



(74)

:

(54)

가 .  
 가  
 , ITU-T( ) H.261, H.263, ISO( ) MPEG(M  
 oving Picture Experts Group)-1, MPEG-2, MPEG-4 .  
 1 (Ref) (Car) ,  
 (Img) (CurCar) (Ref) 가 (Img) (C  
 urBlk) (Ref) (Pred) (Ref) (CurCar) (C  
 , (CurCar) (PredBlk)  
 (CurCar) (Ref) (CurCar) (Img)  
 가 (CurBlk) (M  
 otionParam) (寫像) (PredBlk) (MotionParam) 가  
 MPEG-1, 2, 4, H.261, H.263 .  
 2 (100) (100) , (101),  
 (102), 가 (103), (104), 가 (105), (106), (1  
 07), (108), (109), (110), (111) (112) .  
 (Img) , (Ref) (Pred) (101) , (Res)  
 (Pred) , (104) ,  
 (110) (111) ,  
 (102) (Res) (CodedRes)  
 (103) , (CodedRes) (MotionParam) 가 가  
 (Bitstream) (100) (103) ,  
 onRes) . 가 (105) , (CodedRes) (ReconRes) (Pred) 가 , (Rec  
 (Recon) (Recon) (Recon) (106) (106) 가 가 ,  
 (Ref) (106) , 가 (105) (106) 가  
 1) (107) , (106) (108) , (108) , (11  
 (112) (Blk) (108) '1' '2' (108) '1' (109)  
 '1' , '2' (UsePolator) (110) (110)





1 ,  
2 ,  
3 ,  
4 ,  
5 ,  
6(a) 1/2 , 6(b) 1/2 i 1/2 j 1/2 ,  
7(a) , 7(b) ,  
8 ,  
9 ,  
10(a) (Bitstream) , 10(b) (Bitstream) ,  
11 ,  
12 11 ,  
13 2 ,  
14 13 (Bitstream3) ,  
15 1 3 , 15(a) ,  
15(c) , 15(b) (FD) , , , ,  
16 ,  
17 ,  
18 ,  
19 ,  
, , ,  
( 1)  
4 (400) , 2 ,  
(100) ,

(400), 가 (105), (106), (101), (107), (PicType) (102), 가 (103), 가 (104),  
A(403), B(404), (111) (108), (109), (401), (402),  
(400) (PicType) (Img) (401) (40)  
2) (401) (402) '1' , B '1'  
A(403) (401) (402)가 '1' , A(403) , 가 , (Blk) '4'  
(PicType) , P '2'가  
, B '1' (401) (402)가 '2'  
, 가 (Blk) 가 '8' B(404) 가 B(404)  
(Pred) (101)  
, B 2 P 2 가 , B  
B  
(PicType) '2', '1', '0'  
, 가 (PicType)  
5 (500) , 3  
(200) (500) , (Bitstream)  
(500) , (201), (202), 가 (203), (204), (A(503))  
207), (208), (209), (212), (501), (502), (505) ,  
B(504) 가 (500) , 가 (Bitstream)  
(PicType) (CodedRes) (MotionParam) ,  
(PicType) (501) (502) , (MotionParam) (212)  
1) (502) (PicType) , (CodedRes) (202) (50  
'1'  
, (501) (502) '1' , B A(503)  
(501) (502)가 '1' , (Blk) '4'  
A(503) (PicType) , P (501) (502)가 B  
'2'가 , B (Blk) '1' B(504) (501) (502)가 B  
'2' , 가 , 가 '8'  
(504) , 가 ,  
, B 2 P 2 가 , B  
B  
, (500) , B P, B ,  
가 , P B 가 , B 가 , B  
가 , 가 가 (500)  
, 가 가 가

가 , ,  
 6(a) 1/2 , 6(b) 1/2 1/2  
 y) , (x, y) , x , 6(a) j 6(b) 1/2 , O  
 , i , 2 , 1/2 , O , i, j , I(x,  
 , 6(a) (i-0.5, j) I(i-0.5, j)  
 N(N) '2' , (i-0.5, j) I(i-0.5, j) , i  
 , 1 , I(i-1, j) I(i, j)가 , I(i-0.5, j) , i

$$I(i-0.5, j) = \sum_{k=0}^N a_k \cdot I(i-trunc(N/2)+k, j) \quad \cdot ( 1)$$

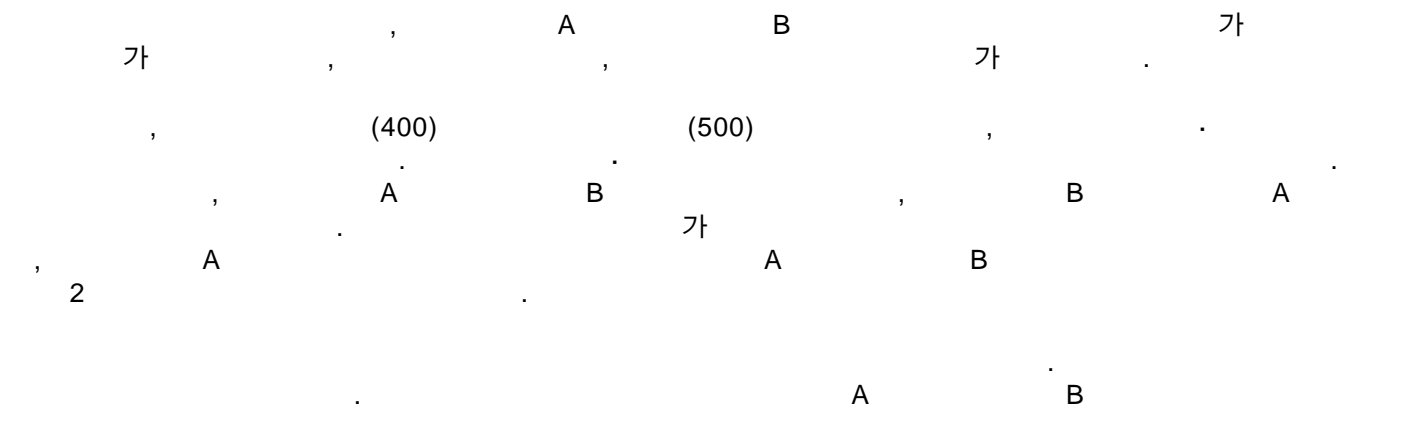
1 , a k , trunc(n) n , 1  
 , a k , 1/2 (i-0.5, j) , I(i-0.5, j)가 , 1  
 , i , N '4' , (i-0.5, j)  
 , 1 N I(i-2, j) 2 I(i+1, j)가 , I(i-1, j) , I(i, j) , i  
 , N '6', '8' , I(i-0.5, j)가

