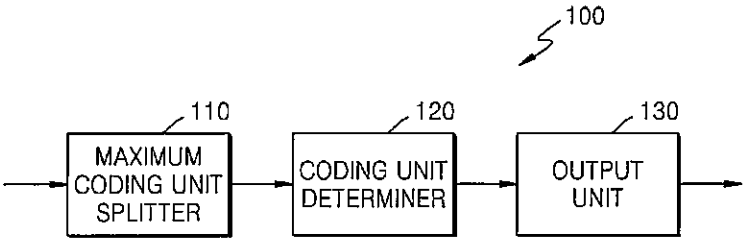
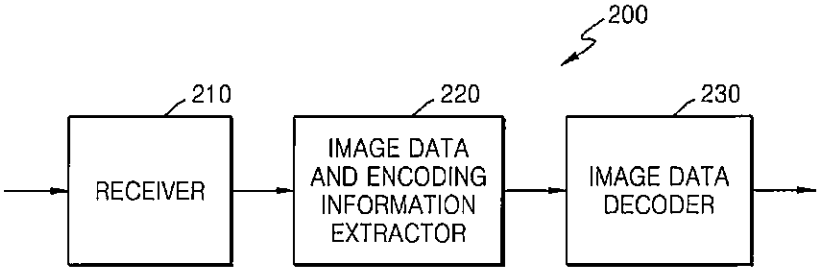
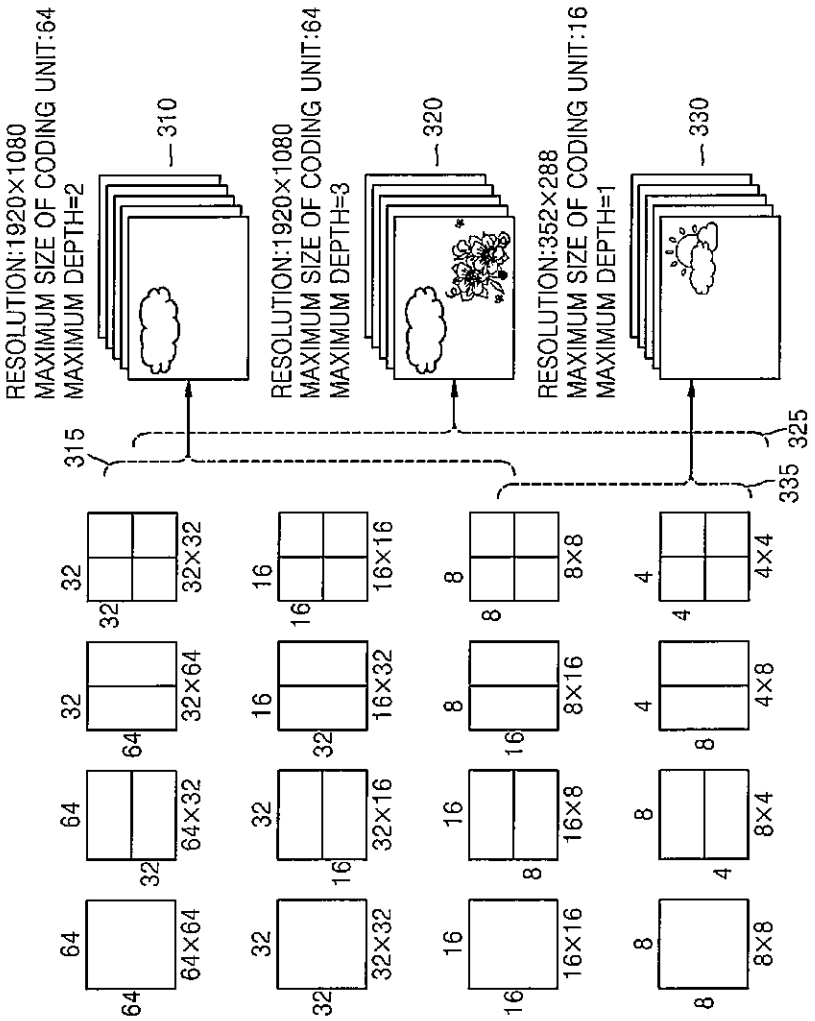
[Fig. 1]



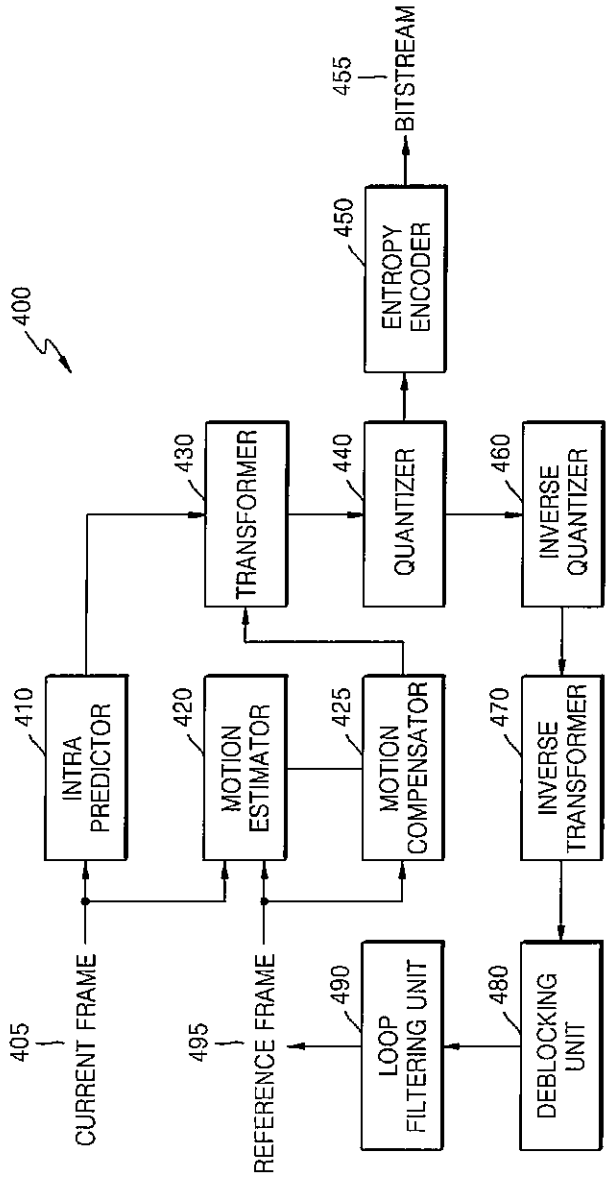
[Fig. 2]



