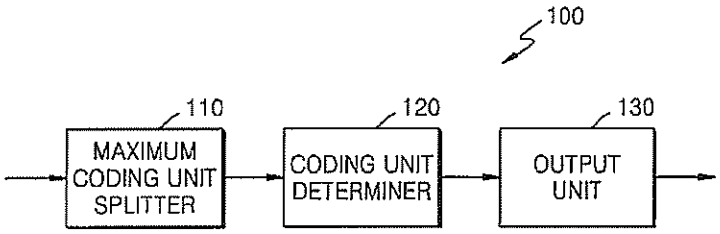
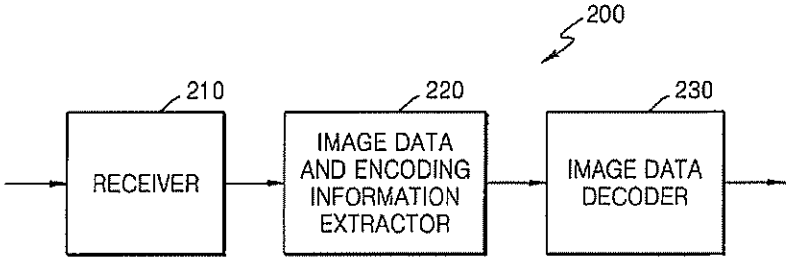
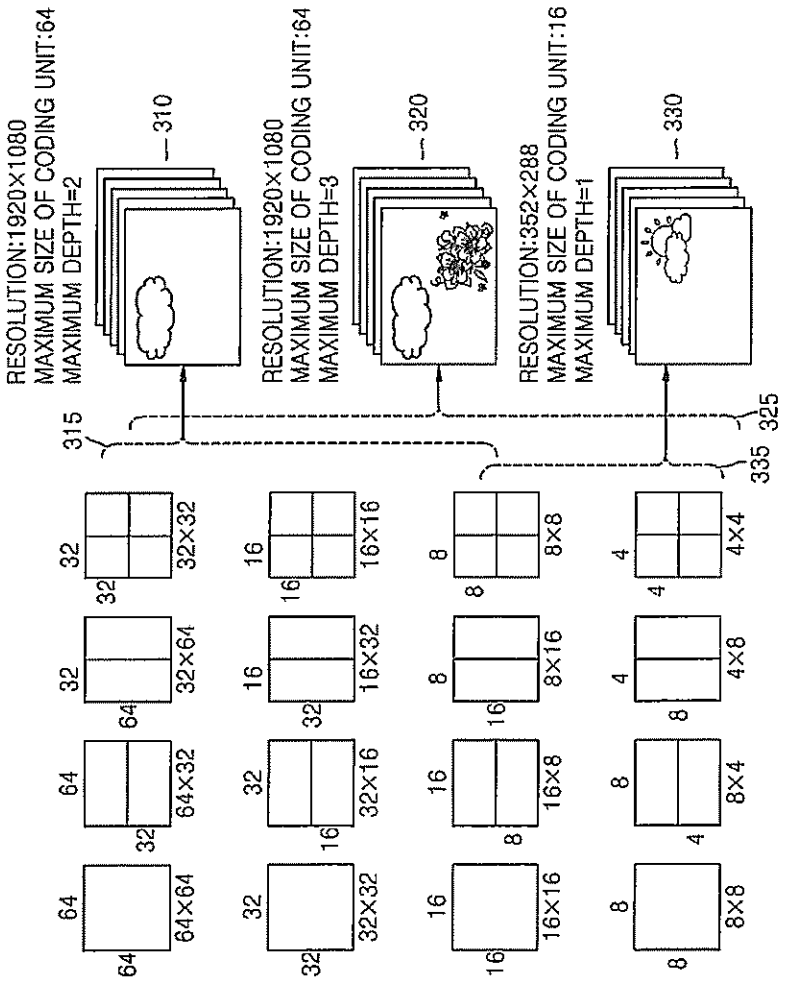
[Fig. 1]



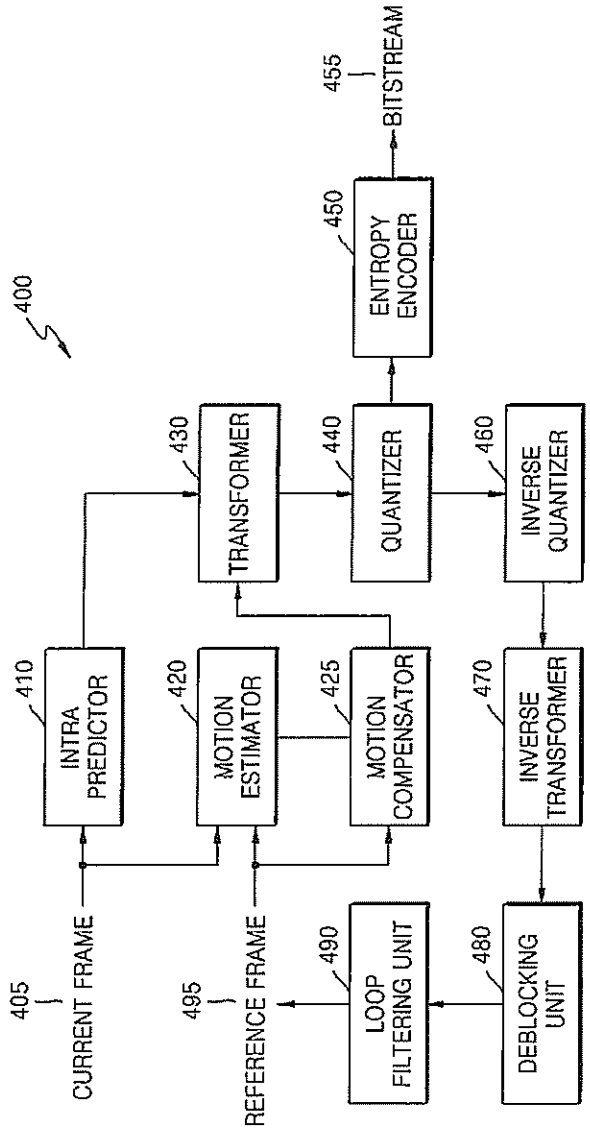
[Fig. 2]