6(b) , (i, j-0.5) I(i, j-0.5) , M(M  
 , (i, j-0.5) j , 2 , I(i, j-1) '2'  
 I(i, j)가 , I(i, j-0.5) , j , 2 , I(i, j-1)

$$I(i, j-0.5) = \sum_{m=0}^M a_m \cdot I(i, j-trunc(M/2)+m) \quad \cdot ( 2)$$

2 , a m , , 가 '4', '6', '8' , 2 M  
 , (i, j-0.5) , I(i-0.5, j-0.5) , I , j 1/2  
 , (i-0.5, j-0.5) , I , j

$$I(i-0.5, j-0.5) = \sum_{m=0}^M \sum_{k=0}^N a_m \cdot a_k \cdot I(i-trunc(N/2)+k, j-trunc(M/2)+m) \quad \cdot ( 3)$$



가 , 가 .

가 , 가 .

B 가 , A 가 , 가 .

가 , 가 .

A B 가 , A B 가 .

가 , 가 .

가 , 가 .

B 2 P 2 가 , B

7(a) (400) (500) 7(b) 7(a)

) (PicType)가 (400) , I , B , P '0' .

(112) (108) (109) '1' (401) (402)가 '1' (PicType)

가 , B A(403) A가 , P B(404)

B가 (401) (402)가 '2' B(404)

(400) (PicType) (401) (402) (Pi

7(b) B A(403) A (S701), B (402) '1' B

(S703). (400) '2' S701 S703 B(404) (PicType) B

(Img)

(400) 가 B ,

가 B 가 ,

(PicType) (Bitst

ream) , 가 P , 가 ,

가 가 P ,

8 (800) 8

, 2 (100) 4 (400) (101), (102), (104), 가 (10





가 (1002) , (1001)  
(Bitstream) , ,

(1 , MPEG )  
(PolatorType) (Bitstream) 가 ,

(PolatorType) 가 ,  
가 ,

, 1/4 , 1/2 1/4 1/2

가

, 2 , 3 , 3

11 (1100) 11 5  
(500) (1100) , (202), 가 (203), (204), (207),  
(208), (209), (212), A(503), B(504), 가 (1100)  
(1101), (1102), (1103) (1104) (1100)  
8 (800) (Bitstream2)가  
(1100) (Bitstream2) (PolatorType1)가  
(1100) (Bitstream2) (PolatorType1) 가  
(1100) (1100)가

(1100) , (PolatorType1) '1' '2'가 2 , ,  
A(503)( N=4) B(504)( N=8) , ,  
(1100) 가 (1101) , (Bitstream2) 가 ,  
(CodedRes) (MotionParam) (PolatorType1) (PolatorType1)  
(1102) , (PolatorType1)  
가 (1102) , (PolatorType1)

12 11 (1102) (1200)  
(1201) , (1200) (PolatorType1) (PolatorType1)  
(N)(1203)가 (1201) (PolatorType1)  
2) , (PolatorType1) (1100) (110)  
N=16) , '3' , C(  
0) (N)(1203)가 (PolatorType1) C 가 (120)

가 B(504)( N=8) (PolatorType1) '2'  
 (PolatorType2) (1100)  
 (CodedRes) (MotionParam) 가  
 ( ) 가 (PolatorType2) '1'  
 (1103) (1104) '1' (Recon) A(503)가  
 (PolatorType2) '2'가 (1103) (1104)가 '2'  
 (Recon) B(504)가  
 (1100) (1100)  
 (PolatorType2)가 (Bitstream)가  
 (Bitstream) 가 (1100)가  
 가 1 (Bitstream) (1100)가  
 가 (1100) , 2 , 3  
 가 가 1 (1100)  
 가 (1100)가  
 (1102) (PolatorType1) (1100)  
 (PolatorType2)  
 ( 2)  
 13 2 (1300) 2, 4 8  
 (100), (400) (800) (1300)  
 (106), (107), (108), (109), (102), (104), 가 (105),  
 (1302), 가 (1303), (1304) (1305) (112), (1301),  
 bleRef)가 (AvaivableRef) , (1300) 가 (1305) (Avaira  
 '0'  
 '1'  
 (1301) (1302) , (AvaivableRef) '0'  
 (AvaivableRef) '1' A(403)  
 '2' B(404)  
 (1304) , (AvaivableRef) '0' 가  
 (ReconRes) (106) (AvaivableRef) '1'  
 (1304) (ReconRes)가 (106) 가  
 (1303) , (1300) , 10 (Bitstream3)  
 (Bitstream3) (AvaivableRef)  
 14 13 (1300) (Bitstream3)  
 (1400) (500) (1100) , 3, 5 11 (200),  
 (AvaivableRef) (Bitstream3) (1400) , (202)  
 가 (203), (204), (207), (208), (209), (212),  
 가 (1401), (1402), (1403) (1404) 가 (1401) ,  
 (Bitstream3) 가 (CodedRes)  
 (MotionParam) (AvaivableRef) (14  
 02) (1403) (1404) (1404) , (AvaivableRef) '0' ,