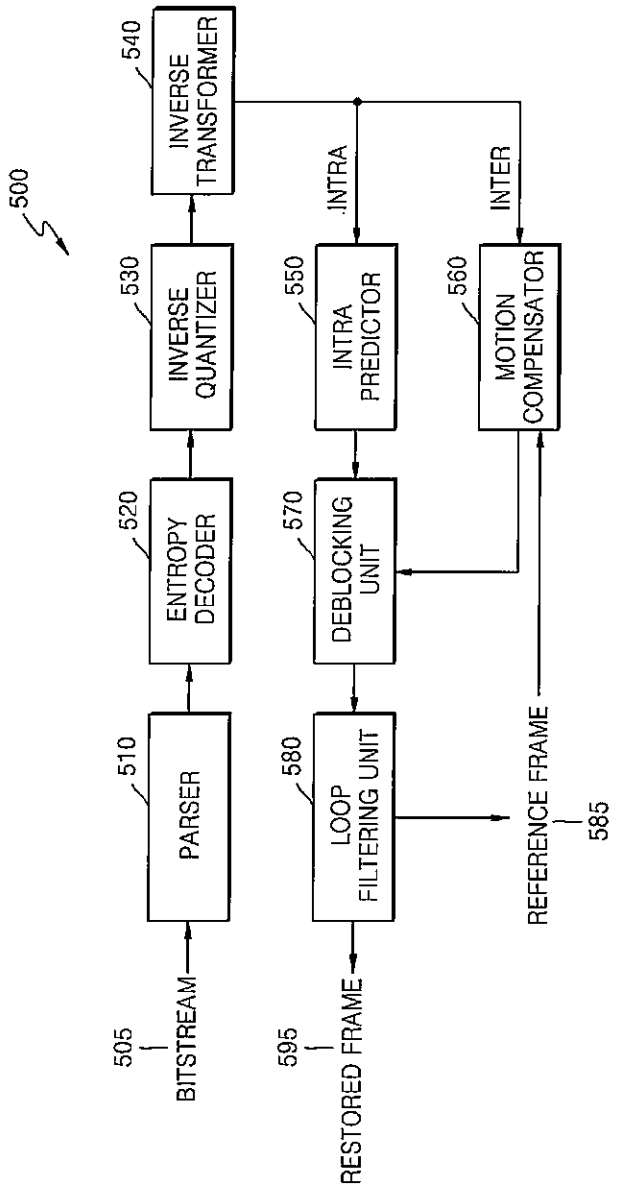
[Fig. 3]



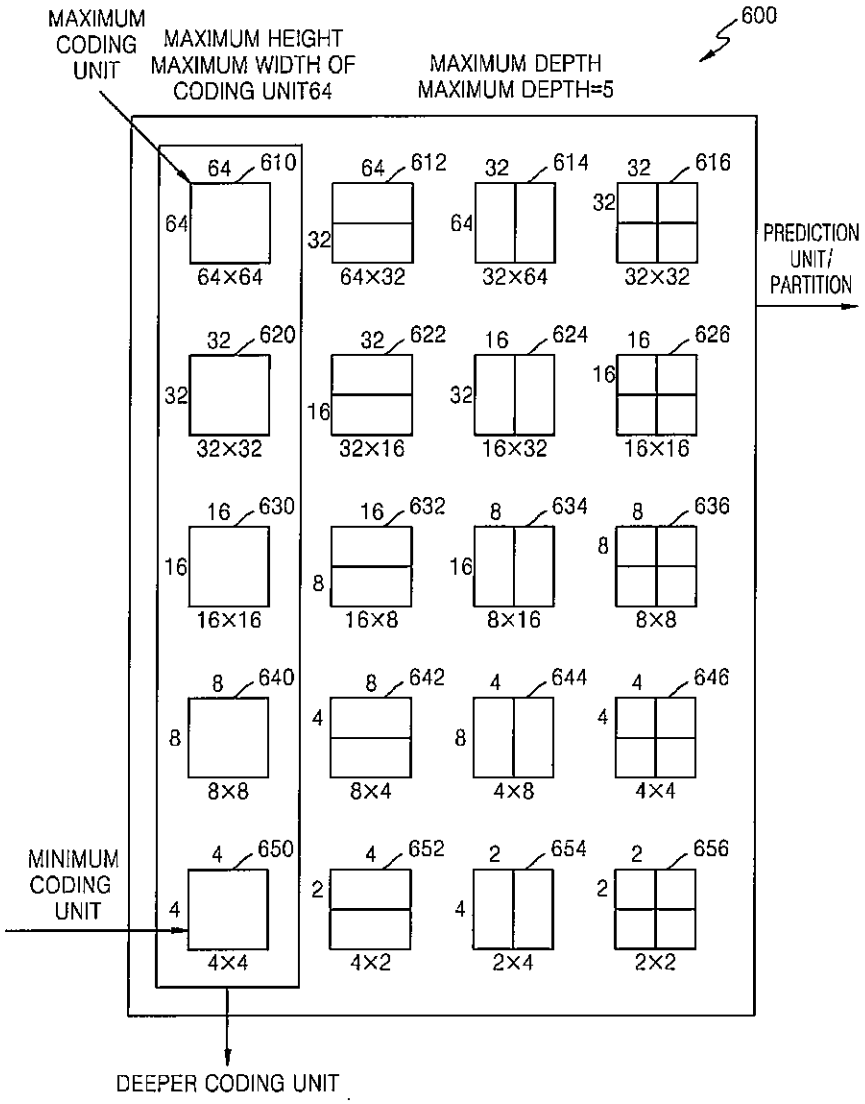
[Fig. 4]


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

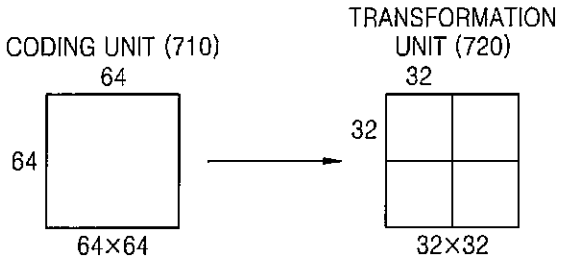
[Fig. 5]


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

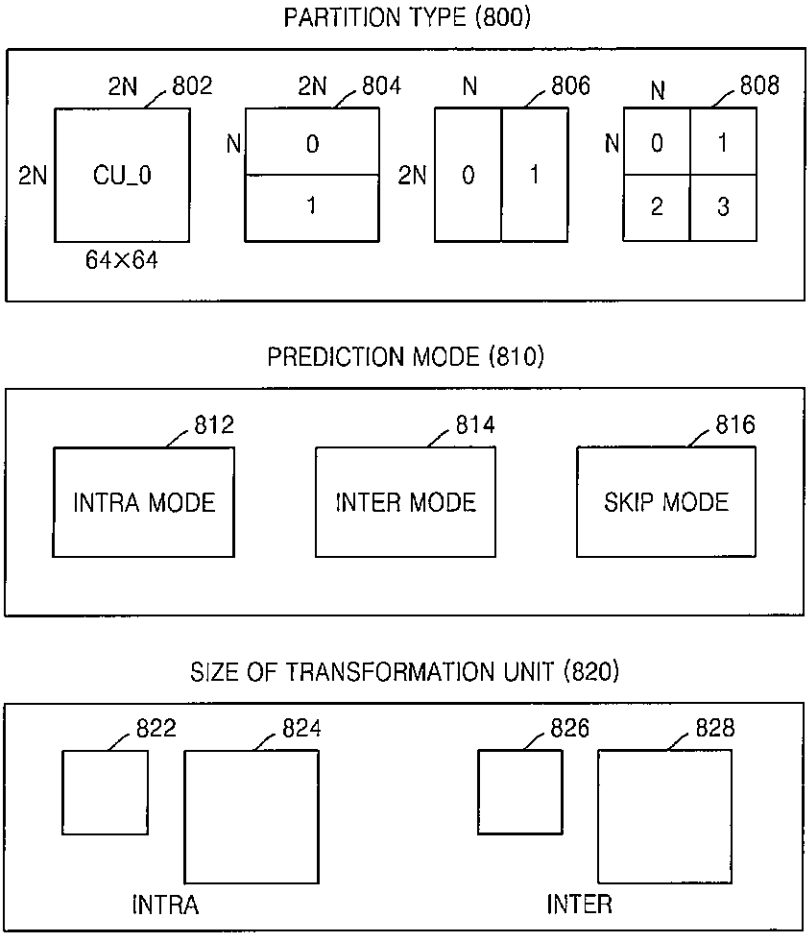
[Fig. 6]


