602
j=j+1
S603
IS THERE PARTITION j ? AND DOES IT HAVE MOTION VECTOR?
NO
YES
S604
DO TARGET PARTITION AND PARTITION j HAVE IDENTICAL ref_list AND ref_idx?
NO
YES
S605
IS MOTION VECTOR OF PARTITION j IDENTICAL TO PMV1?
YES
NO
S608
j>M ?
NO
YES
S606
DETERMINE MOTION VECTOR OF PARTITION j AS MOTION VECTOR PREDICTOR CANDIDATE PMV2
S607
OUTPUT MOTION VECTOR PREDICTOR CANDIDATE PMV2
END

Fig.7

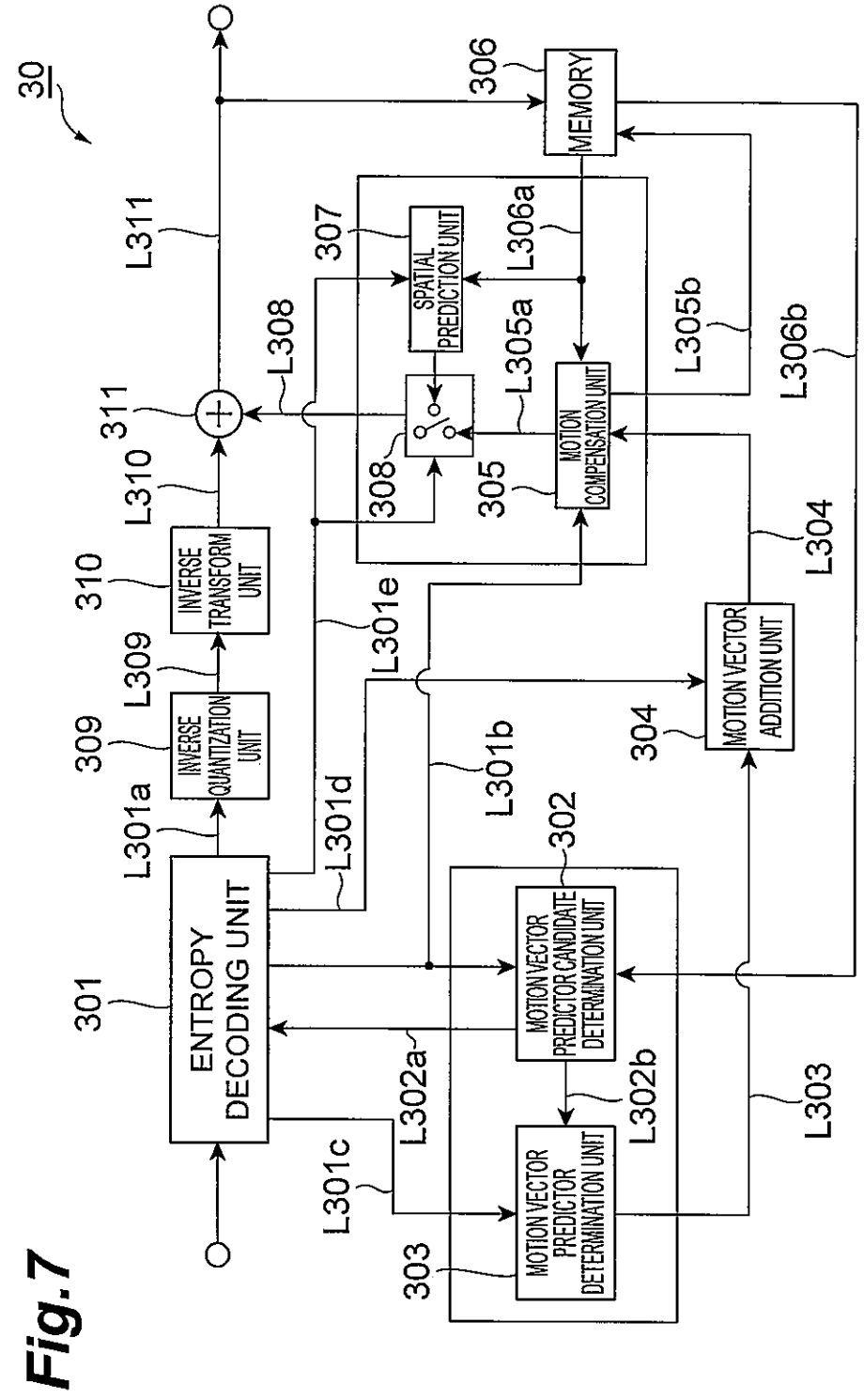

30
301
ENTROPY DECODING UNIT
L301a
309
INVERSE QUANTIZATION UNIT
L309
310
INVERSE TRANSFORM UNIT
L310
311
L311
306
MEMORY
307
SPATIAL PREDICTION UNIT
L306a
L308
308
305
MOTION COMPENSATION UNIT
L305a
L305b
L306b
L304
304
MOTION VECTOR ADDITION UNIT
L301e
L301d
L301b