(Recon)가 (204) (Recon)가 (204) (AvalrableRef)  
 '1' (Recon)가 (204) (Recon)가 (1402) (1403) (Avairab  
 leRef) '0' (Recon)가 (204) (Recon)가 A(503) (AvairableRe  
 '1' '1' '2' B(504)

(1300) (1400)

가 (1300)  
 가 (1300)

(1400) (1404)  
 (Recon)가 (204)  
 (1404)

1 2 A(403) B(404)  
 A(403) B(404)

( )가

( 3)

가

15 1 3

15(b) (FD) (F) 15(a)  
 (Se) (Tr) 16  
 (FD)

15(c) (FD) (FD) (Cs)  
 (FDD)

가

, IC , ROM

16 19

16 (ex100) (ex107 ex110)  
 (ex100) (ex101) (ex102) (ex104)

(ex111), PDA(personal digital assistant)(ex112), (ex113), (ex114)가  
 (ex100) 16  
 (ex107 ex110), (ex104)  
 (ex113) 가 , , PDC(Personal Digital Communications), CDMA(Code Division Multiple Access), W-CDMA(Wideband-Code Division Multiple Access), GSM(Global System for Mobile Communications), PHS(Personal Handyphone System)  
 (ex103), (ex113) (ex109), (ex104) 가 , (ex113) (ex111) (ex103) (ex116) (ex116) LSI(ex117) (ex111) (ex111) (ex116)가 (ex115) (CD-ROM, ) (ex115)가 LSI  
 17 (ex115) (ex115), (ex110) (ex201), CCD 가 (ex203), (ex202), (ex201) (ex204), (ex208), (ex205), (ex207), (ex206) 가 가 EEPROM(Electrically Erasable and Programmable Read Only Memory)  
 (ex100) 가 (ex113), (ex116) (ex103) (ex103) 가 (ex103) (ex114) 가 (ex111), PDA(ex112), (ex113), (ex100)  
 가  
 (ex115) 18 (ex115) 18 (ex115) (ex115) (ex202) (ex204) (ex311) (ex310), (ex304), (ex312), (ex303), LCD (Liquid Crystal Display) (ex302), (ex309), (ex308), (ex307), (ex306) (ex305)가 (ex313) (ex310) (終話) 가 (ex115) , CPU, ROM RAM (ex311) (ex205) (ex305) (ex306) (ex301) (ex115) (ex201) (ex306) (ex306) (208) (ex304) (ex311) (ex311) (ex306) (ex301) (ex201) (ex110) (ex203) (ex303) (ex312) (ex303) LCD (ex302) (ex202) (ex20)

가 .

(ex312) , (ex203)

(ex115) , (ex203) , (ex308) (ex205) (ex308) , (ex305)

(ex308) , (ex312) (ex305)

(ex201) , (ex301) (ex306)

ex110) (ex308) (ex306) , (ex201) (

, (ex201) , (ex308) ,

(ex309) (ex313)

, (ex309) , (ex305)

, LCD (ex302) (ex202)

(ex305) , 가 (ex208) ,

가 .

가 , 19

(ex410) , (ex409)

가 가 (ex406) , TV (ex410) (ex401)

(ex402) (ex407)

, (ex403) , CATV (ex405) / 가 (ex

406) (ex404) , TV (ex408)

(ex410) 가 , TV (ex411) (ex412)

13) (ex410) (ex107) 가 (ex412)가 (ex4

, (ex413) 18 (ex203) (

ex303) (ex114) , (ex111) TV (ex401)

, 3가 .

가 .

가

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11.

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12.

가 , ,

가 가

13.

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가 가 가 , B ,

14.

가 , ,

P , 가 , 가 가 B , 1

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15 16.

15 17.

15 18.

18 19.

19 20.

가

19 21.

가

20 22.

가

가 가

23.

가 가

23 24.

가

25.

가

가

가

가

가

26.

27.

가가

28.

가

가

가

29.

28

가

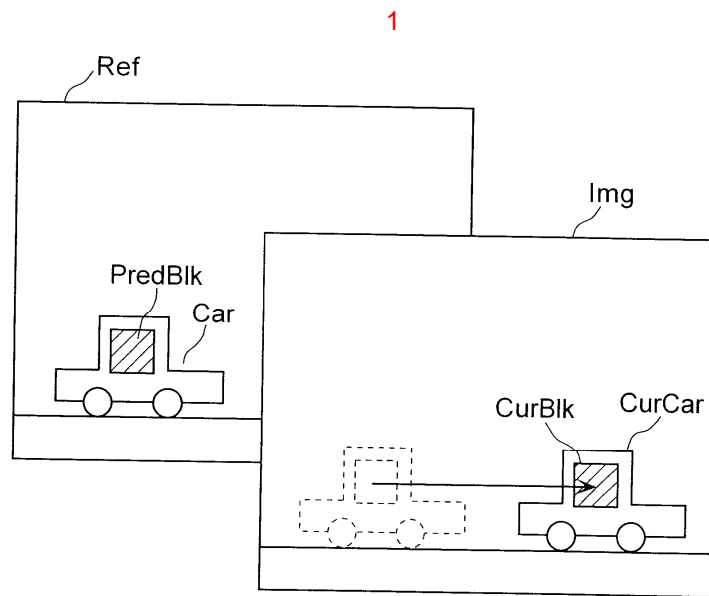
30.