MAXIMUM CODING UNIT
MAXIMUM HEIGHT MAXIMUM WIDTH OF CODING UNIT64
MAXIMUM DEPTH MAXIMUM DEPTH=5
600
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
MINIMUM CODING UNIT
4×4
4×2
2×4
2×2
DEEPER CODING UNIT

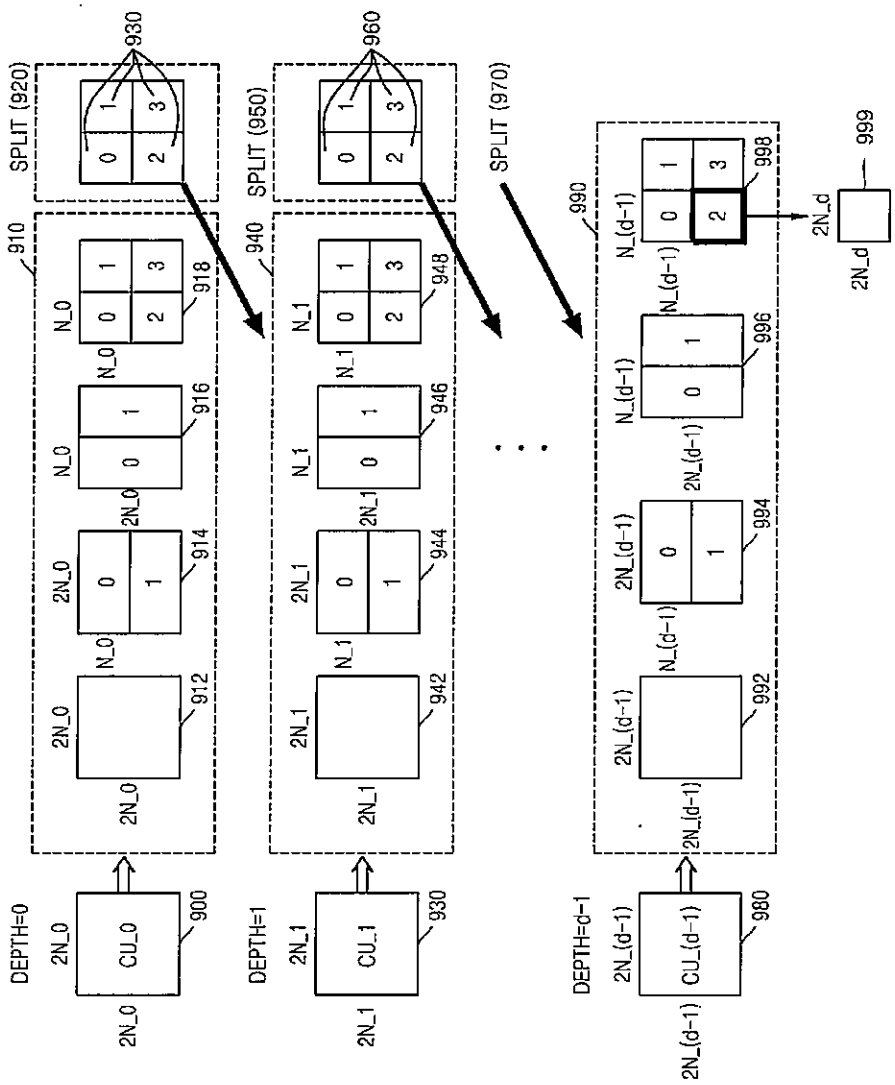
[Fig. 7]


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

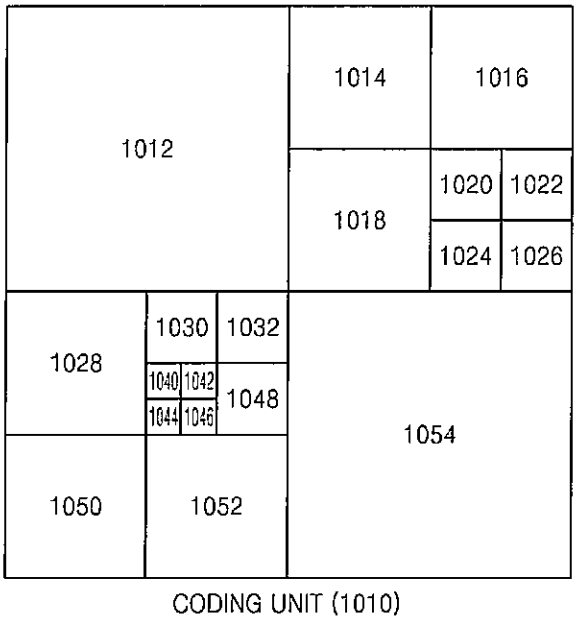
[Fig. 8]


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
INTRA MODE
814
INTER MODE
816
SKIP MODE
SIZE OF TRANSFORMATION UNIT (820)
822
824
826
828
INTRA
INTER

[Fig. 9]

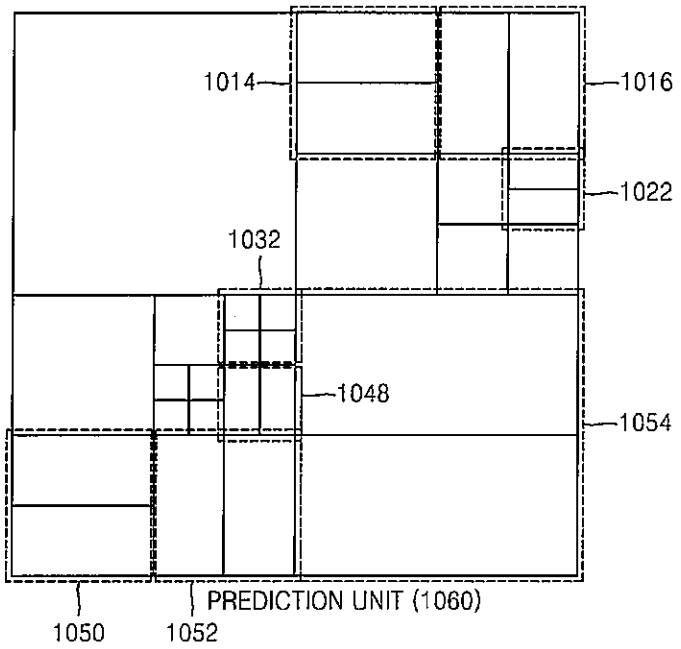


[Fig. 10]