302
MOTION VECTOR PREDICTOR CANDIDATE DETERMINATION UNIT
L302a
L302b
L303
L301c
303
MOTION VECTOR PREDICTOR DETERMINATION UNIT

Fig.8

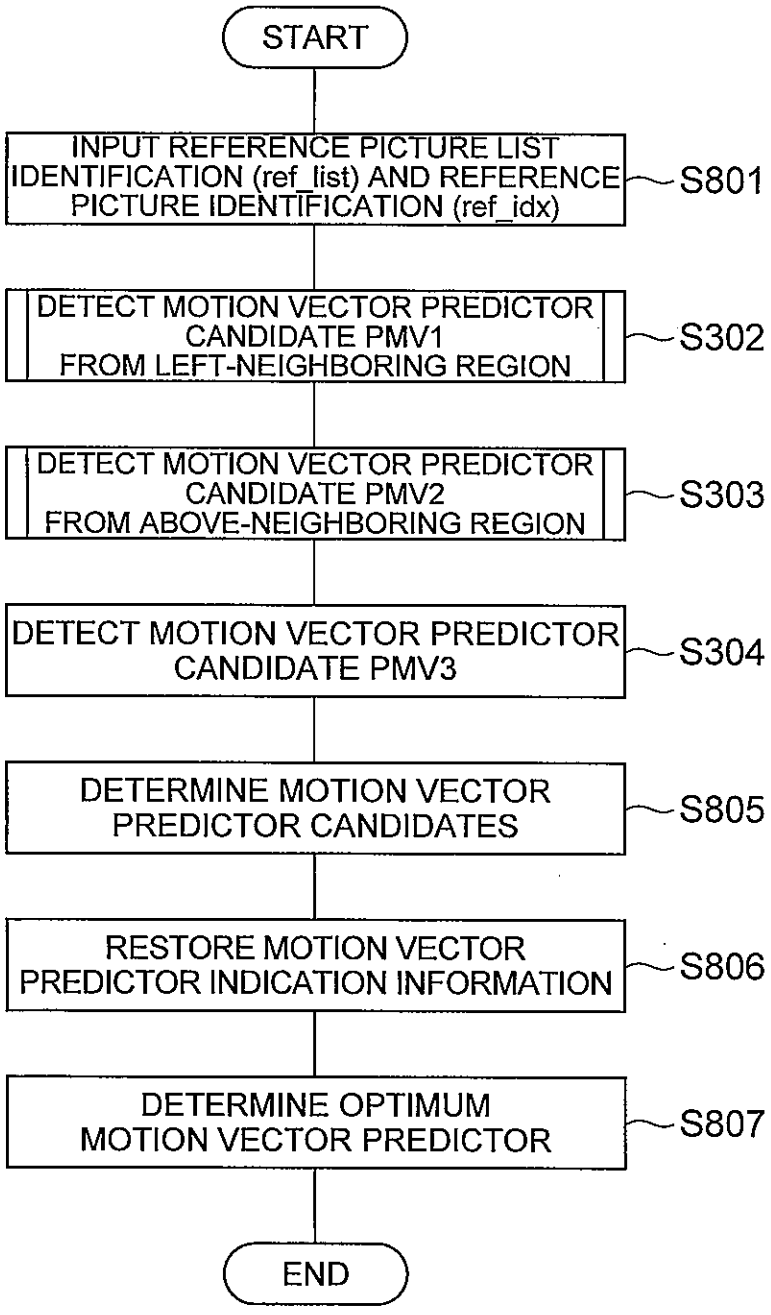

START
INPUT REFERENCE PICTURE LIST IDENTIFICATION (ref_list) AND REFERENCE PICTURE IDENTIFICATION (ref_idx)
S801
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMV1 FROM LEFT-NEIGHBORING REGION
S302
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMV2 FROM ABOVE-NEIGHBORING REGION
S303
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMV3
S304
DETERMINE MOTION VECTOR PREDICTOR CANDIDATES
S805
RESTORE MOTION VECTOR PREDICTOR INDICATION INFORMATION
S806
DETERMINE OPTIMUM MOTION VECTOR PREDICTOR
S807
END

