

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl.7
G06K 9/46

(45)
(11)
(24)

2004 07 05
10-0438841
2004 06 24

(21) 10-2002-0022215
(22) 2002 04 23

(65)
(43)

10-2003-0083510
2003 10 30

(73)

416

(72)

104 701

(74)

:

(54)

,

(classifier)

,

가

2

,

4

,

- 1
- 2
- 3
- 4
- 5

가 3

가 2

가 가

가

가

가

가

1

1

2

3

가

(320),

(310),

(330), 가
(340),

(350),
(360),

(370)

(36

(380)

0)

3

4

(S400).

(310)

(S410).

20). (320) (S4)

가
 .2
 (340) (S430). (330) 가

가 가
 (330)

6 (330)
 (x,y) (x+x_d, y+y_d)
 가 가 x_d y_d
 가 가 30 가 x_d y_d 2
 (x_o^l, y_o^r) 가 (x_m^l, y_m^r) x_m^l, y_m^r

$$\begin{bmatrix} (x_0^l, x_0^r) (x_0^l, x_1^r) (x_0^l, x_2^r) \dots (x_0^l, x_n^r) \\ (x_1^l, x_0^r) (x_1^l, x_1^r) (x_1^l, x_2^r) \dots (x_1^l, x_n^r) \\ (x_2^l, x_0^r) (x_2^l, x_1^r) (x_2^l, x_2^r) \dots (x_2^l, x_n^r) \\ \vdots \quad \quad \quad \vdots \quad \quad \quad \vdots \\ (x_n^l, x_0^r) (x_n^l, x_1^r) (x_n^l, x_2^r) \dots (x_n^l, x_n^r) \end{bmatrix}$$

가 s (s+1)*(s+1)
 4 가 5 가
 25 가 가
 25 가 , 1
 1 25 가 가
 (320) (340)

(S440). (350)
 (S450). (350)

(Gradient) (Template) (PCA:Principal Component Anal
 ysis) (LFA:Local Feature Analysis) 가
 (360) (350) (mappi
 ng) (S460). (DB:380)

(S470).
 5 7b
 (S520), (S530) (S500), (S510)
 (S430) S400 S450 (S540) (370)
 (380) (350) (370) (370)
 (370) (S550). 1 (FV1)
 1 (FV1)
 (S570). 1 (FV1)
 (S580) (S560).
 8

$$f(x) = \text{sgn}(\langle w \cdot x \rangle + b)$$
 sgn, w, x
 bias b 가
 (hyperplane)
 8
 $\langle w \cdot x \rangle + b = 0$ bias bias
 0 bias bias class 1, 0
 class 2
 (370) (380)
 2 (FV2) S430 2 (330) (S590).
 2 7a 7b
 2 가 (, ' ')
 FAR (False Acceptance R
 ate) 가 (, ' ') 가
 7a FRR (False Rejection Rate) 7b
 가 7a 가
 7b FAR, FRR
 7b FV2 FAR 0 가
 FRR 7b FV1
 가 V1 1 F
 가
 가 FAR
 가 FAR
 1 (FV1)
 FV1 2 (FV2) FV2
 (S430)
 (380)
 2
 가

- (a) ;
- (b) , ;
- (c) ;
- (d) , ;
- (e) ;
- (f) , ;
- (g) 1 ; 1

2.

1 , 2 , (b) (d)

3.

2 , 0 2

4.

1 3 , (a)

5.

1 3 , (c)

6.

1 3 , 가 1/15 , (b) 가

7.

1 3 , , 4 (b)

8.

1 3 ,

$$f(x) = \text{sgn}(\langle w \cdot x \rangle + b)$$

sgn

, w

b

, x

9.

1 3 , 가

10.

가 ;

가 ;

11.

10

4

가

1/15

12.

10

13.