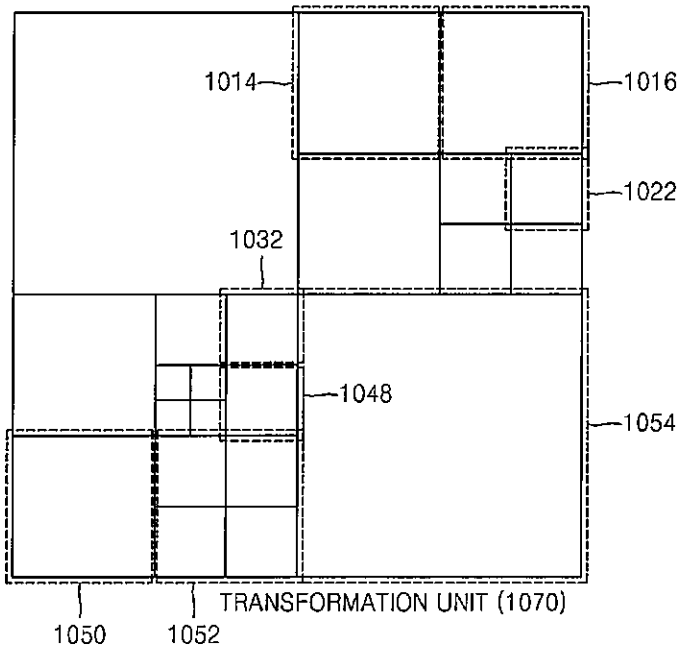


CODING UNIT (1010)

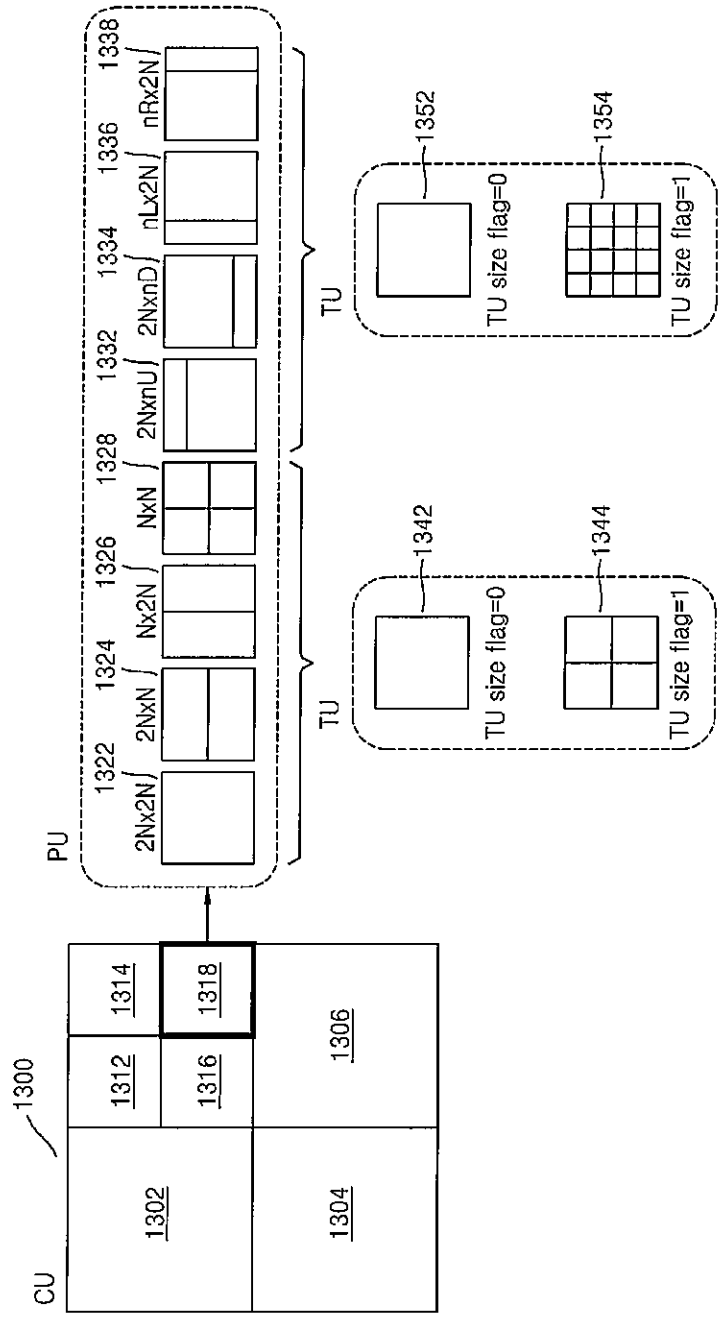
[Fig. 11]


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

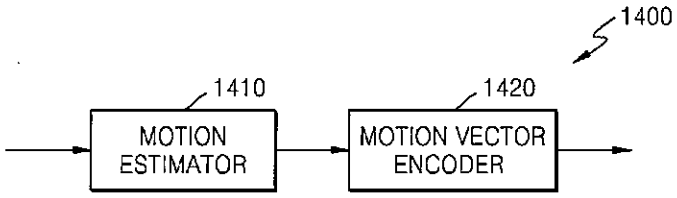
[Fig. 12]


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

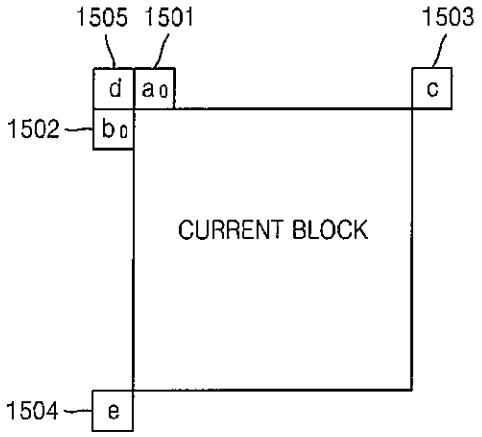
[Fig. 13]


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

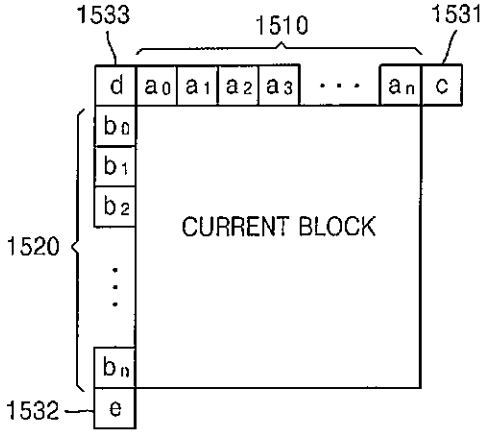
[Fig. 14]