Fig.9

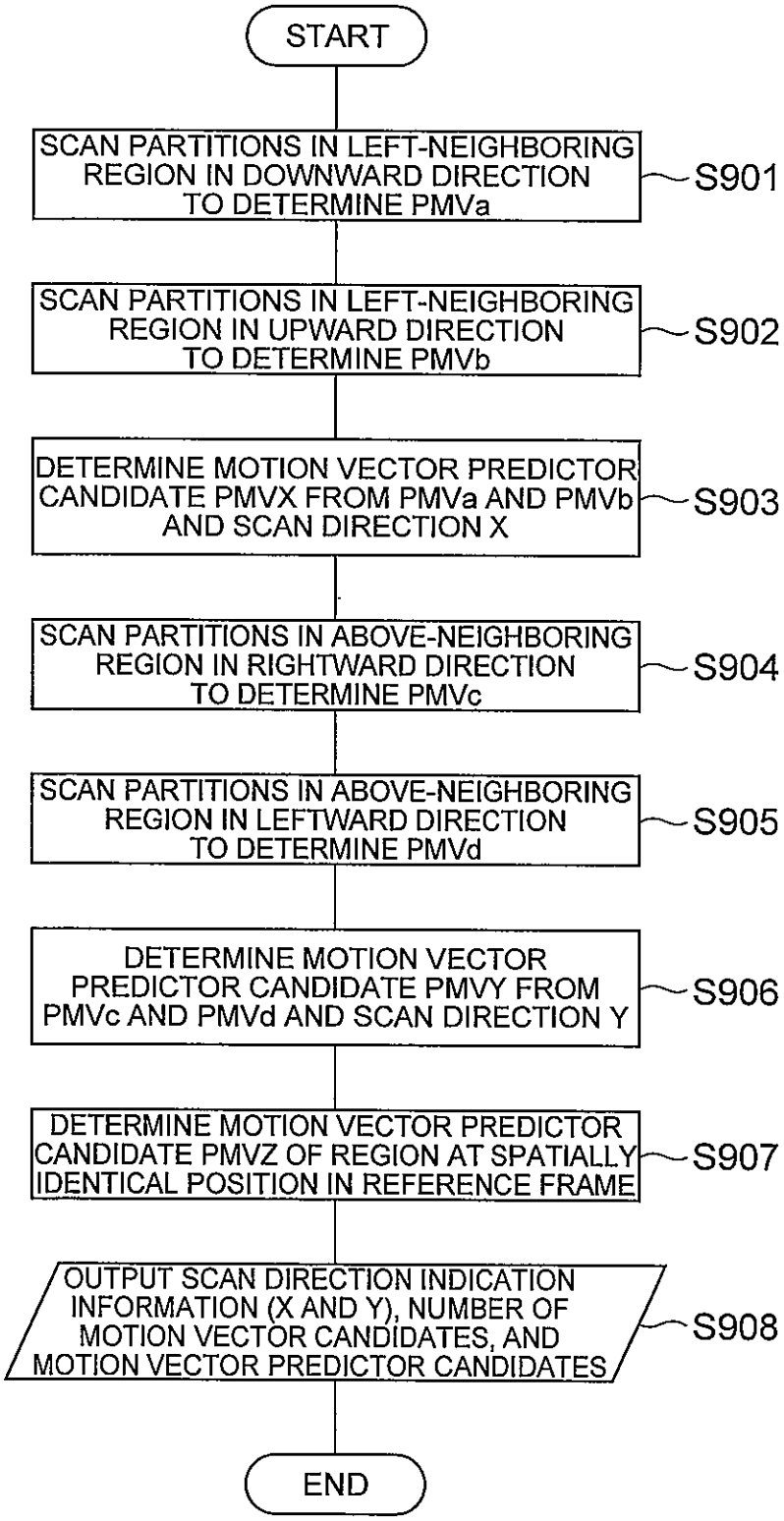

START
SCAN PARTITIONS IN LEFT-NEIGHBORING REGION IN DOWNWARD DIRECTION TO DETERMINE PMVa
S901
SCAN PARTITIONS IN LEFT-NEIGHBORING REGION IN UPWARD DIRECTION TO DETERMINE PMVb
S902
DETERMINE MOTION VECTOR PREDICTOR CANDIDATE PMVX FROM PMVa AND PMVb AND SCAN DIRECTION X
S903
SCAN PARTITIONS IN ABOVE-NEIGHBORING REGION IN RIGHTWARD DIRECTION TO DETERMINE PMVc
S904
SCAN PARTITIONS IN ABOVE-NEIGHBORING REGION IN LEFTWARD DIRECTION TO DETERMINE PMVd
S905
DETERMINE MOTION VECTOR PREDICTOR CANDIDATE PMVY FROM PMVc AND PMVd AND SCAN DIRECTION Y
S906
DETERMINE MOTION VECTOR PREDICTOR CANDIDATE PMVZ OF REGION AT SPATIALLY IDENTICAL POSITION IN REFERENCE FRAME
S907
OUTPUT SCAN DIRECTION INDICATION INFORMATION (X AND Y), NUMBER OF MOTION VECTOR CANDIDATES, AND MOTION VECTOR PREDICTOR CANDIDATES
S908
END