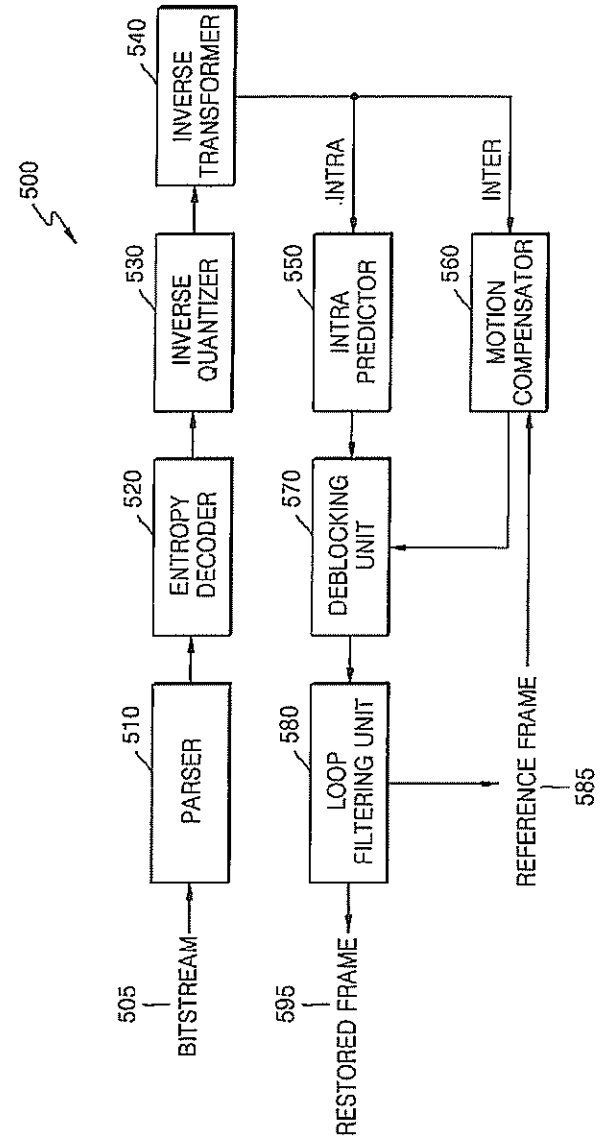
[Fig. 3]



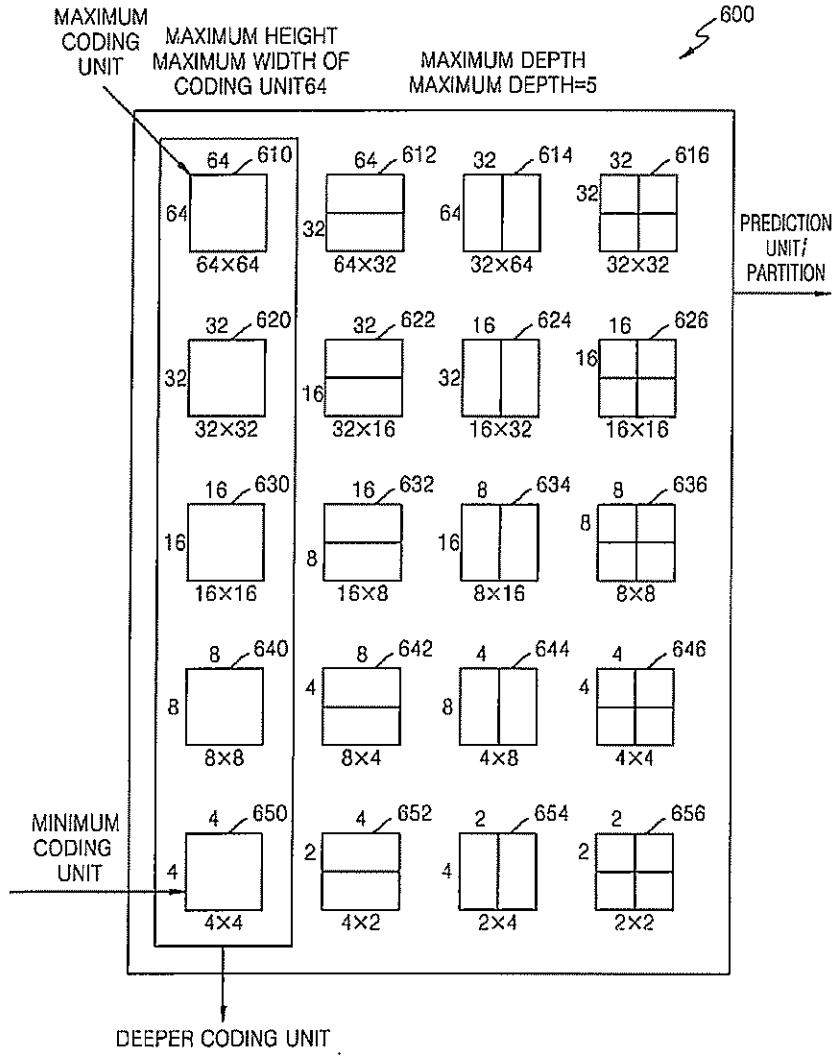
[Fig. 4]


400
405
CURRENT FRAME
410
INTRA PREDICTOR
420
MOTION ESTIMATOR
425
MOTION COMPENSATOR
430
TRANSFORMER
440
QUANTIZER
450
ENTROPY ENCODER
455
BITSTREAM
460
INVERSE QUANTIZER
470
INVERSE TRANSFORMER
480
DEBLOCKING UNIT
490
LOOP FILTERING UNIT
495
REFERENCE FRAME

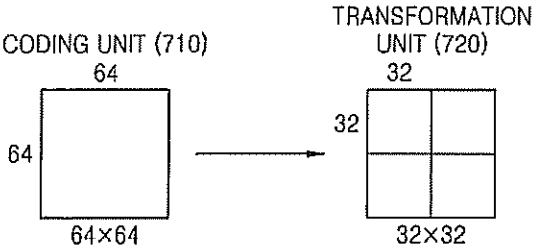
[Fig. 5]


500
505
BITSTREAM
510
PARSER
520
ENTROPY DECODER
530
INVERSE QUANTIZER
540
INVERSE TRANSFORMER
550
INTRA PREDICTOR
560
MOTION COMPENSATOR
570
DEBLOCKING UNIT
580
LOOP FILTERING UNIT
585
REFERENCE FRAME
595
RESTORED FRAME
INTRA
INTER

