

training ”

. DogEar . 2
가 (creature)

3
(multi modal)

4
5,6

(wire)

2.

() 가

ALIVE [4] 가 (creature)

가 가
(hand gestures)

가
가

ALIVE 가
가

2

가

가

가

3

가

VR

가

가

VR 가
가

가

1

3 가

(i)

가

1

(view

(ii) ()

point)

(AI)

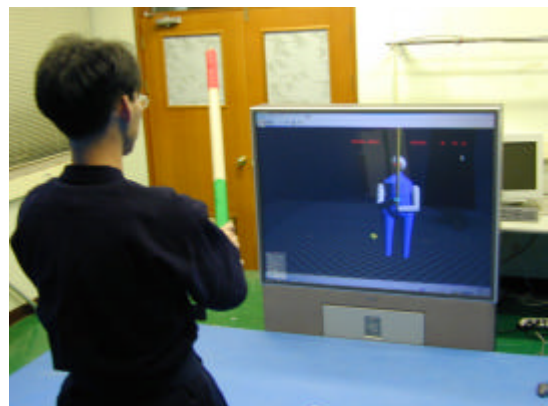
(iii)

가

가
(intelligence)

가

가



2

VR

3

“ ”,

가

가

“ ”, “ ” 3

가

VR

[5]

가

3

(multiview)

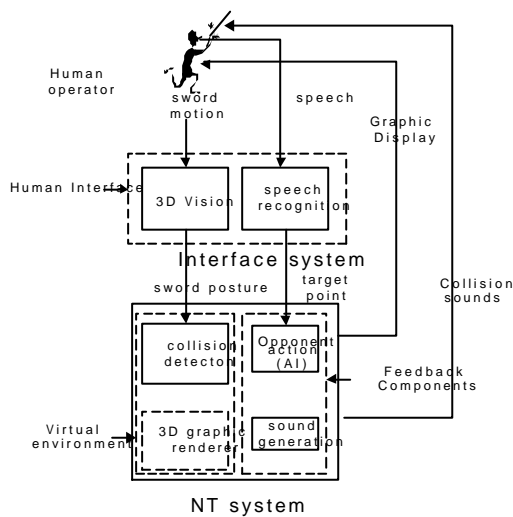
가 가 3(a)

가

가

TCP/IP

3(b)



(a)



(b)

3.

Human and Sword Tracking

가

2.

(color marker)

3.

3.1

3

4

2

Segmentation

(foreground)

(azimuth angle) α

(elevation angle) β

(disparity) [5]

tion angle) β

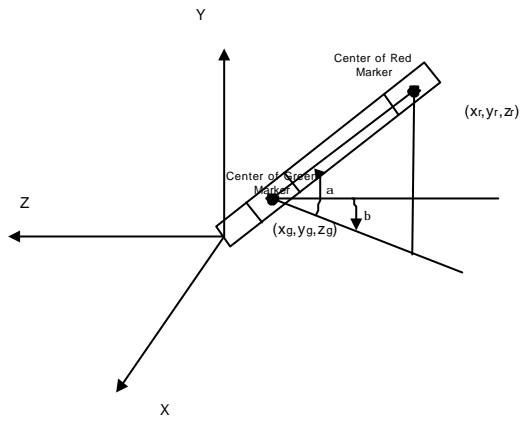
$$L_1 = \sqrt{(x_r - x_g)^2 + (y_r - y_g)^2 + (z_r - z_g)^2} \quad (1)$$

$$\mathbf{a} = \tan^{-1}((x_r - x_g) / (z_r - z_g)) \quad (2)$$

smooth

disparity

$$b = \sin^{-1}((y_r - y_g)/L_1) \quad (3)$$



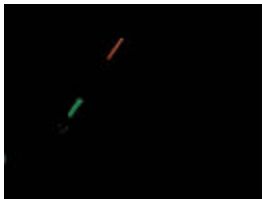
4.

5

5(a)

가

5(b)



(a)



(b)

5.