Fig.10

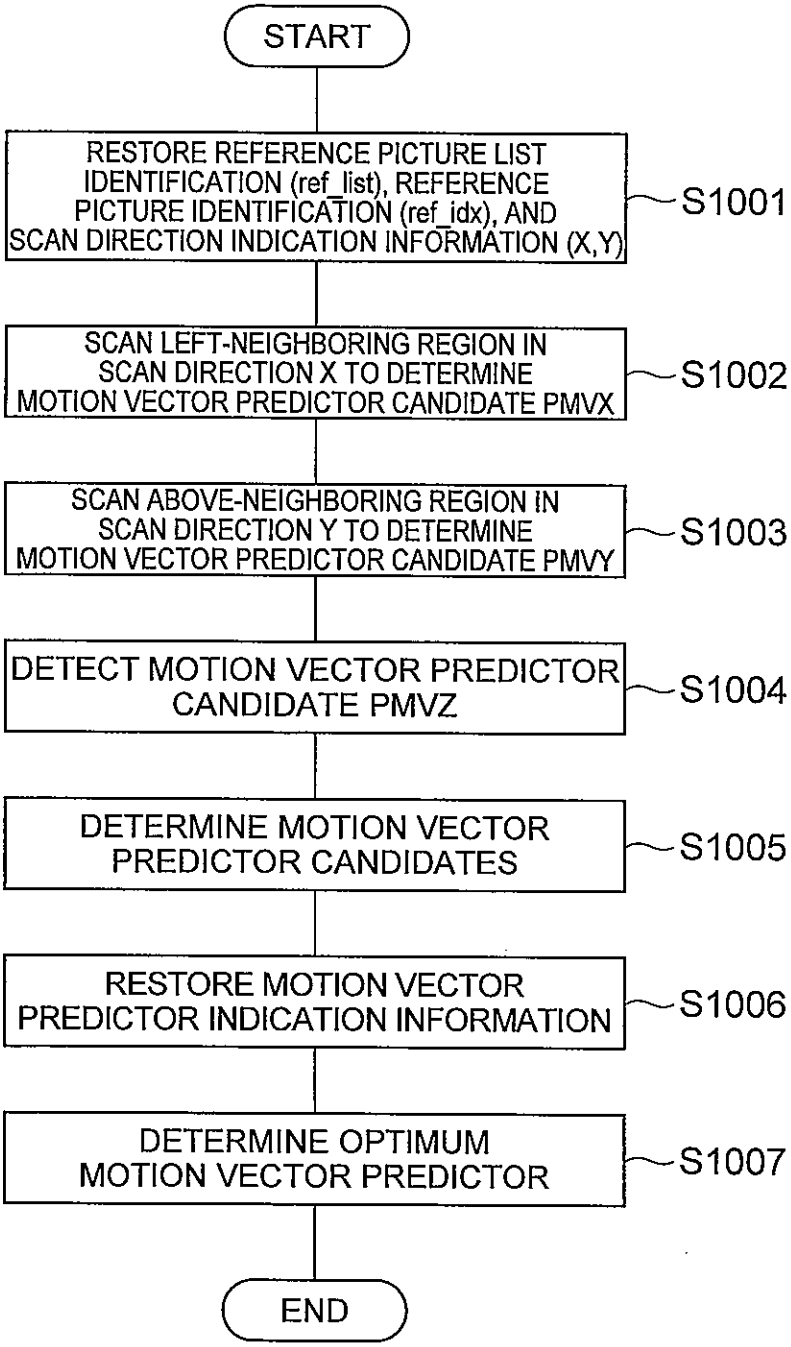

START
RESTORE REFERENCE PICTURE LIST IDENTIFICATION (ref_list), REFERENCE PICTURE IDENTIFICATION (ref_idx), AND SCAN DIRECTION INDICATION INFORMATION (X,Y)
S1001
SCAN LEFT-NEIGHBORING REGION IN SCAN DIRECTION X TO DETERMINE MOTION VECTOR PREDICTOR CANDIDATE PMVX
S1002
SCAN ABOVE-NEIGHBORING REGION IN SCAN DIRECTION Y TO DETERMINE MOTION VECTOR PREDICTOR CANDIDATE PMVY
S1003
DETECT MOTION VECTOR PREDICTOR CANDIDATE PMVZ
S1004
DETERMINE MOTION VECTOR PREDICTOR CANDIDATES
S1005
RESTORE MOTION VECTOR PREDICTOR INDICATION INFORMATION
S1006
DETERMINE OPTIMUM MOTION VECTOR PREDICTOR
S1007
END