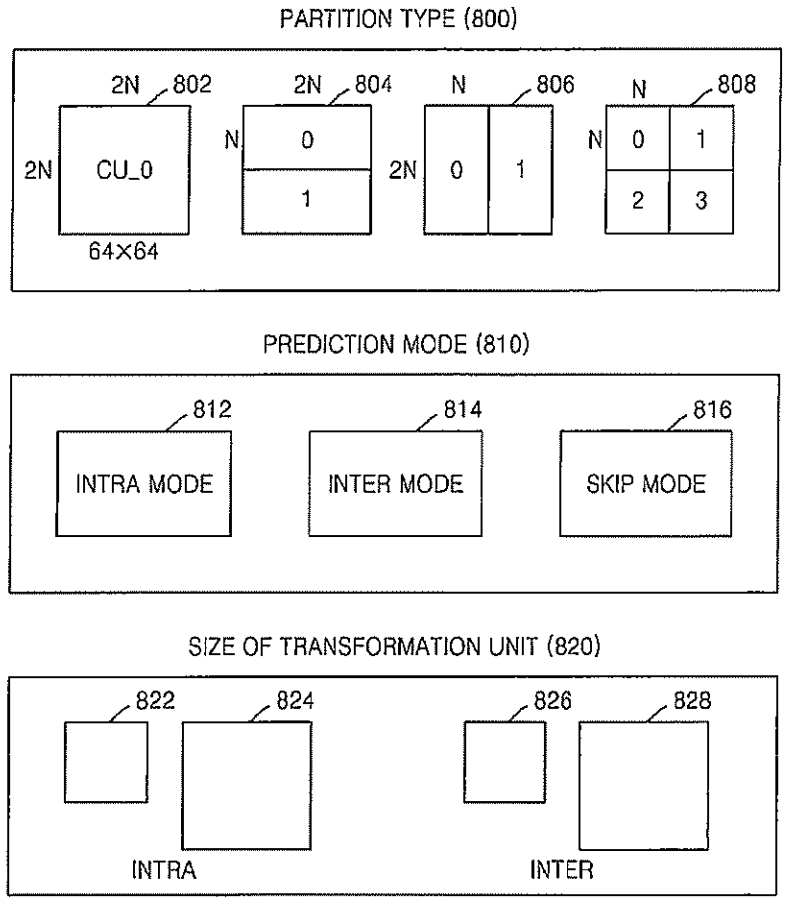
[Fig. 6]


600
MAXIMUM CODING UNIT
MAXIMUM HEIGHT MAXIMUM WIDTH OF CODING UNIT64
MAXIMUM DEPTH MAXIMUM DEPTH=5
PREDICTION UNIT/ PARTITION
64×64
64×32
32×64
32×32
32×32
32×16
16×32
16×16
16×16
16×8
8×16
8×8
8×8
8×4
4×8
4×4
4×4
4×2
2×4
2×2
MINIMUM CODING UNIT
DEEPER CODING UNIT

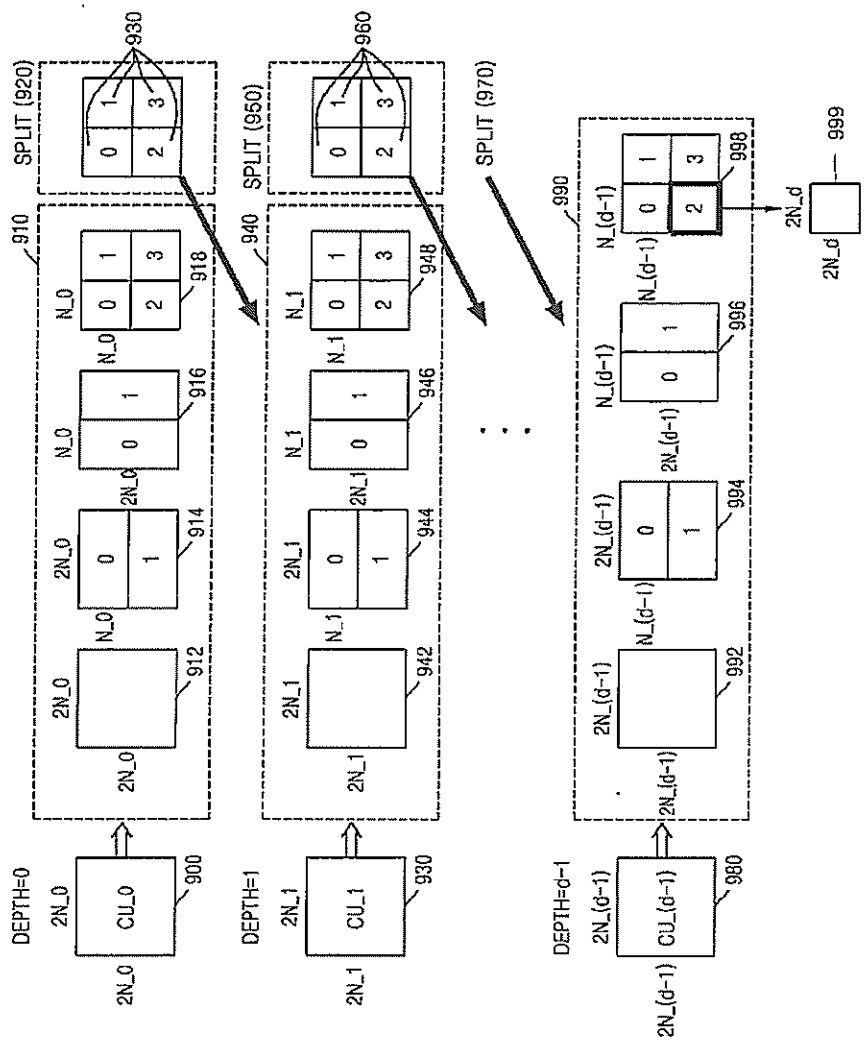
[Fig. 7]


CODING UNIT (710)
TRANSFORMATION UNIT (720)
64×64
32×32

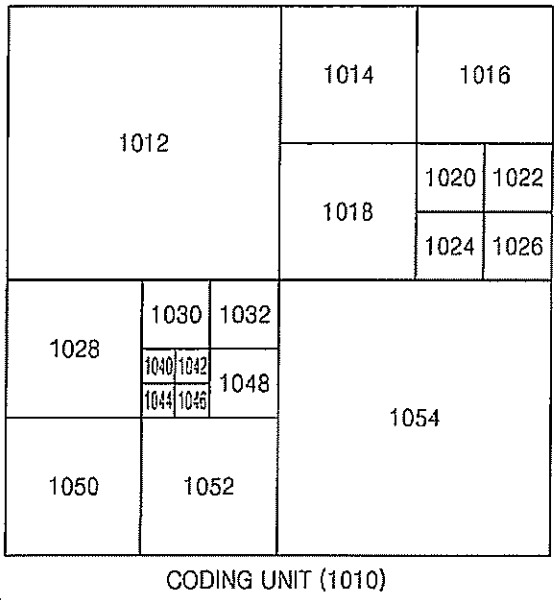
[Fig. 8]