28

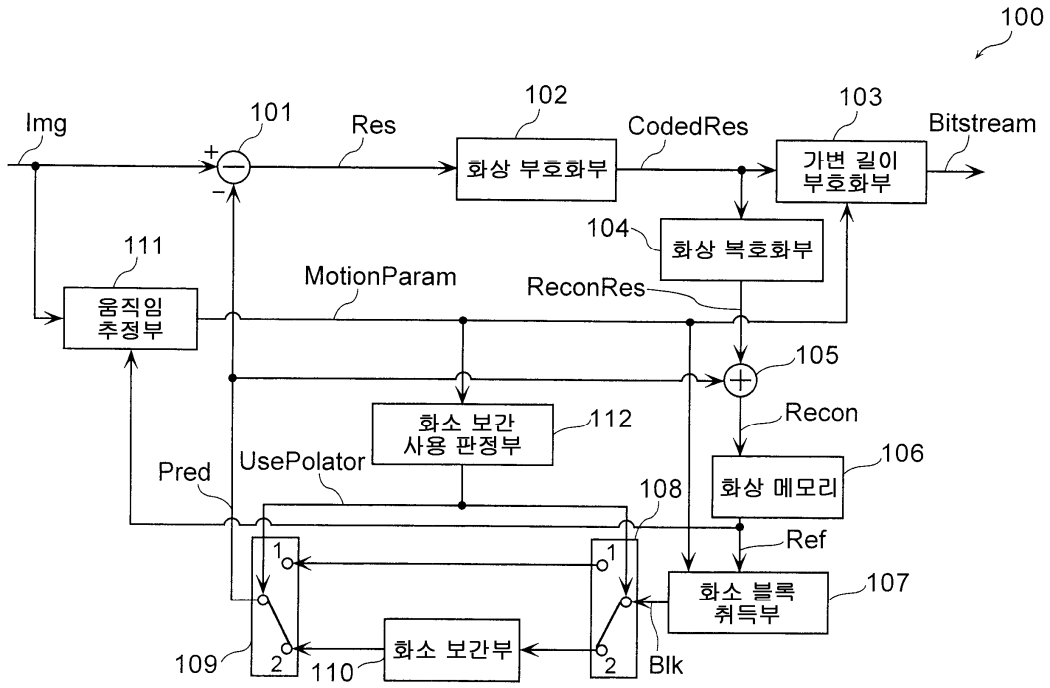
가

A(403) , B(404) , (400) , (PicType) B , '0'  
 , 1/2 (PicType) B , '4' (PicType) B , A(403)가  
 , (PicType) B , '1' , '8'

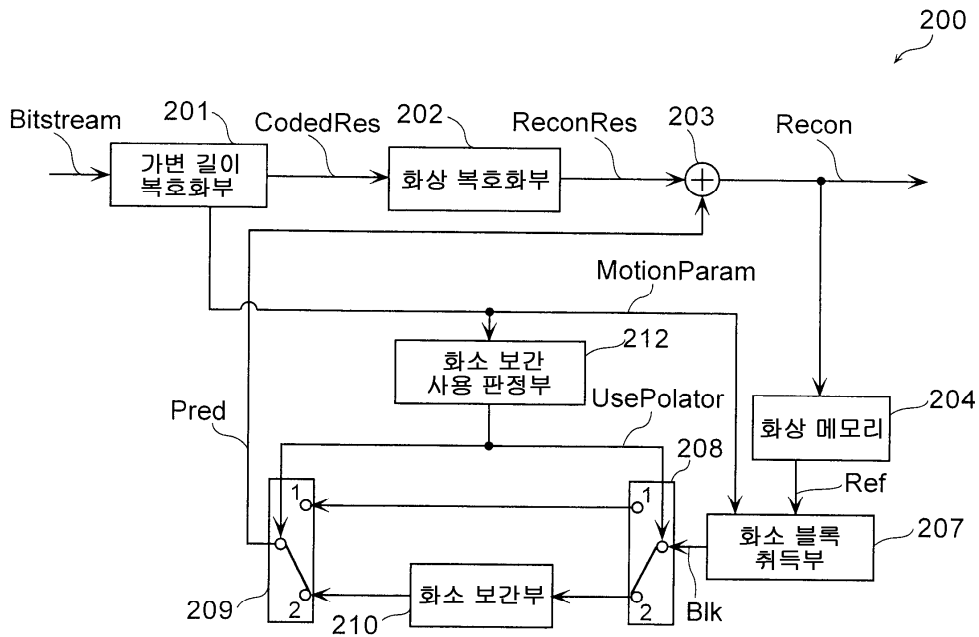
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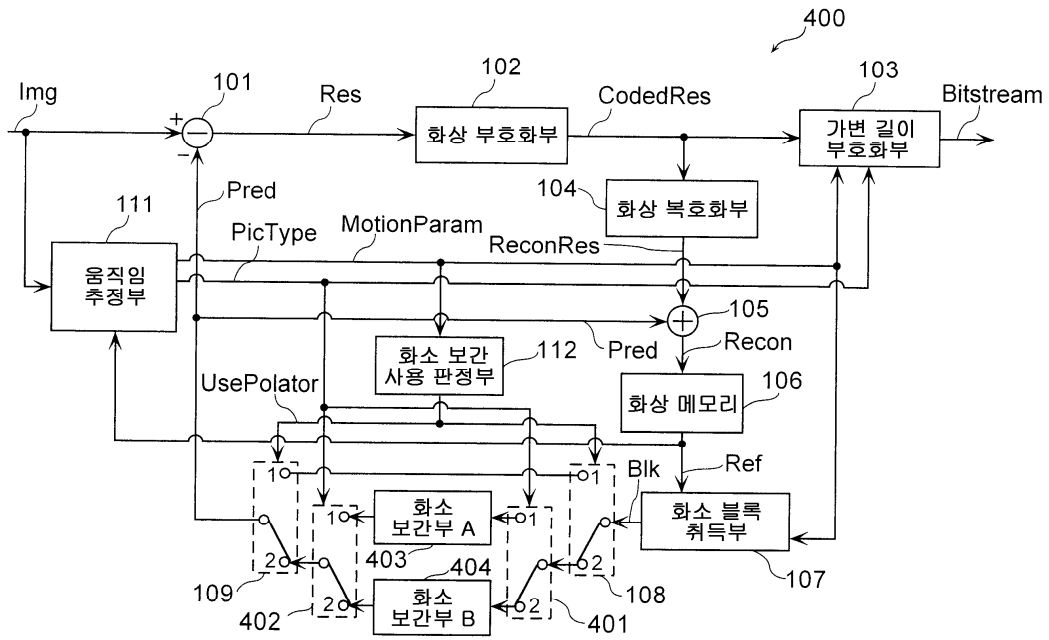
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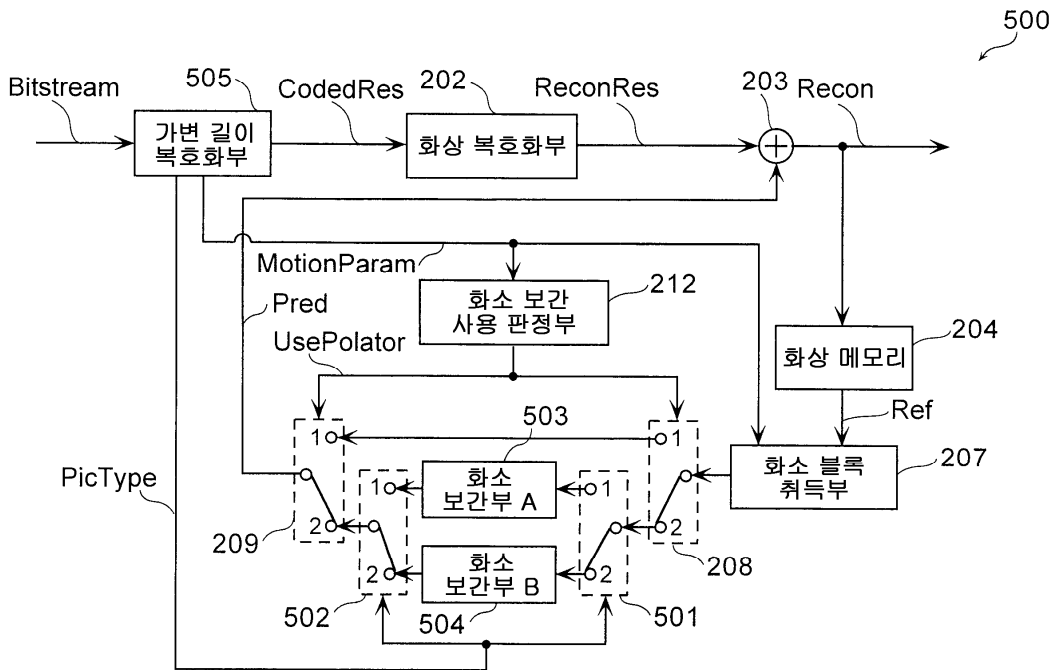
3