Fig.11

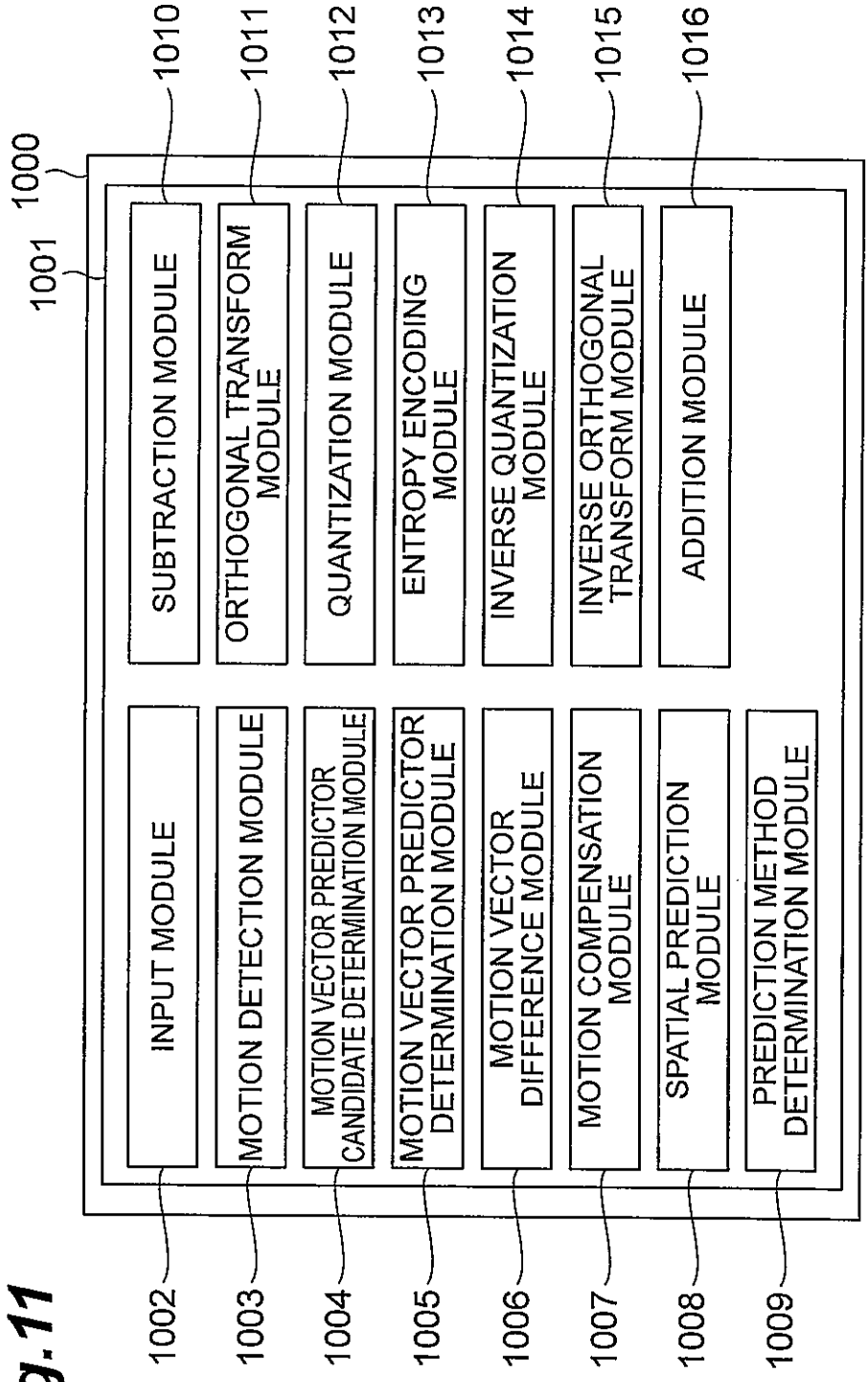

1000
1001
INPUT MODULE
SUBTRACTION MODULE
MOTION DETECTION MODULE
ORTHOGONAL TRANSFORM MODULE
MOTION VECTOR PREDICTOR CANDIDATE DETERMINATION MODULE
QUANTIZATION MODULE
MOTION VECTOR PREDICTOR DETERMINATION MODULE
ENTROPY ENCODING MODULE
MOTION VECTOR DIFFERENCE MODULE
INVERSE QUANTIZATION MODULE
MOTION COMPENSATION MODULE
INVERSE ORTHOGONAL TRANSFORM MODULE
SPATIAL PREDICTION MODULE
ADDITION MODULE
PREDICTION METHOD DETERMINATION MODULE