PARTITION TYPE (800)
2N
802
2N
804
N
806
N
808
2N
CU_0
64×64
N
0
1
2N
0
1
N
0
1
2
3
PREDICTION MODE (810)
812
814
816
INTRA MODE
INTER MODE
SKIP MODE
SIZE OF TRANSFORMATION UNIT (820)
822
824
826
828
INTRA
INTER

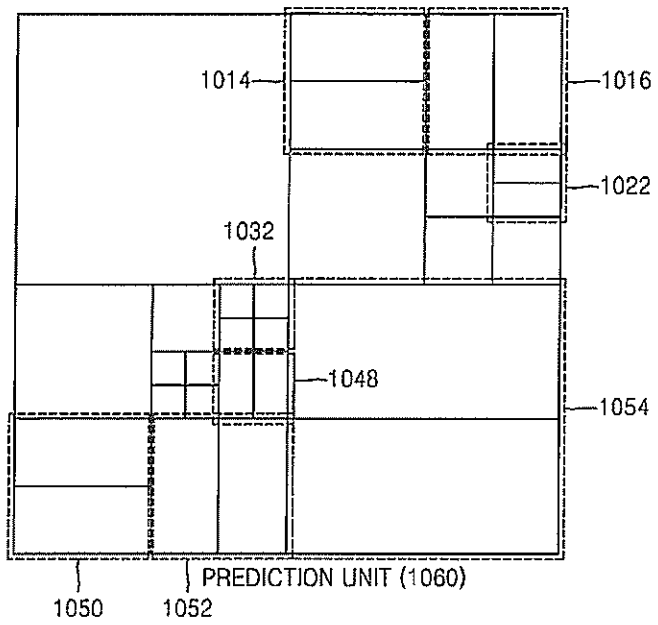
[Fig. 9]


SPLIT (920)
SPLIT (950)
SPLIT (970)
930
960
910
940
990
DEPTH=0
DEPTH=1
DEPTH=d-1
CU_0
CU_1
CU_(d-1)
900
930
980
912
914
916
918
942
944
946
948
992
994
996
998
999
2N_0
2N_1
2N_(d-1)
2N_d
N_0
N_1
N_(d-1)

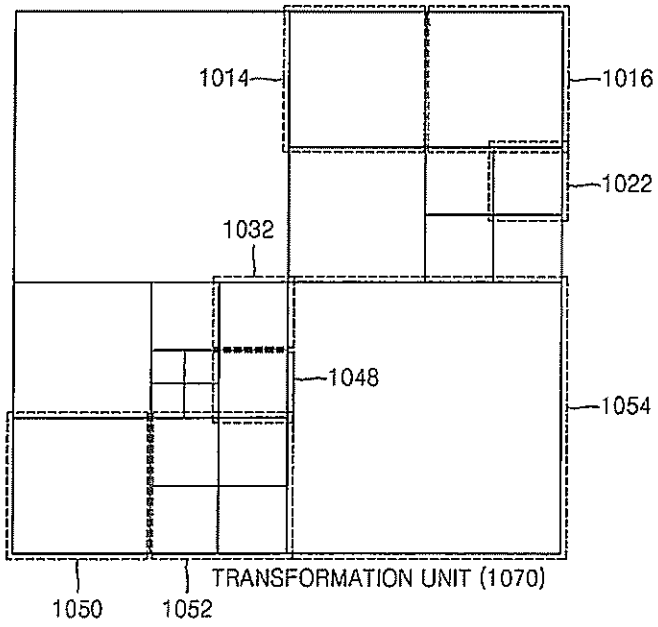
[Fig. 10]


1012
1014
1016
1018
1020
1022
1024
1026
1028
1030
1032
1040
1042
1044
1046
1048
1050
1052
1054
CODING UNIT (1010)

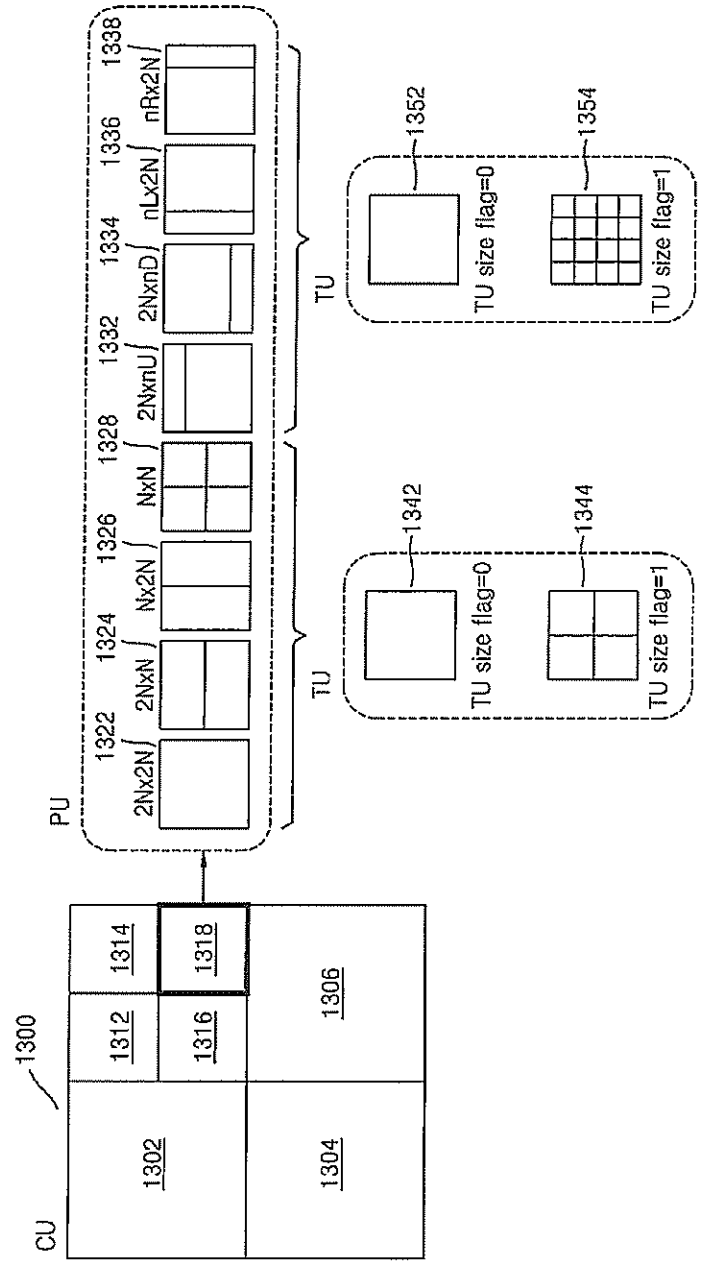
[Fig. 11]