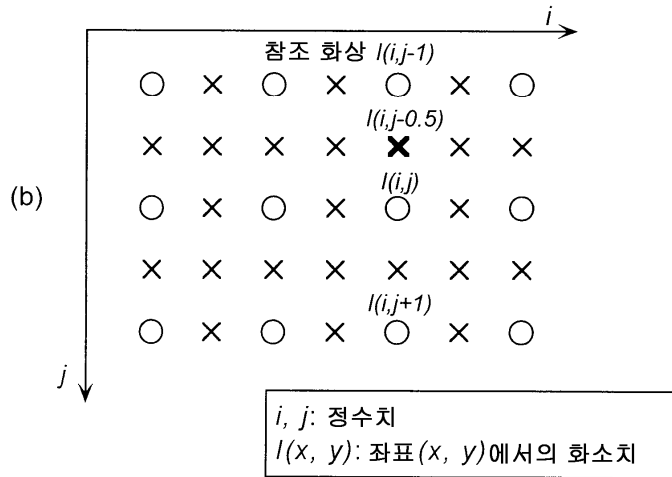
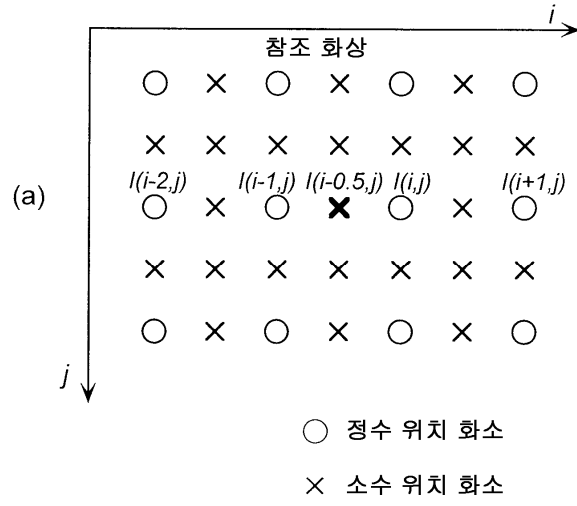
4