12

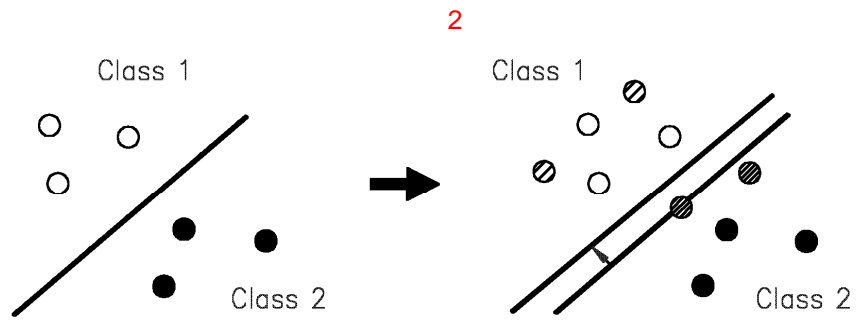
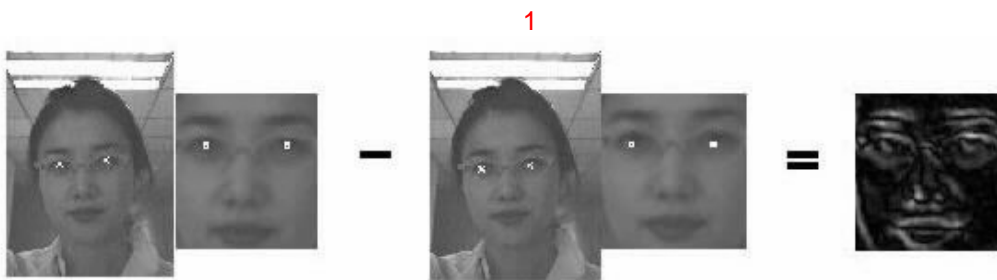
$$f(x) = \text{sgn}(\langle w^*x \rangle + b)$$