1400
1410
MOTION ESTIMATOR
1420
MOTION VECTOR ENCODER

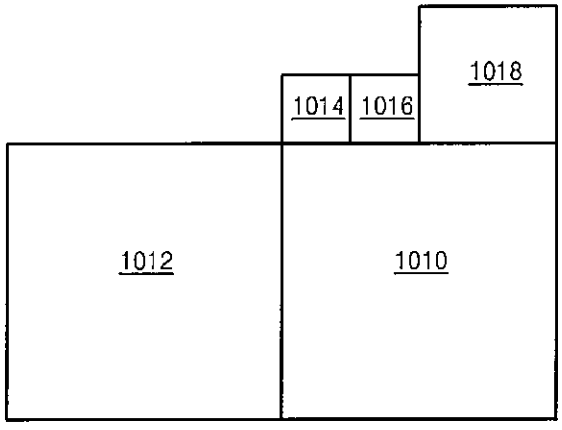
[Fig. 15a]



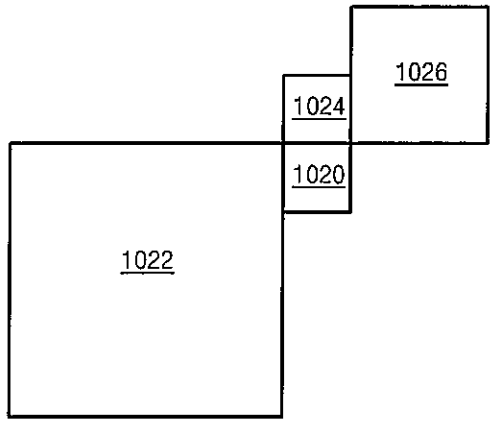
[Fig. 15b]



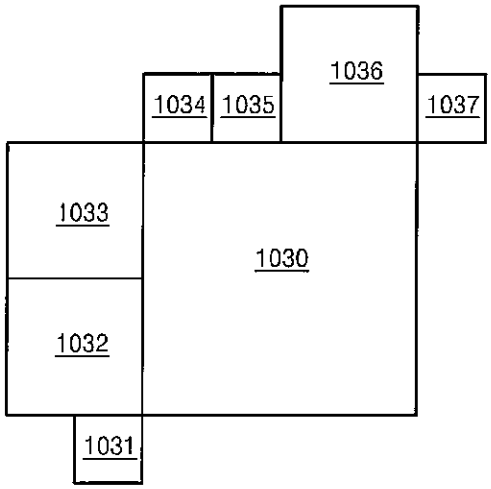
[Fig. 15c]



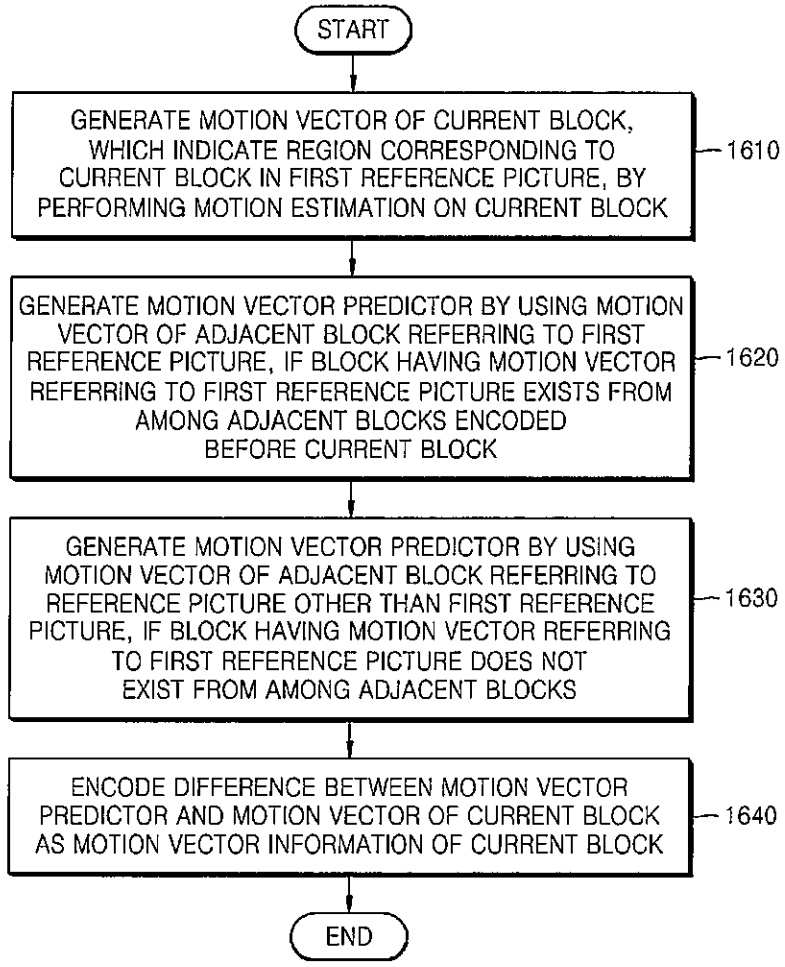
[Fig. 15d]



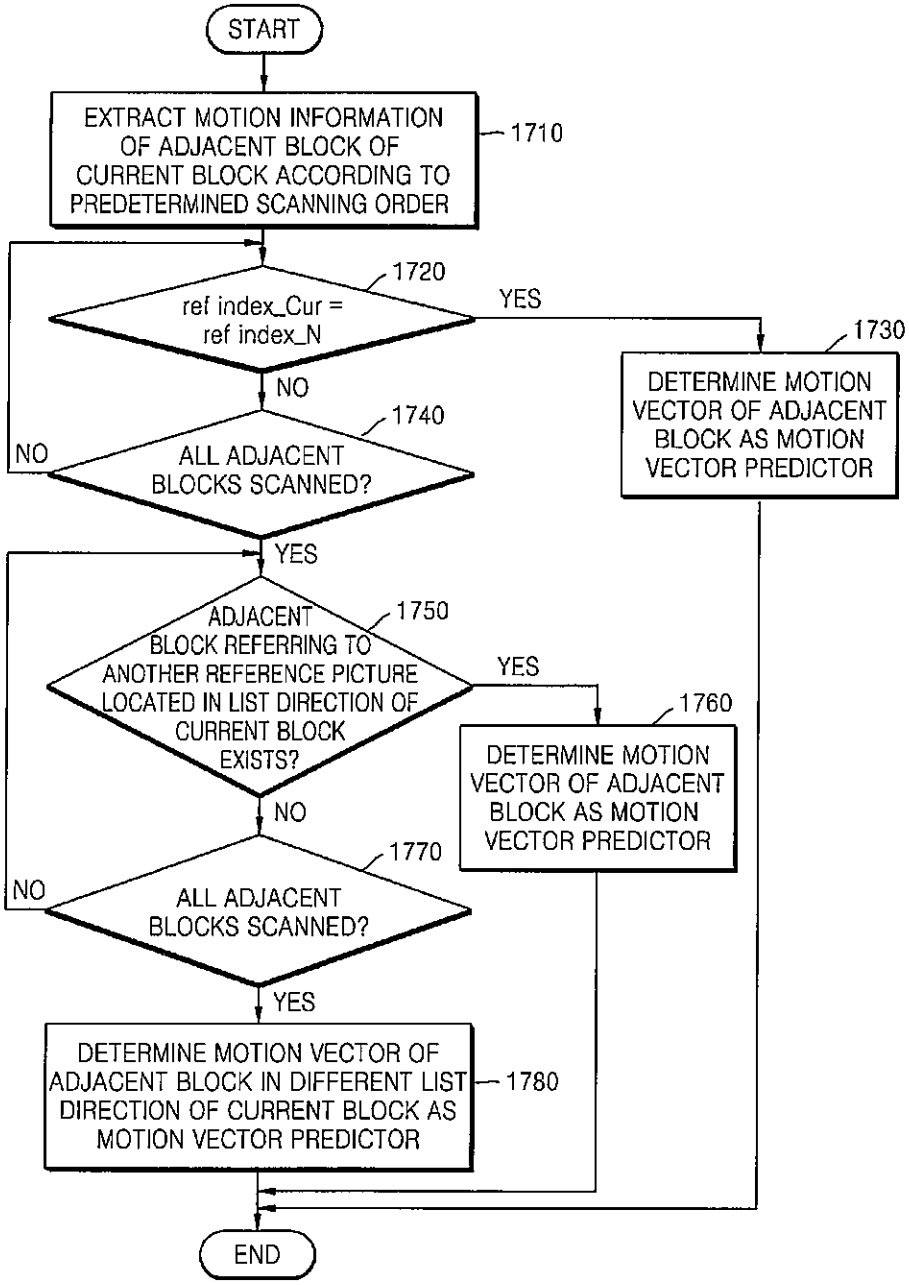
[Fig. 15e]