1014
1016
1022
1032
1048
1054
PREDICTION UNIT (1060)
1050
1052

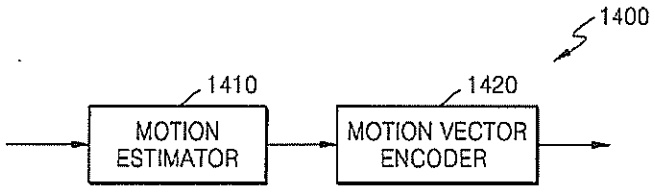
[Fig. 12]


1014
1016
1022
1032
1048
1054
TRANSFORMATION UNIT (1070)
1050
1052

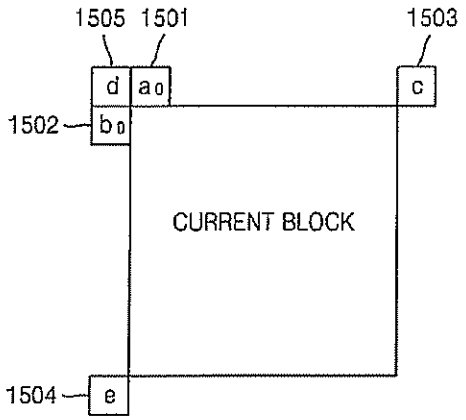
[Fig. 13]


CU
1300
1302
1304
1306
1312
1314
1316
1318
PU
2Nx2N
1322
2NxN
1324
Nx2N
1326
NxN
1328
2NxnU
1332
2NxnD
1334
nLx2N
1336
nRx2N
1338
TU
TU
1342
TU size flag=0
1344
TU size flag=1
1352
TU size flag=0
1354
TU size flag=1

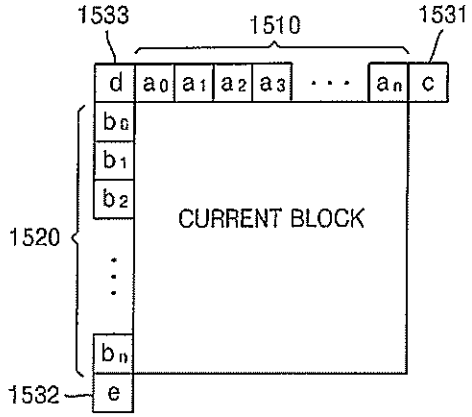
[Fig. 14]


1400
1410
MOTION ESTIMATOR
1420
MOTION VECTOR ENCODER

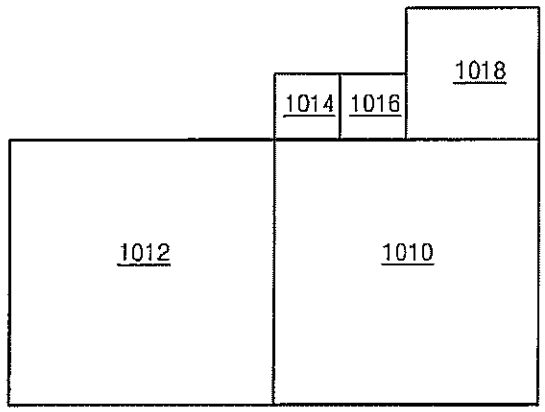
[Fig. 15a]



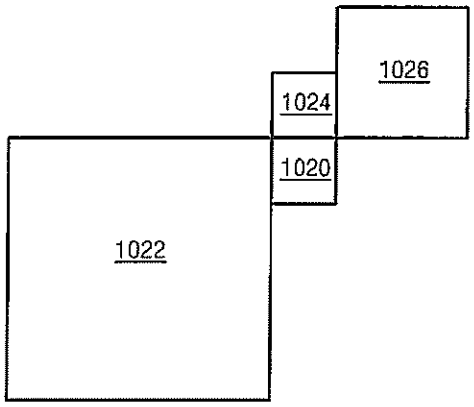
[Fig. 15b]



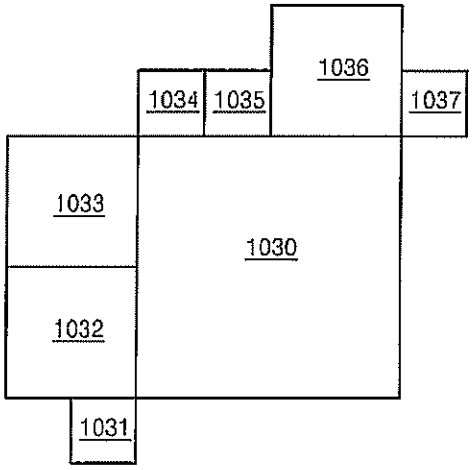
[Fig. 15c]



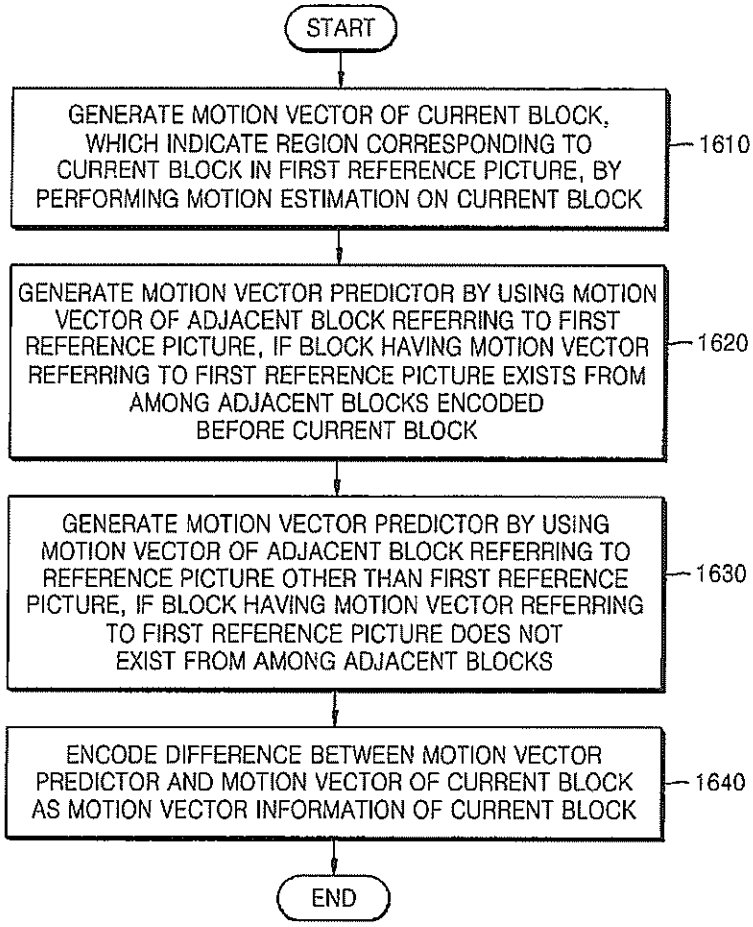
[Fig. 15d]