5

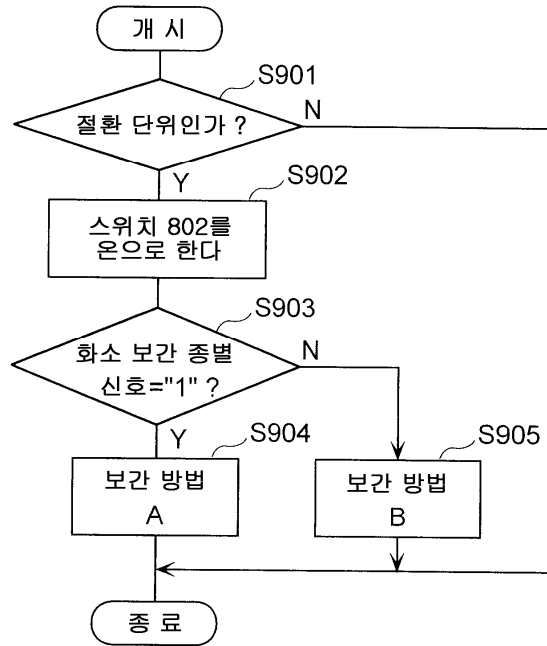


6

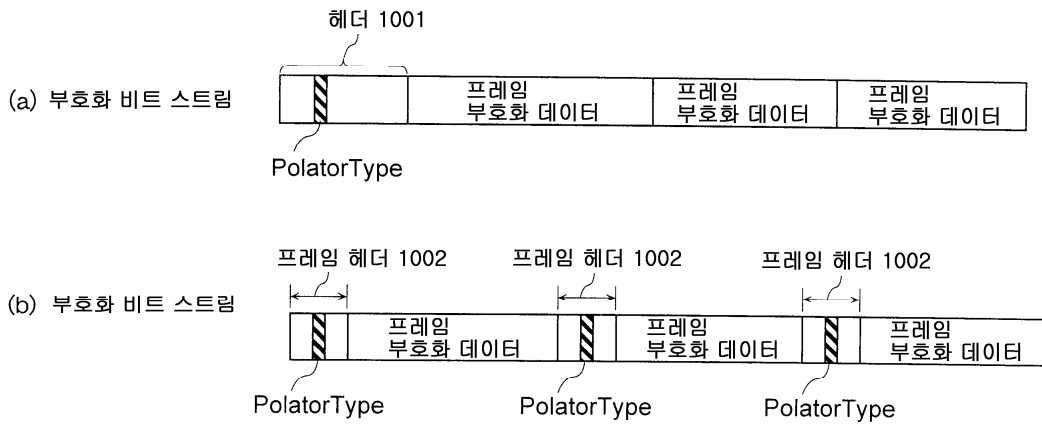




9

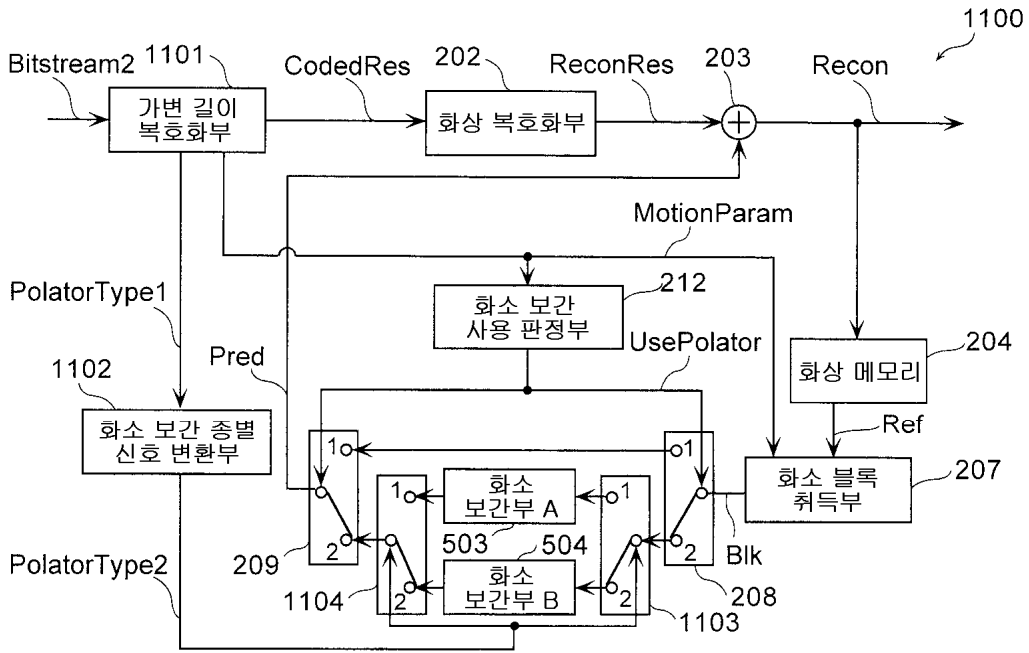


10





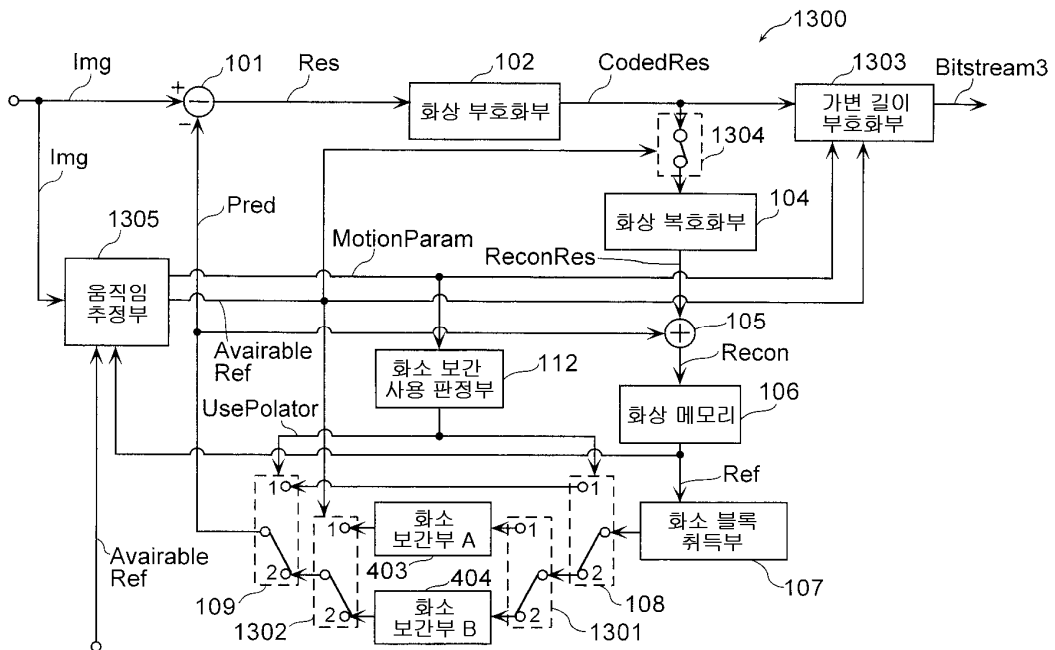
11



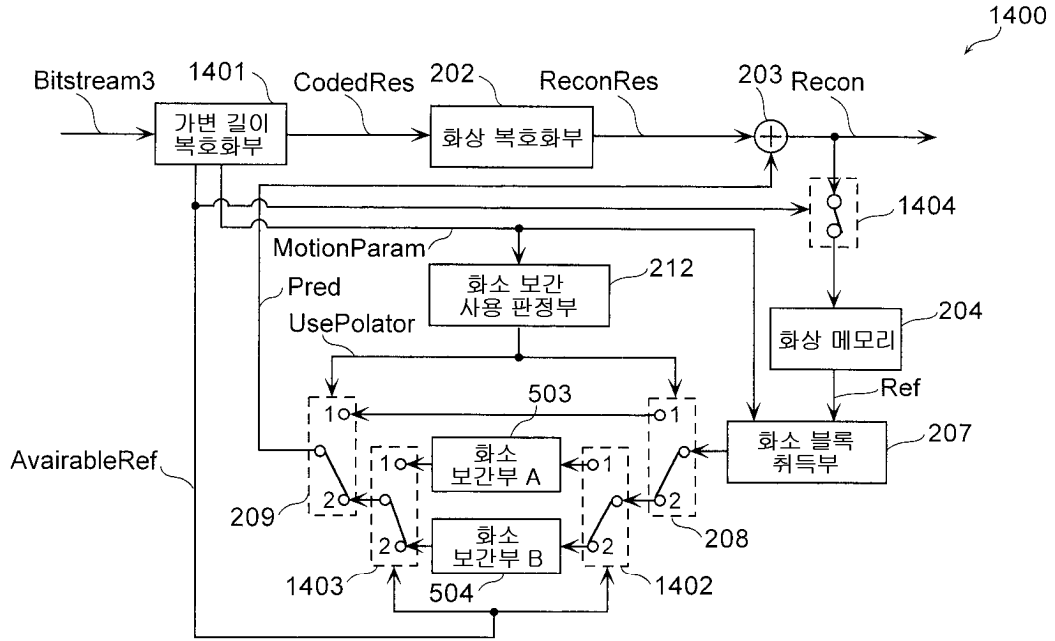