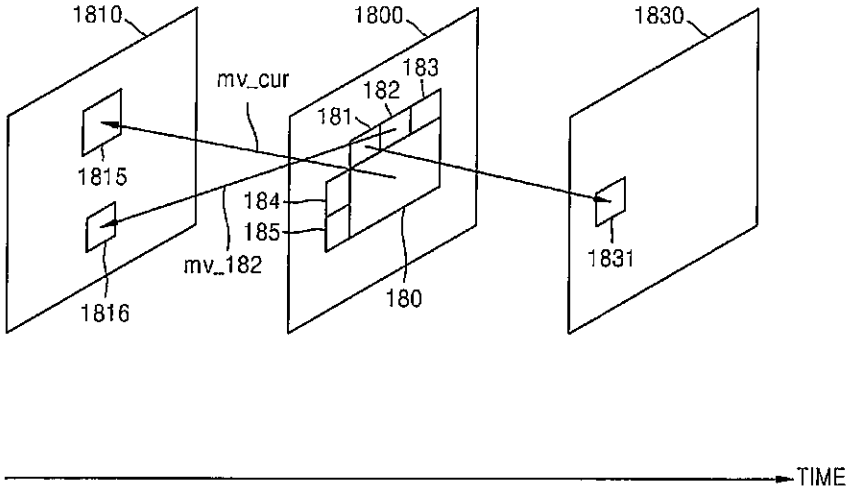
[Fig. 16]


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

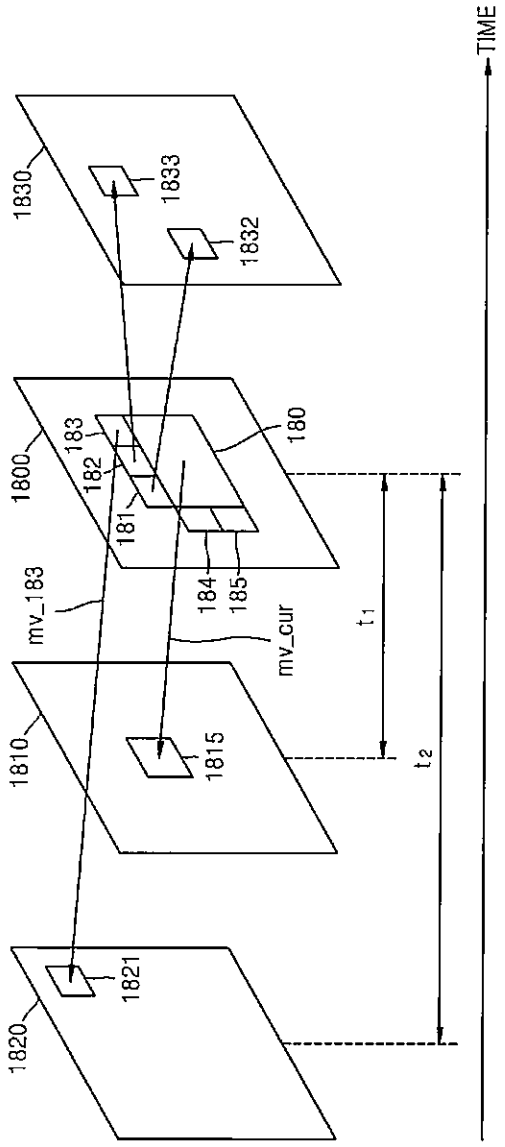
[Fig. 17]


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

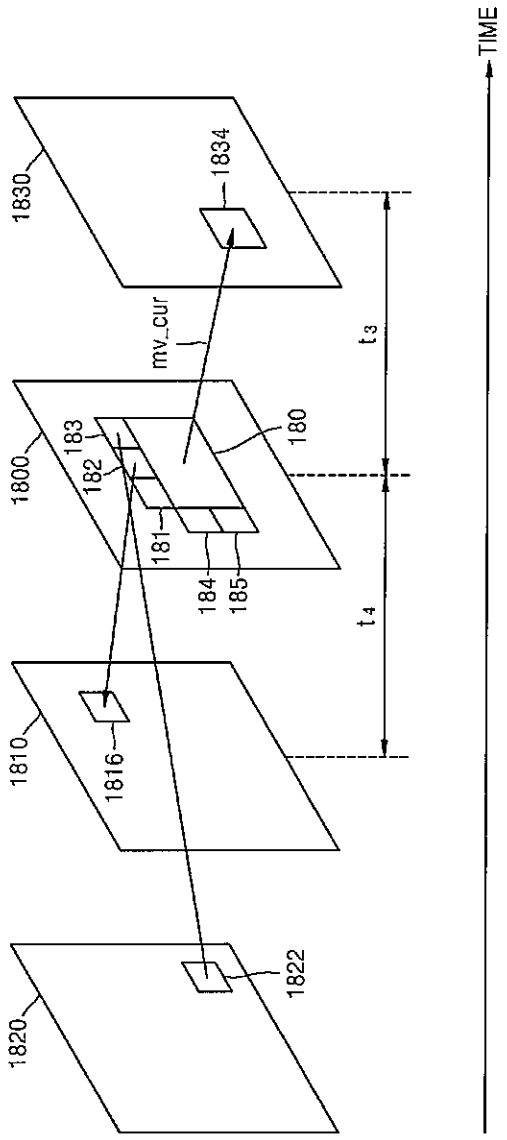
[Fig. 18a]