3

가

3.2

가

4

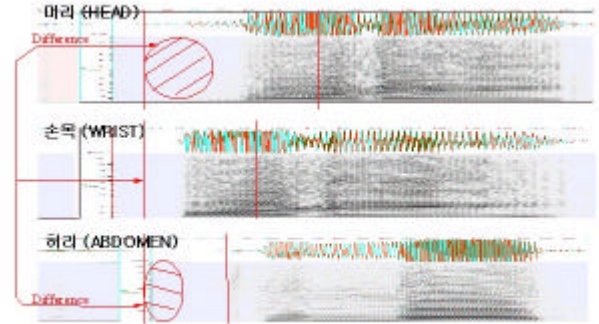
(feature

extraction)

(Feature extraction)

(spectrogram)

6



6.

threshold

(time window)

6

가

80%

가

가

4. 가 (Intelligent Agent)

가

가

(motivation system),

(perception system),

(behavior system),

(set of activity)

(motor system)

(state)

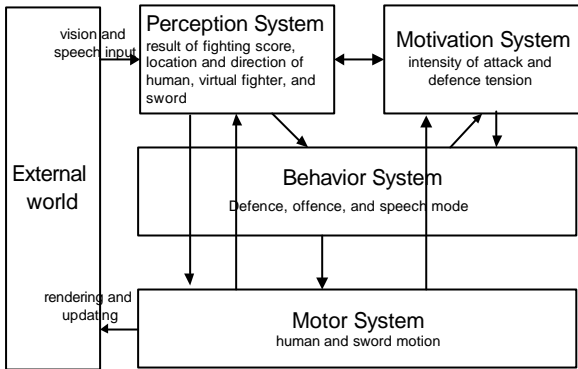
(geometry)

가

가

가

1



7. 가

1.

Parameters	Measurements
Fighting Area	2m () * 4m ()
Sword Resolution	5 deg (pitch), 5 deg (roll)
Body Resolution	0.05m
Bandwidth of System	5Hz

8

7 가 (schematic diagram)

8(a) 가

(state) (drive)
 (state) (drive)

FASTRAK receiver trans-
 mitter
 8(b)

가 2

(perception system)
 가 가 /

가 가 가

(behavior system)
 (action)

FASTRAK transmitter 76cm receiver 가
 spec spec
 [6].

8(c)

가 가 가 가
 8(c)

가
 (interpolation)

가 0.3
 가 가

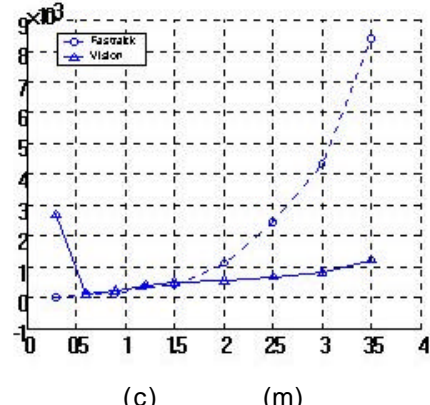
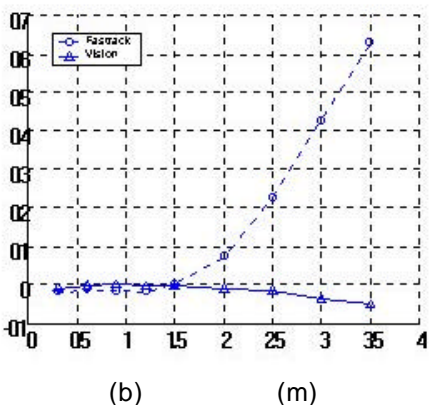
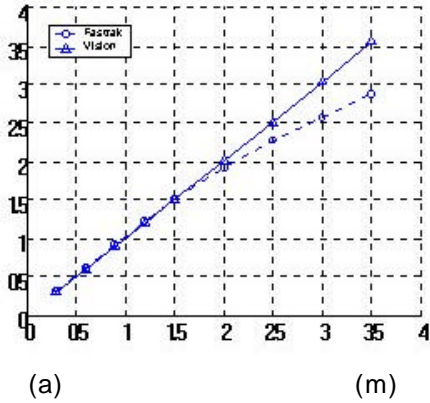
5.

(robust)

가

가

5Hz



8. (FASTRAK)

6.

(
)
 3
 가 가
 가 가
 가 가
 가 가
 가 가

가

(force feedback)

3 가 (photo-realistic)

Acknowledgement

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[2] Fisher S.S., Girard M. and Amkraut S., Menagerie, "Tomorrow's Realities," SIGGRAPH-93 Visual Proceeding, ACM SIGGRAPH 1993, pp.212-213, 1993.

[3] S-Y Yoon, R. C. Burke, B. M. Blumberg, G. E. Schneider, "Interactive Training for Synthetic Characters", submitted to AAAI 2000.

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[5] W. Woo, N. Kim, and Y. Iwadate, "Object segmentation for zkeying using stereo images," in Proc. WCC, pp. 1249-1253, Aug. 2000.

[6] Polhemus, <http://www.polhemus.com/ftrakds.htm>