12

실장 유무	화소 보간 종별 신호	필터 탭수 (N)
×	0	2
○	1	4
○	2	8
×	3	16

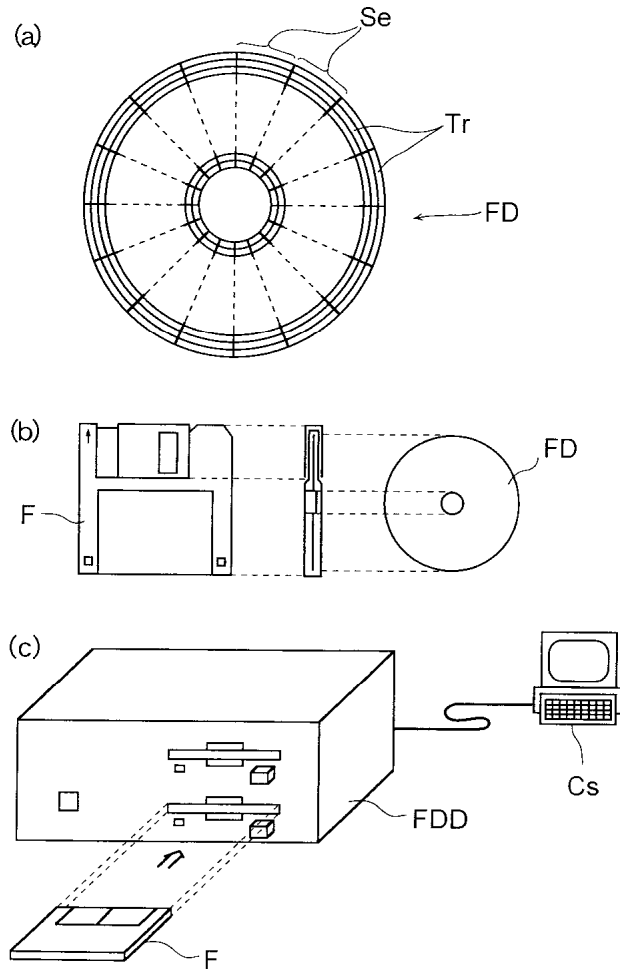
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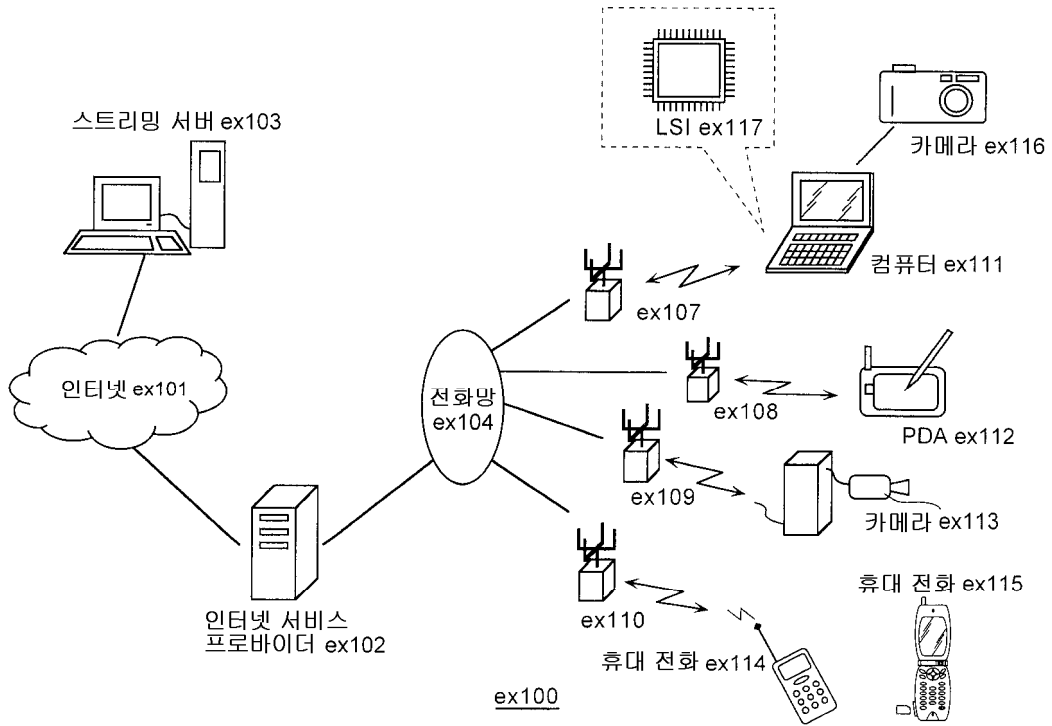