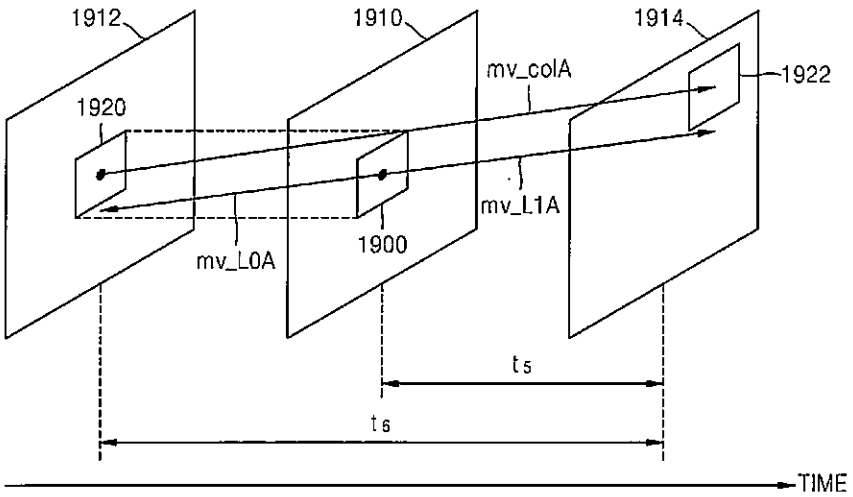
[Fig. 18b]



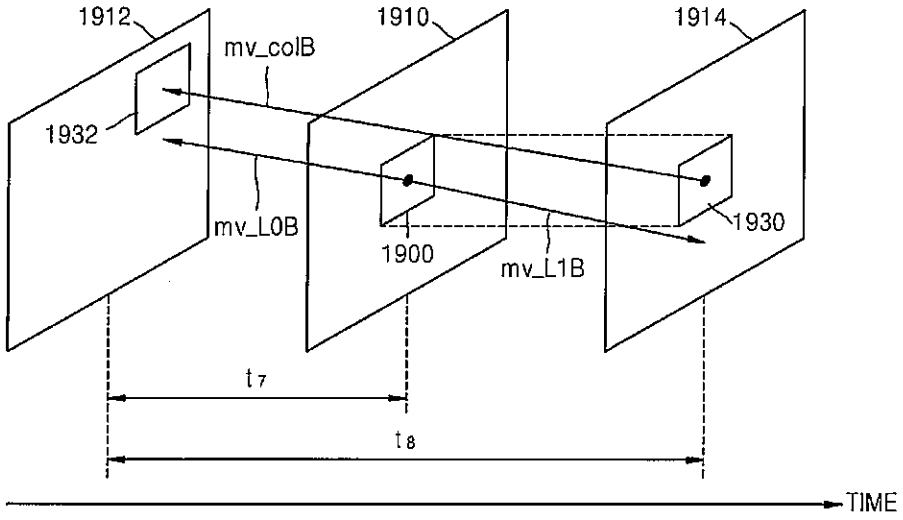
[Fig. 18c]



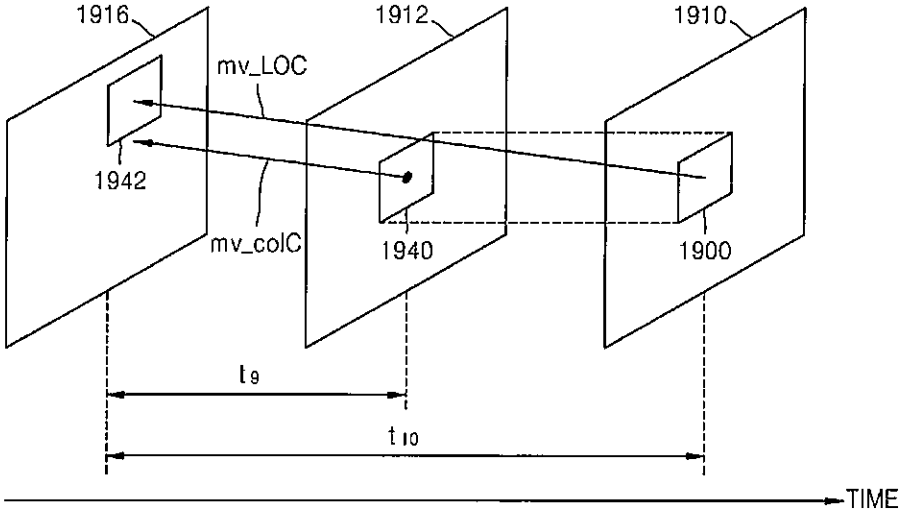
[Fig. 19a]



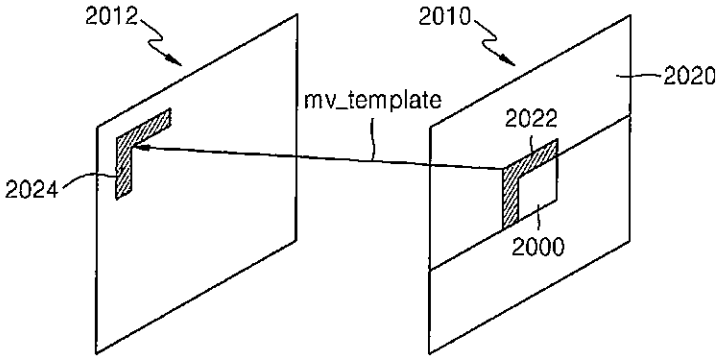
[Fig. 19b]



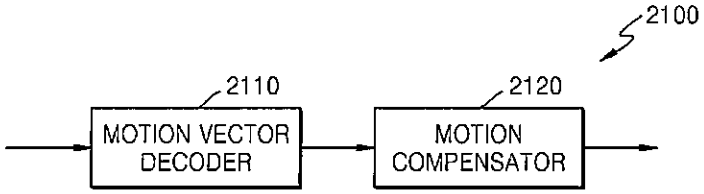
[Fig. 19c]



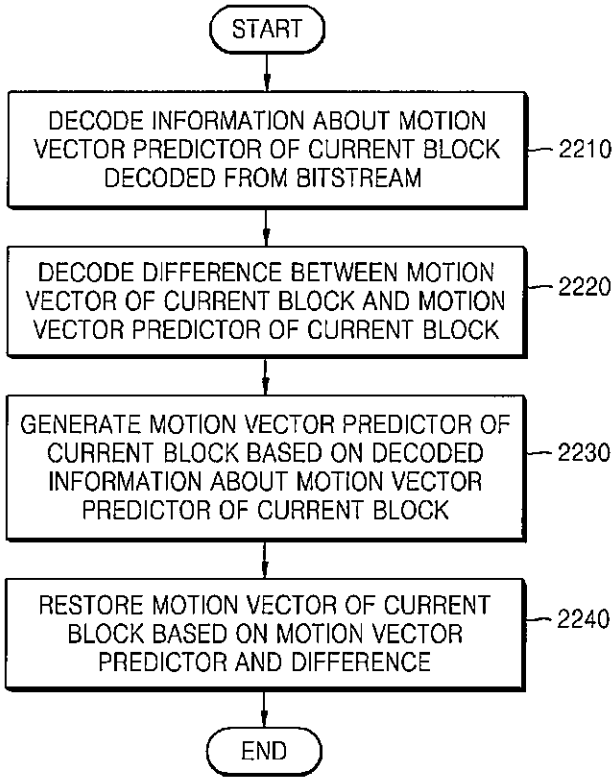
[Fig. 20]