sgn

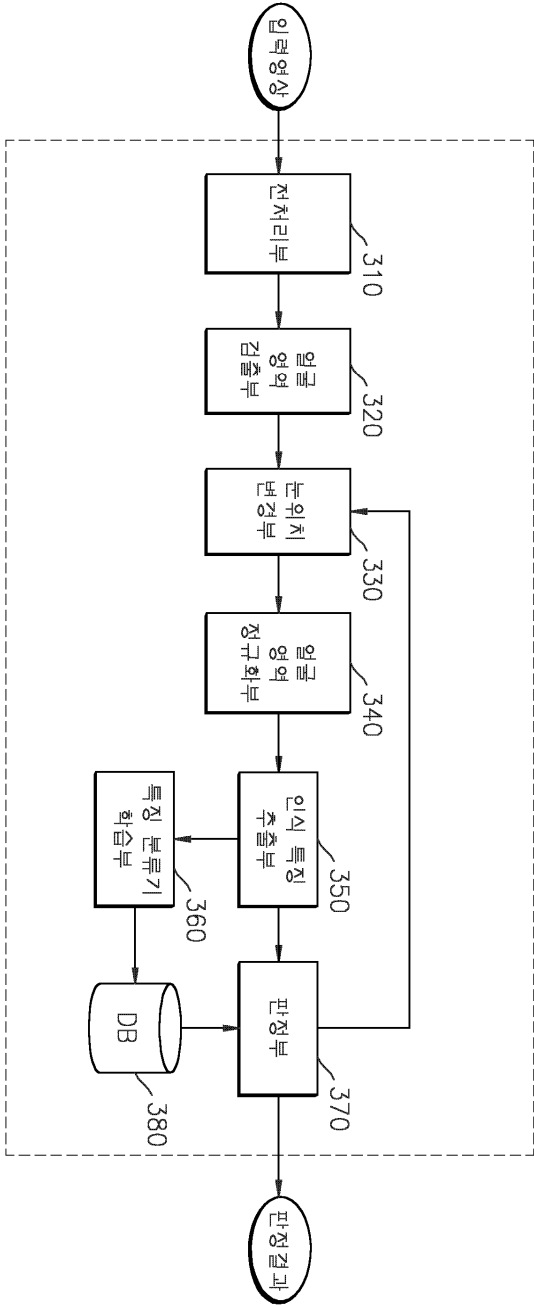
w

b

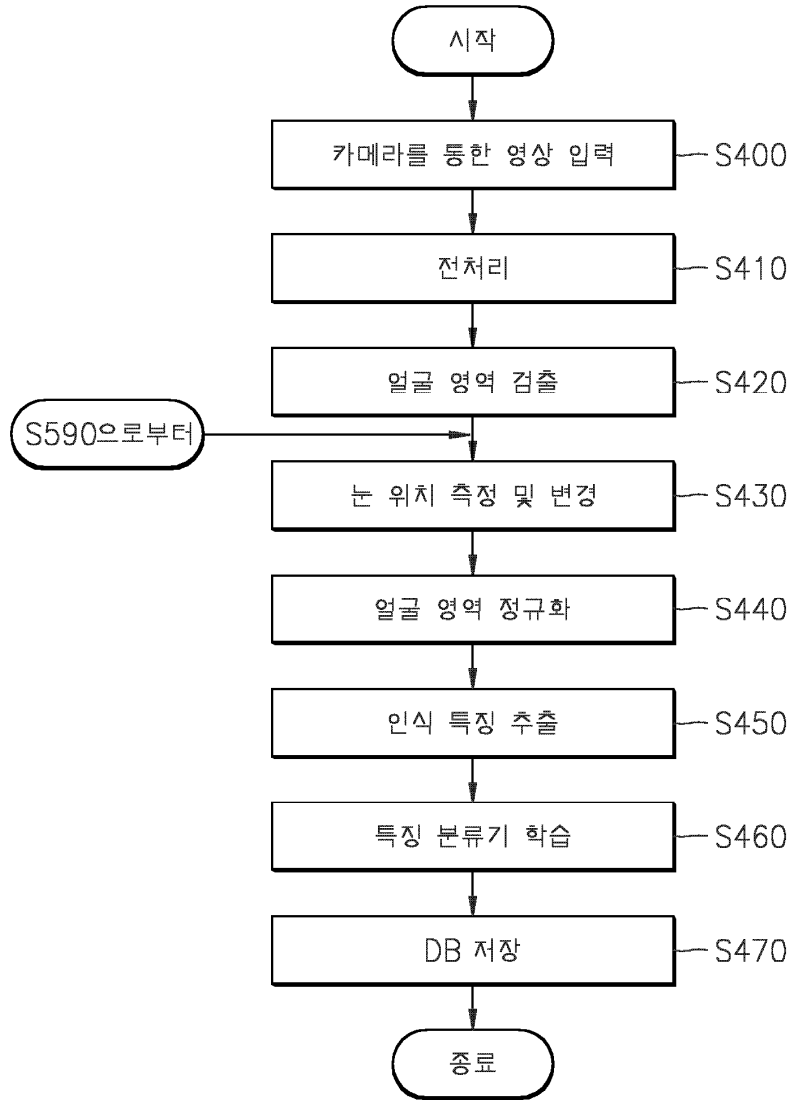
x



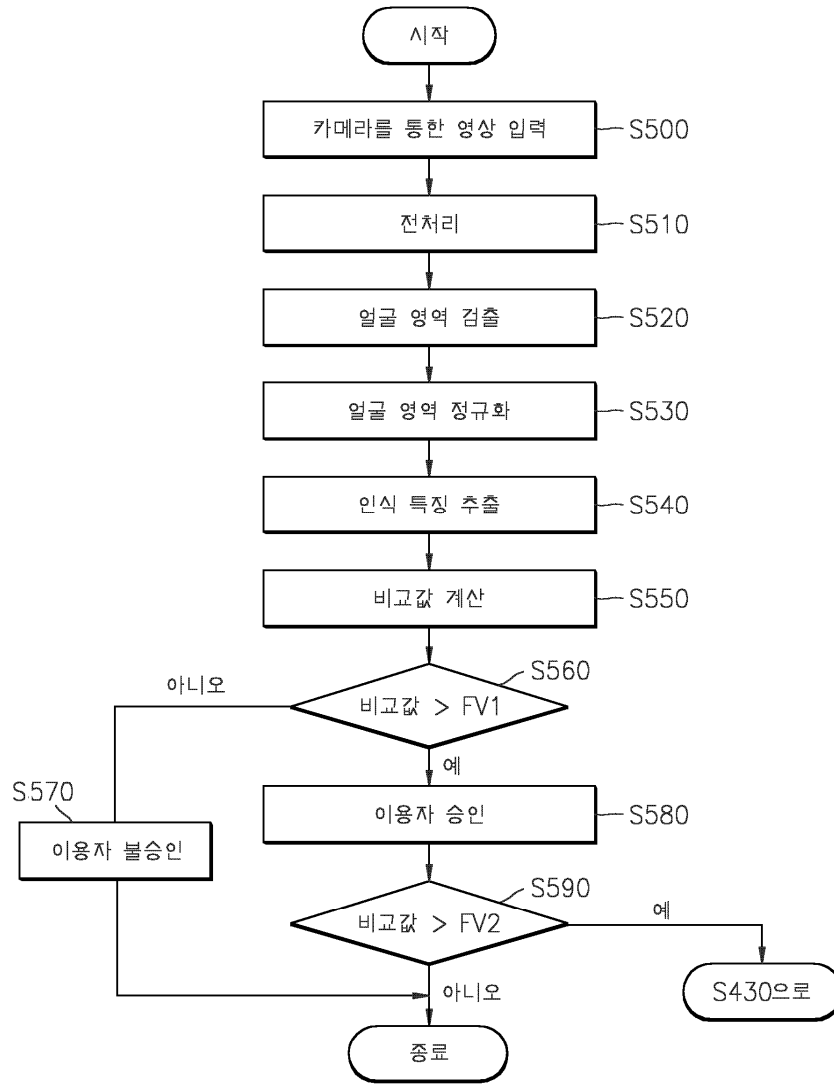