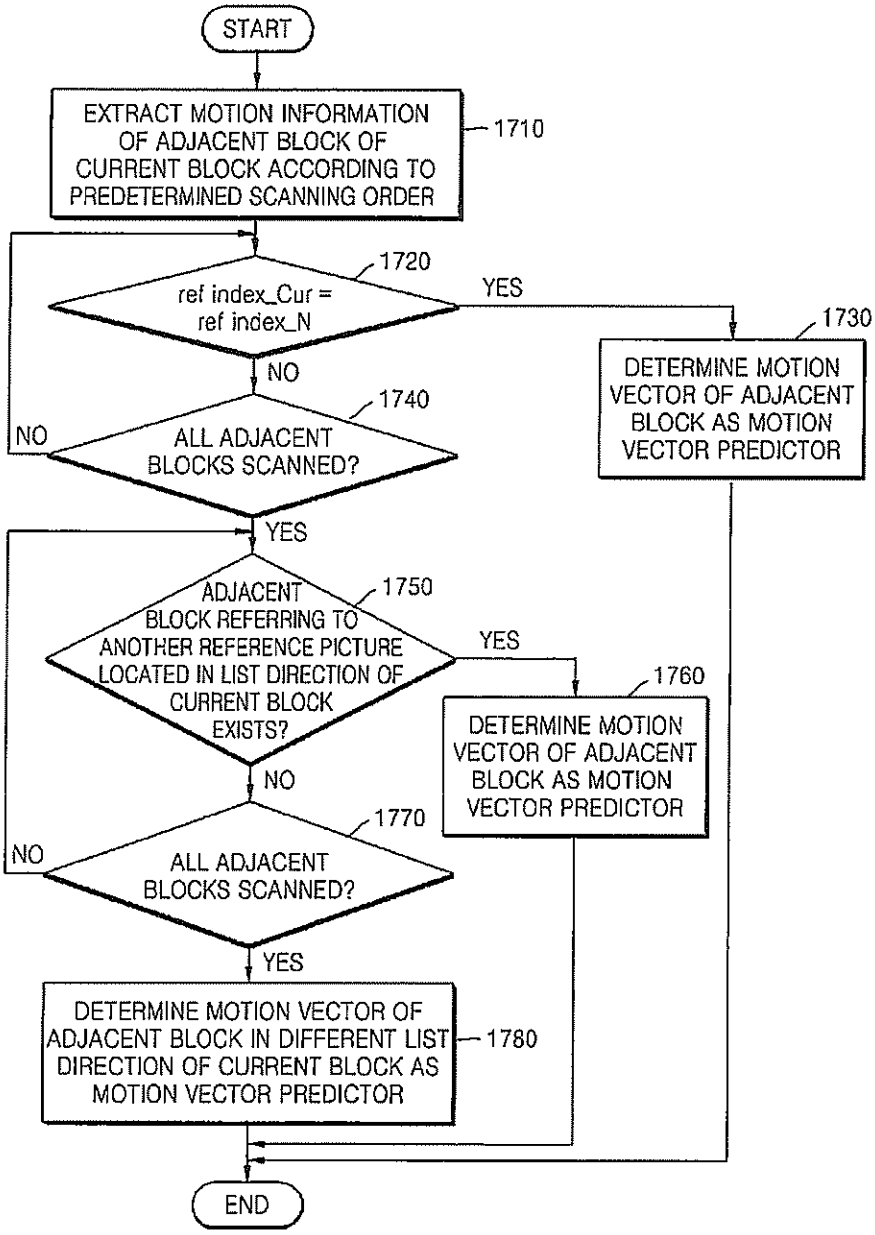
[Fig. 15e]



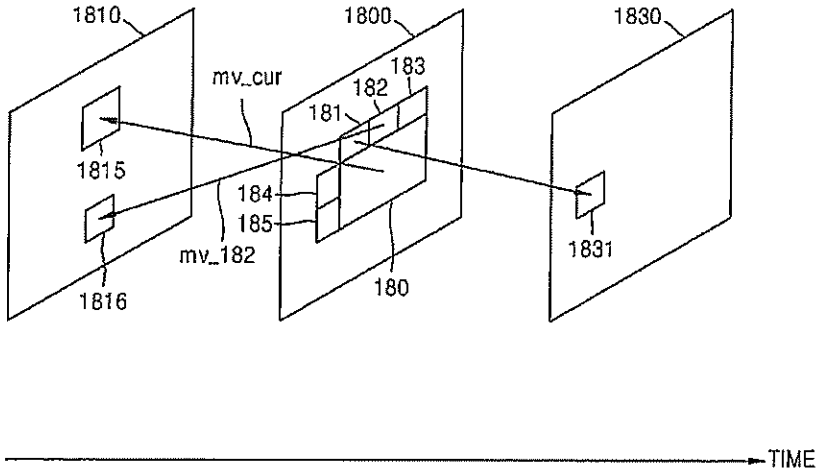
[Fig. 16]


START
GENERATE MOTION VECTOR OF CURRENT BLOCK, WHICH INDICATE REGION CORRESPONDING TO CURRENT BLOCK IN FIRST REFERENCE PICTURE, BY PERFORMING MOTION ESTIMATION ON CURRENT BLOCK
1610
GENERATE MOTION VECTOR PREDICTOR BY USING MOTION VECTOR OF ADJACENT BLOCK REFERRING TO FIRST REFERENCE PICTURE, IF BLOCK HAVING MOTION VECTOR REFERRING TO FIRST REFERENCE PICTURE EXISTS FROM AMONG ADJACENT BLOCKS ENCODED BEFORE CURRENT BLOCK
1620
GENERATE MOTION VECTOR PREDICTOR BY USING MOTION VECTOR OF ADJACENT BLOCK REFERRING TO REFERENCE PICTURE OTHER THAN FIRST REFERENCE PICTURE, IF BLOCK HAVING MOTION VECTOR REFERRING TO FIRST REFERENCE PICTURE DOES NOT EXIST FROM AMONG ADJACENT BLOCKS
1630
ENCODE DIFFERENCE BETWEEN MOTION VECTOR PREDICTOR AND MOTION VECTOR OF CURRENT BLOCK AS MOTION VECTOR INFORMATION OF CURRENT BLOCK
1640
END