[Fig. 21]


2100
2110
MOTION VECTOR DECODER
2120
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

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Draft by KW

Patents

1 Form Filing (PF1(2004)) 2 Form Filing (PF8) 3 Form Filing (PF41) 4 Preview 5 Payment 6 Receipt

* CONFIRMATION PAGE

PF1(2004)

TRANSACTION SUMMARY			
Description	Request For The Grant Of A Patent Under Section 25 (PF1(2004))		
User ID	vjps4	**Account ID**	CA00000401
Corp/Firm Name	Viering, Jentschura & Partner LLP	**Agent Code**	AG758
Date	14-Oct-2013 17:38:40	**UEN**	T06LL1666B
1. YOUR REFERENCE*	P107668		
2. TITLE OF INVENTION *	METHODS AND APPARATUSES FOR ENCODING AND DECODING MOTION VECTOR		
3. DETAILS OF APPLICANT(S) *			
Number of applicant(s)	1		
Name	SAMSUNG ELECTRONICS CO., LTD		
Address	SAMSUNG ELECTRONICS CO., LTD. 129, SAMSUNG-RO, YEONGTONG-GU SU-WON-SI GYEONGGI-DO 443-742 REPUBLIC OF KOREA		
State [Code] *(for US only)*	--		
Country [Code]	REPUBLIC OF KOREA[KR]		
For corporate Applicant			
State [Code] of incorporation *(for US only)*	--		
Country [Code] of incorporation	REPUBLIC OF KOREA[KR] → PS Check.		
4. DECLARATION OF PRIORITY UNDER SECTION 17(2)			
Total number of Priority Claims	2		
Country/country designated	UNITED STATES OF AMERICA[US]		
File number	61/362,809		
Filing Date	9-Jul-2010		
Country/country designated	REPUBLIC OF KOREA[KR]		

File number	10-2011-0019100
Filing Date	3-Mar-2011

5. INVENTOR(S)*

The applicant(s) is/are the sole/joint inventor(s). Yes
A statement on Patents Form 8 is/will be furnished. No

6. CLAIMING AN EARLIER FILING DATE UNDER

section 26(6)

Patent Application Number	2013001375
Filing Date	8-Jan-2013

7. SECTION 14(4)(C) REQUIREMENTS *

Invention has been displayed at an international exhibition. No

8. SECTION 114 REQUIREMENTS *

The invention relates to and/or used a micro-organism deposited for the purposes of disclosure in accordance with section 114 with a depository authority under the Budapest Treaty. No

9. STATEMENT UNDER SECTION 26(1)(c)(ii)(C)

--

10. CHECKLIST *

(A) The application consists of the following number of sheets

Description	39 sheet(s)
Claim(s)	2 sheet(s)
Drawing(s)	16 sheet(s)
Abstract	0 sheet(s)
Total number of sheet(s)	57 sheet(s)

Attachment : P107668_PF1(2004), PF8 & PF41.Zip (2730KB) .

ADDRESS FOR SERVICE IN SINGAPORE*

Block House No	--	**Street Name [Code]**	ROCHOR ROAD[ROC04H]
Level No	--	**PO Box / Unit**	1088
Building Name	ROCHOR POST OFFICE	**Postal Code**	911833

REMARKS(Please include any additional instructions as well as contact information)	--
The Singapore Application Number had already been given for this application	--

PF8

TRANSACTION SUMMARY

Description	Statement Of Inventorship And Of Right To The Grant Of A Patent Under Section 24 (PF8)
1. YOUR REFERENCE*	P107668
2. TITLE OF INVENTION*	METHODS AND APPARATUSES FOR ENCODING AND DECODING MOTION VECTOR
3. NAME OF APPLICANT(S)*	
Name	SAMSUNG ELECTRONICS CO., LTD
4. DETAILS OF INVENTOR(S)*	
Total number of inventor(s)	2
Name	LEE, TAMMY
Address	A-707 TRAPALACE APT., 1344-13 SEOCHO-DONG, SEOCHO-GU. SEOUL 137-070
Country of Permanent Residence [Code]	REPUBLIC OF KOREA[KR]
Citizenship [Code]	REPUBLIC OF KOREA[KR] → plg chk **The above inventor was resident in Singapore at any time during the period of invention.** No
Name	SEREGIN, VADIM

Address	611-1204 SINNAMUSIL 6-DANJI APT. YEONGTONG 2-DONG, YEONGTONG-GU, SUWON-SI GYEONGGI-DO 443-733 REPUBLIC OF KOREA
Country of Permanent Residence [Code]	REPUBLIC OF KOREA[KR]
Citizenship [Code]	REPUBLIC OF KOREA[KR] → pls chk. **The above inventor was resident in Singapore at any time during the period of invention.** No

5. THE APPLICANT(S) DERIVED THE RIGHT FROM THE INVENTOR(S) TO BE GRANTED THE SAID APPLICATION, AS FOLLOWS: *

Contract of Employment → pls chk.

STATEMENT

I/We believe that the person(s) stated in paragraph 4 is/are the inventor(s) of the invention in respect of which the patent application is made.

I/We also consent to the publication of the details contained herein to each of the inventors as stated in paragraph 4.

PF41

TRANSACTION SUMMARY

Description	Declaration Of Authorisation Where An Agent Is Appointed Or Where One Agent Is Substituted For Another (PF41)
1. YOUR REFERENCE*	P107668

2. DETAILS OF APPLICANT(S)/PROPRIETOR(S)/OTHER PERSON(S) WHO HAS/HAVE APPOINTED THE AGENT TO ACT ON HIS/THEIR BEHALF*

Total number of person(s)	1
Name	SAMSUNG ELECTRONICS CO., LTD
Address	SAMSUNG ELECTRONICS CO., LTD. 129, SAMSUNG-RO, YEONGTONG-GU SU-WON-SI GYEONGGI-DO 443-742 REPUBLIC OF KOREA
State [Code] *(for US only)*	--
Country [Code]	REPUBLIC OF KOREA[KR]

3. DETAILS OF AGENT APPOINTED FOR FIRST TIME OR IN SUBSTITUTION FOR ANOTHER*

Name	--		
Firm	Viering, Jentschura & Partner LLP		
Address	230 Victoria Street #07-06/07 Bugis Junction Towers Singapore 188024		
Address of service in Singapore			
Block House No	--	**Street Name**	ROCHOR ROAD[ROC04H]
Level No	--	**PO Box / Unit**	1088
Building Name	ROCHOR POST OFFICE	**Postal Code**	911833

4. AREA OF MATTER ON WHICH THE APPOINTED AGENT IS ACTING ON*

For all matters relating to this patent application/patent, except those matters expressly excluded

<<Previous | Next>>

NOTE:

You have attached P107668_PF1(2004), PF8 & PF41.Zip (2730kb) for PF1-2004.
If you wish to submit another file instead, click on 'Previous' to replace with a new file, using the 'Clear' function.
Otherwise, the system will submit this file for payment.

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Last updated on 14 October 2013

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