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016

Fig.12

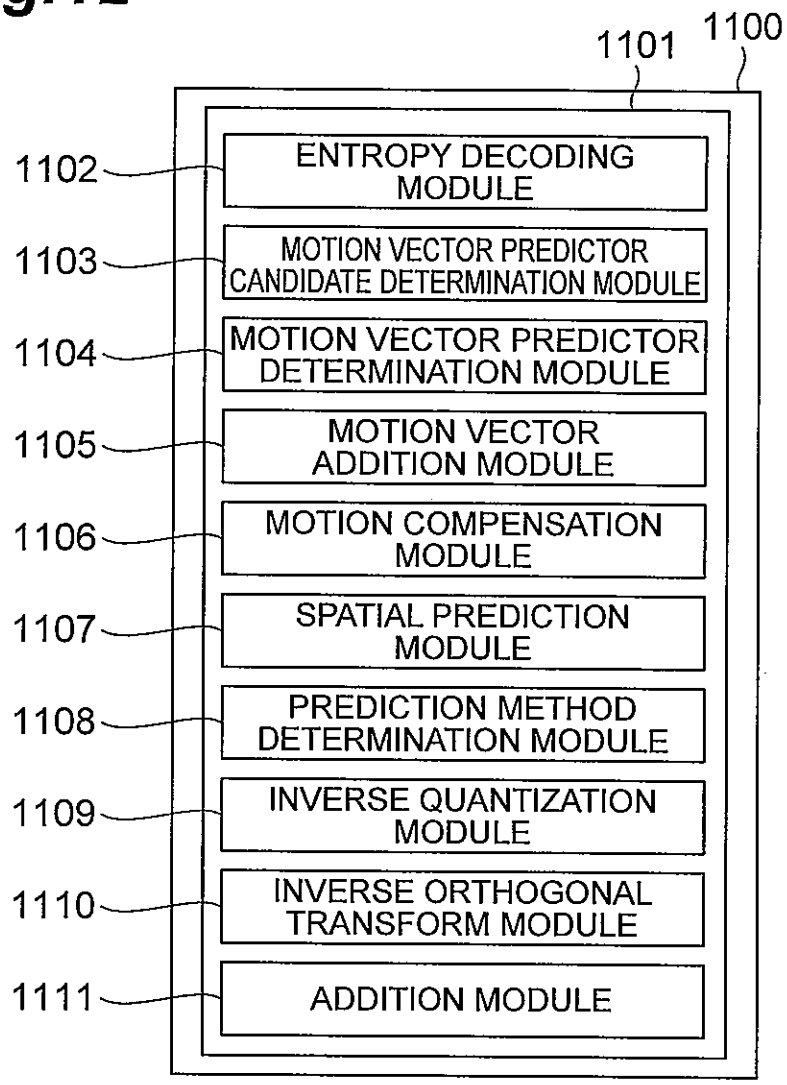

1100
1101
1102
ENTROPY DECODING MODULE
1103
MOTION VECTOR PREDICTOR CANDIDATE DETERMINATION MODULE
1104
MOTION VECTOR PREDICTOR DETERMINATION MODULE
1105
MOTION VECTOR ADDITION MODULE
1106
MOTION COMPENSATION MODULE
1107
SPATIAL PREDICTION MODULE
1108
PREDICTION METHOD DETERMINATION MODULE
1109
INVERSE QUANTIZATION MODULE
1110
INVERSE ORTHOGONAL TRANSFORM MODULE
1111
ADDITION MODULE