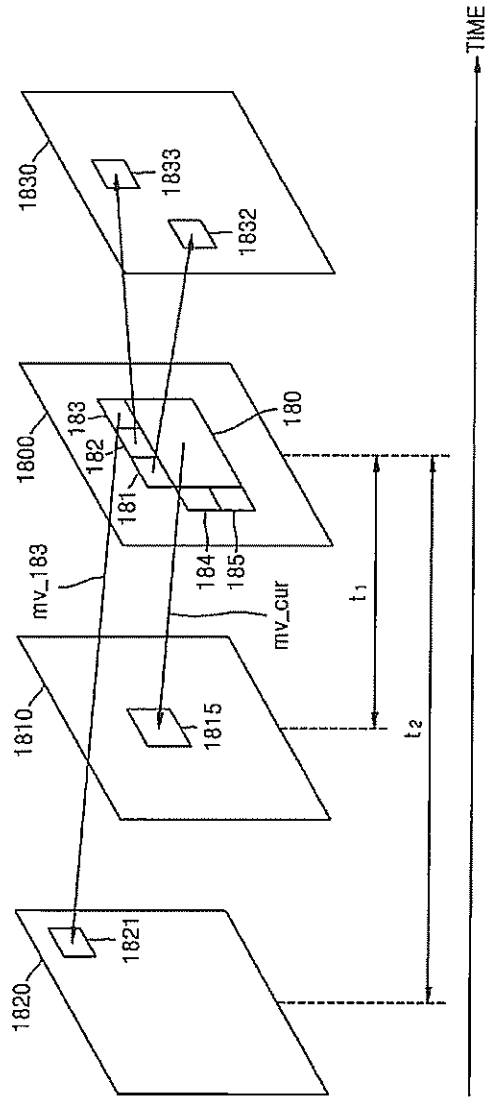
[Fig. 17]


START
EXTRACT MOTION INFORMATION OF ADJACENT BLOCK OF CURRENT BLOCK ACCORDING TO PREDETERMINED SCANNING ORDER
1710
ref index_Cur = ref index_N
1720
YES
NO
DETERMINE MOTION VECTOR OF ADJACENT BLOCK AS MOTION VECTOR PREDICTOR
1730
ALL ADJACENT BLOCKS SCANNED?
1740
NO
YES
ADJACENT BLOCK REFERRING TO ANOTHER REFERENCE PICTURE LOCATED IN LIST DIRECTION OF CURRENT BLOCK EXISTS?
1750
YES
NO
DETERMINE MOTION VECTOR OF ADJACENT BLOCK AS MOTION VECTOR PREDICTOR
1760
ALL ADJACENT BLOCKS SCANNED?
1770
NO
YES
DETERMINE MOTION VECTOR OF ADJACENT BLOCK IN DIFFERENT LIST DIRECTION OF CURRENT BLOCK AS MOTION VECTOR PREDICTOR
1780
END

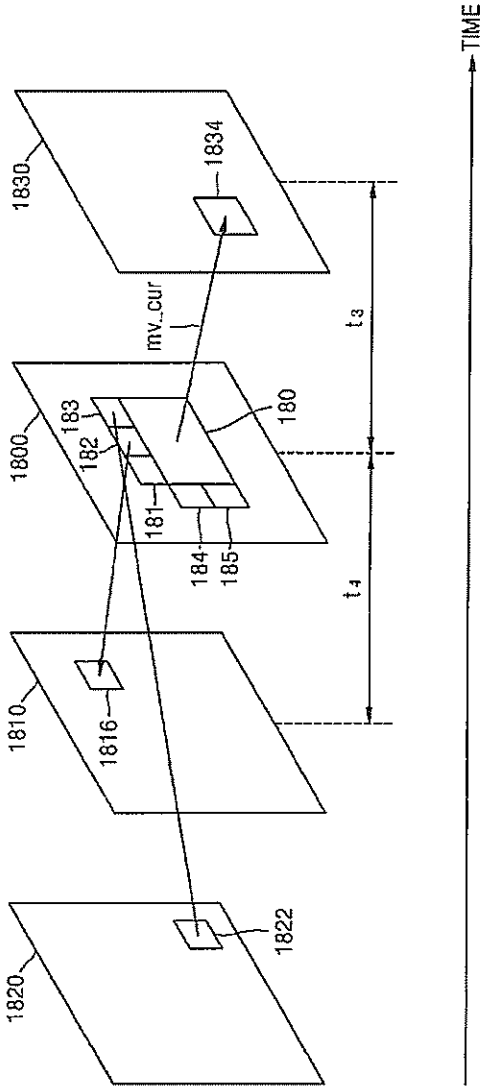
[Fig. 18a]



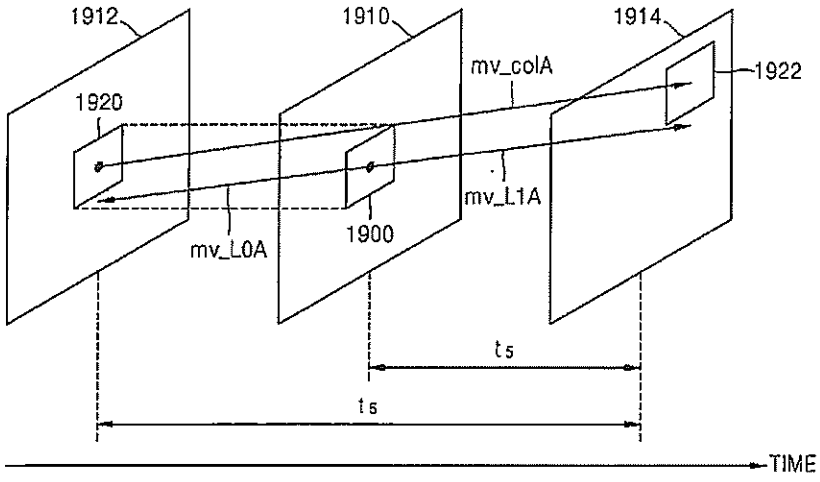
[Fig. 18b]



