

1, 2, 2, 1, 2
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I-VR
U-VR

Information Integration System for User Recognition and Location Awareness in Smart Environment

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가
가 (Digiclops),
ON/OFF
(weight)
OpenGL 3 가 가 가

1. , GATECH AwareHouse

가

가

[2].

[1][2][3][4].

가

가

[1][2].

가

OpenGL

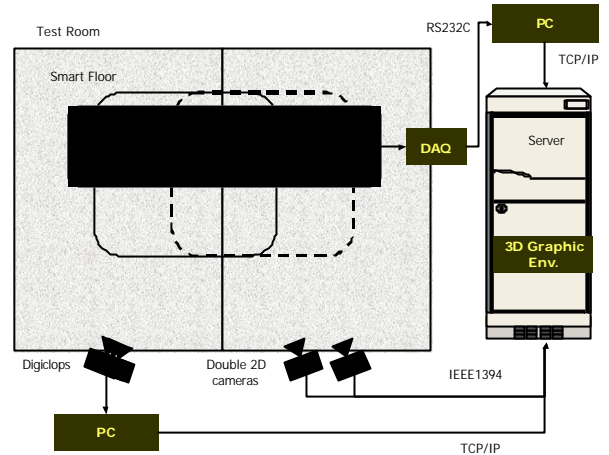
3

가

1

ON/OFF

가



1.

2.1

가

가

2

가

3

(electromagnetic tracker)

4

(gesture)

가

가 24

(privacy)

가

2.

ON/OFF

가

PC

가

가

(Digiclops)

(fusion)

3

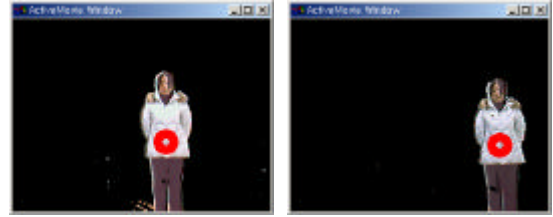
3

가

[3].

3

3



3.

(1, 2)

(disparity map)

3

2.2

GPS(Global Positioning System)

IR(InfraRed) RF(Radio Frequency)

가

가

(optical tracker)

가

IR/RF/

가

IEEE1394

1)

, 2)

가 , 3)

가

IEEE1394

2

가

가

가

(perspective)



2.

(1, 2)

가

가

, 가

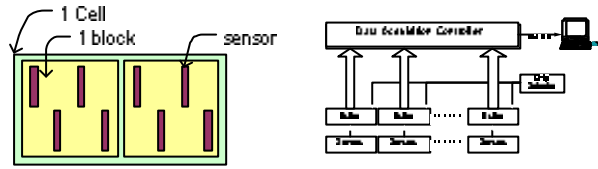
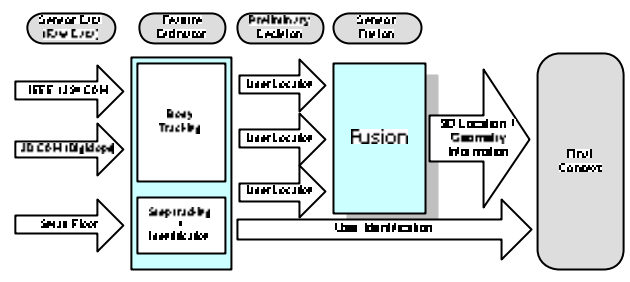
가
ON/OFF

1m * 4m 144

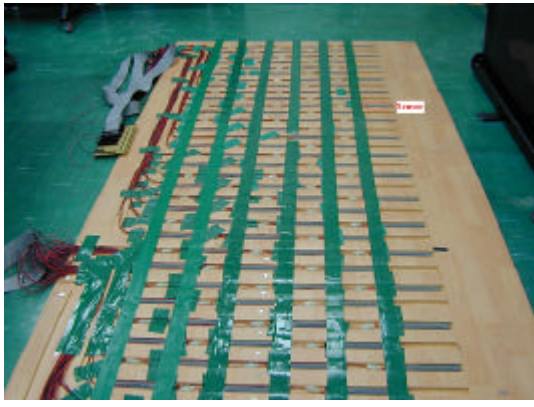
가 6

(resolution)
(30cm * 30cm) 4 가 가
() [

4]. ()
6 RS-
232C PC [4]. 5



4. DAQ



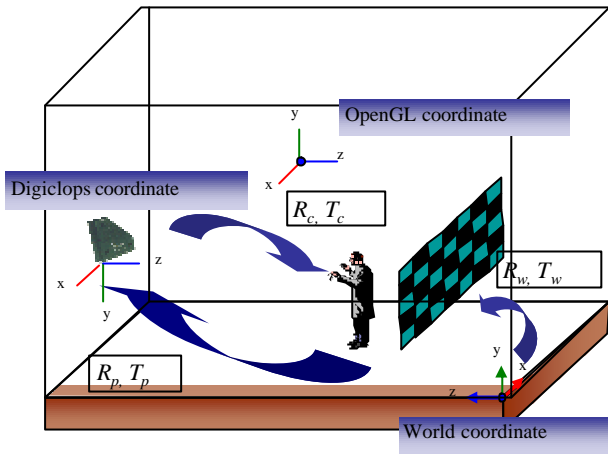
5.

2.3 (Information Integration system)

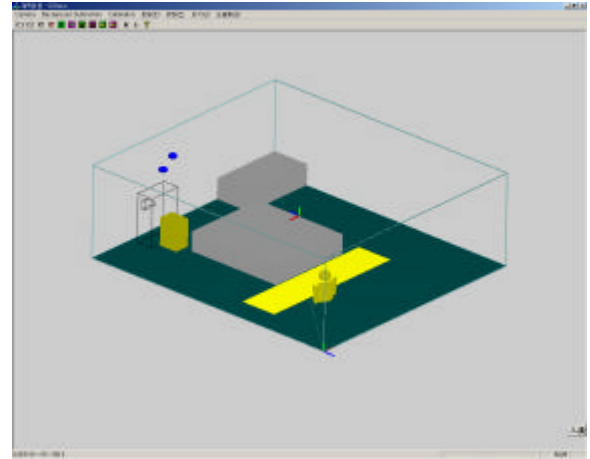
가

가

가



7.



8. 3D 가

4.

가

가

가

(rendering)

가

, OpenGL

가

World

3

[7].

3

가

가

가

가

8

3D

가

가

가

가

1

가

		Digiclops	
가			

1.

가

가

[1] *The New EasyLiving Project at Microsoft Research*, Joint DARPA/NIST Smart Spaces Workshop, July 30-31,

1998, Gaithersburg, Maryland

<http://research.microsoft.com/easyliving/>

[2] Ubiquitous Sensing for Smart and Aware Environments: *Technologies towards the building of an Aware Home*, FCE, GATECH

<http://www.cc.gatech.edu/fce/ahri/>

[3] *House_n Living Laboratory*, MIT

http://architecture.mit.edu/house_n

[4] Stanford Interactive Workspace Project

<http://graphics.stanford.edu/projects/iwork/>

[5] The Smart Floor: *A Mechanism for Natural User Identification and Tracking*, FCE, GATECH

[6] Milan Sonka, Vaclav Hlavac, Roger Boyle, *Image Processing Analysis, and Machine Vision*, PWS publishing, 1998

[7] R. Sharma, V. I. Pavlovic, T. S. Huang, "Toward Multimodal Human-Computer Interface," Proc. IEEE, Vol. 86, pp.853-869, MAY. 1998