3



4



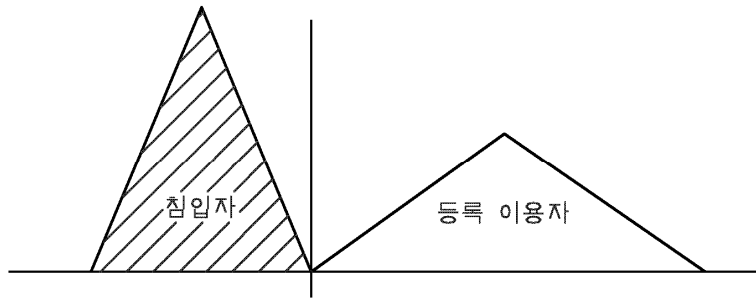
5



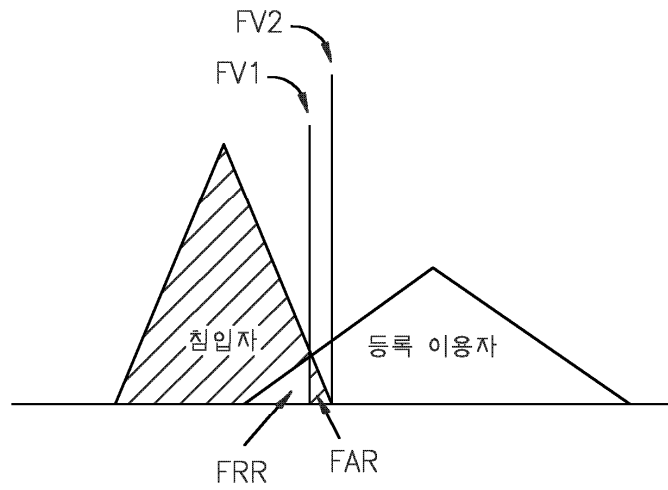
6



7a



7b



8