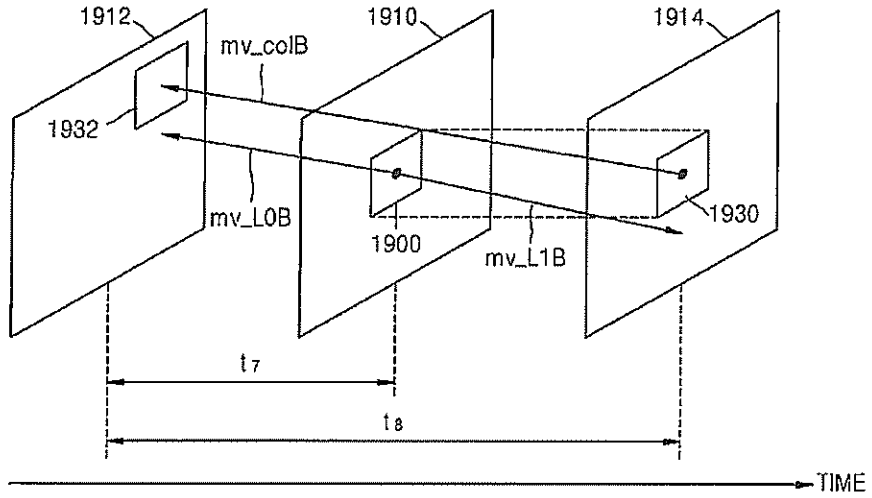
[Fig. 18c]



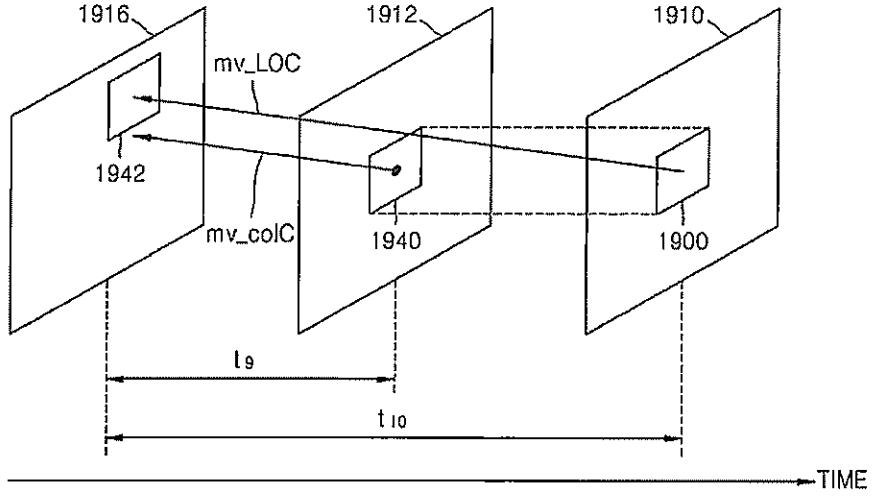
[Fig. 19a]



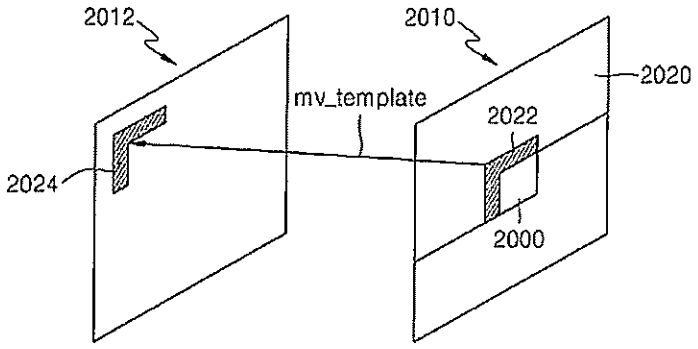
[Fig. 19b]



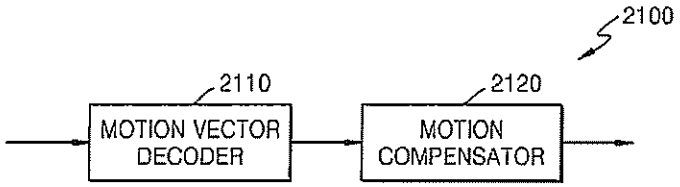
[Fig. 19c]



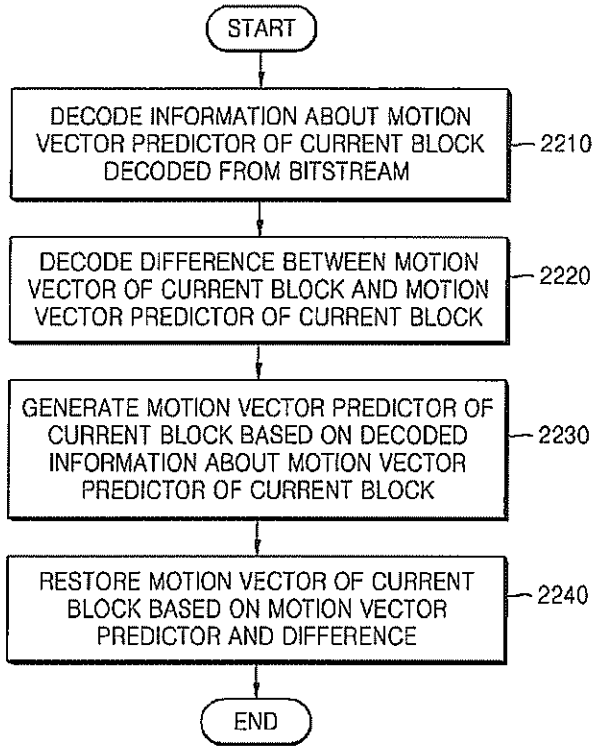
[Fig. 20]



[Fig. 21]


2100
2110
2120
MOTION VECTOR DECODER
MOTION COMPENSATOR

[Fig. 22]


START
DECODE INFORMATION ABOUT MOTION VECTOR PREDICTOR OF CURRENT BLOCK DECODED FROM BITSTREAM
2210
DECODE DIFFERENCE BETWEEN MOTION VECTOR OF CURRENT BLOCK AND MOTION VECTOR PREDICTOR OF CURRENT BLOCK
2220
GENERATE MOTION VECTOR PREDICTOR OF CURRENT BLOCK BASED ON DECODED INFORMATION ABOUT MOTION VECTOR PREDICTOR OF CURRENT BLOCK
2230
RESTORE MOTION VECTOR OF CURRENT BLOCK BASED ON MOTION VECTOR PREDICTOR AND DIFFERENCE
2240
END