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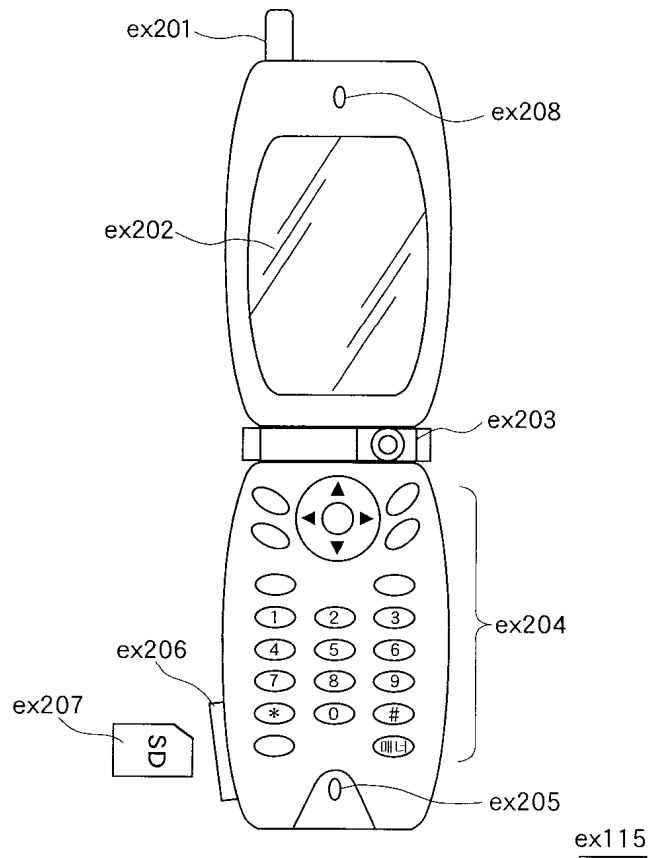
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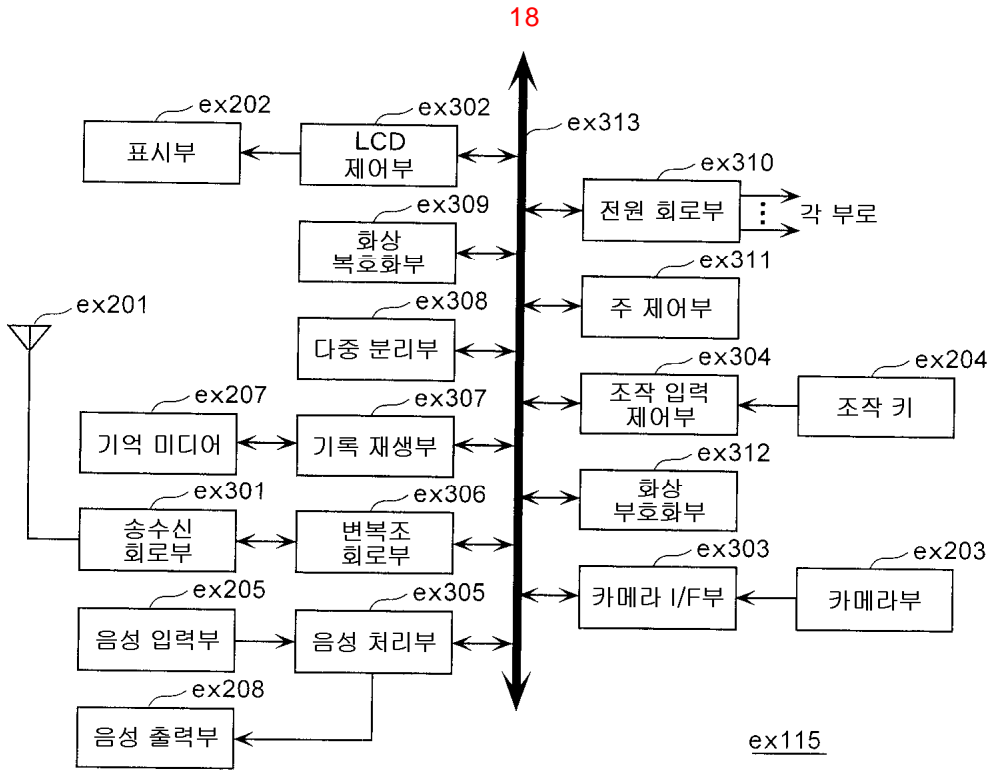


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