UNIVERSITY OF CALIFORNIA

SANTA CRUZ

AUGMENTED REALITY IN EMBEDDED SYSTEMS

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of the requirements for the degree of

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in

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by

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The Thesis of JISHENG YANG
is approved:

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Abstract

AUGMENTED REALITY IN EMBEDDED SYSTEMS

by

Jisheng Yang

1. State the problem briefly.

2. Describe the methodology.

3. Summarize the findings.

ProQuest recommends that the Abstract be no longer than 350 words, as it may be

posted to sites with limited file size

DEDICATION!

ACKNOWLEDGMENTS!

1   Introduction

Remember when Virtual Reality (VR) was all the rage? During the 1990s, it was widely applied in a vast variety of areas. But since the inception of Augmented Reality technology, VR's glorious days have been fading away. Augmented Reality (AR) technology combines the real-world environment with virtual scenes that are generated by computers. Thus the reality is "augmented" by a computer. With the help of other technologies such as image processing, location tracking and object recognition, AR technology enhances uses' perception of the reality. AR is widely used in machine maintenance, medical research, militay and commercial applications. However, most of the current AR systems are based on computers, which inevitably put limitations on AR systems' application. As the embedded micro-systems rapidly develop these days, system integration and image processing have been substantially improved, which provides technological basis for AR application in embedded systems.

2   Related Work

http://www.metaio.com/products/SDK/?gclid=CI7c1Y7_x7MCFSmCQgodgxAAmA

3   Method

$$\alpha = \sqrt{(x_1) + (x_2)^3} + \log(x_3)$$

4   Experiments

Please see Figure 1 for an example

5   Results

Results information will go in here...

6 Discussion

Discussion information will go in here...[**?**]

7 Test Figure/Table

Below are a test figure and a test table to show usage, and that they actually populate the automatically generated lists at the beginning of the document.

Figure 1: Augmented reality in mobile device.

	Pure Software	Pure Hardware
Vertex Stage	Software	Hardware
Pixel Stage	Software	Hardware
Typical Limits	Pixels	-
Framebuffer	Yes	No
Fast Texturing	No	Yes

Table 1: Table: Comparing software, hardware implementations.

References

[1] D. Amselem. A window on shared virtual environments. *Biometrics*, 4(2):130–145, 1995.

[2] M. Billinghurst, H. Kato, and I. Poupyrev. *The magicbook: a transitional ar interface.* CRC Press, 2001.

[3] G.W. Fitzmaurice. Situated information spaces and spatially aware palmtop computers. *Communications of the ACM*, 36(7):52–62, 1993.