Fig.13

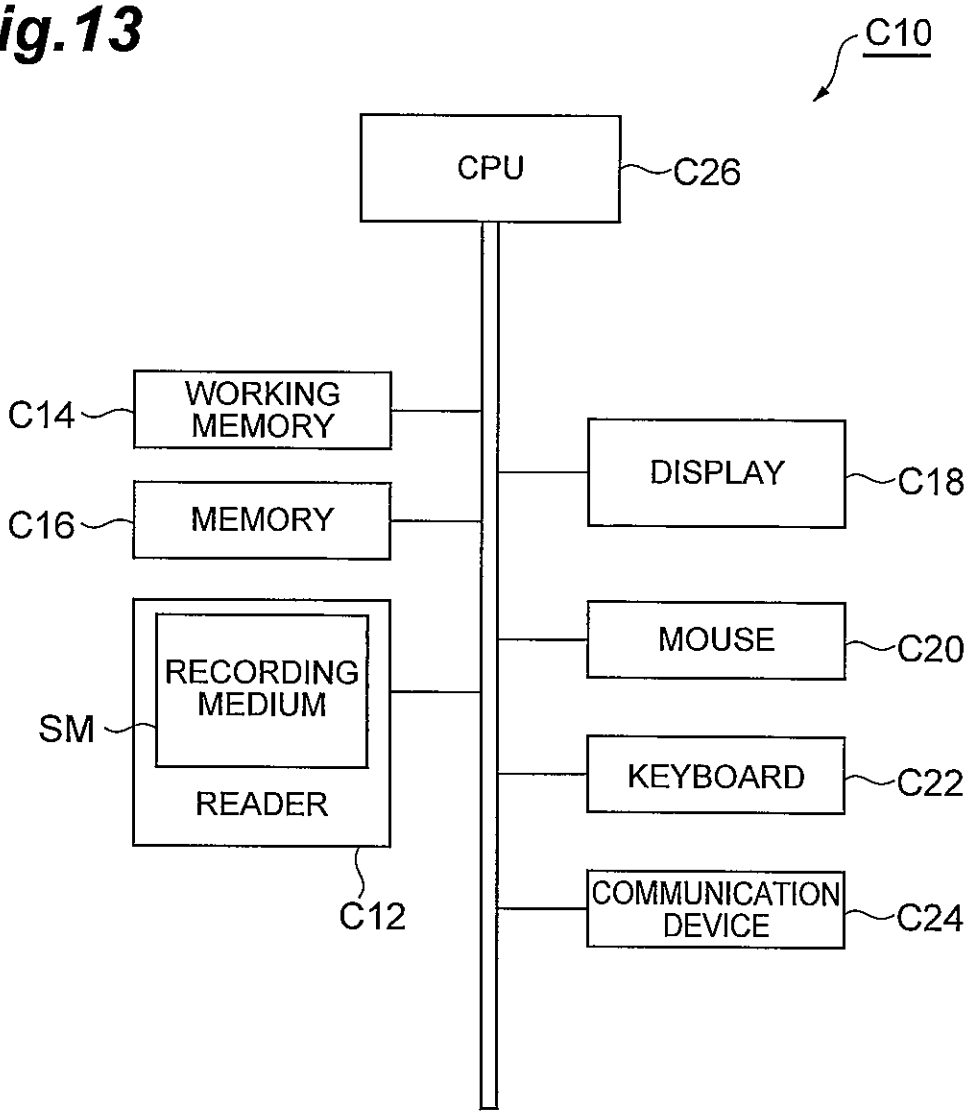

C10
CPU
C26
C14
WORKING MEMORY
C16
MEMORY
SM
RECORDING MEDIUM
READER
C12
DISPLAY
C18
MOUSE
C20
KEYBOARD
C22
COMMUNICATION DEVICE
C24

Fig.14

