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Sensor-supported game mechanisms for augmented reality

Bachelor’s Thesis

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# Abstract

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# Background

## Introduction

## Motivation

This paper builds on the work the author performed during an internship at the Open University of the Netherlands, as part of the WEKIT project. WEKIT (Wearable Experience for Knowledge Intensive Training) is a European research project that aims to develop a new approach to expertise transfer by means of wearable technology, by means of task-sensitive augmented reality. During this internship, the author was able to familiarize himself with topics such as augmented reality and the combination of various sensors.

A focus group survey (see appendix) undertaken in preparation for this paper with 18 participants – current and former game design students, as well as one professor for game design, with at least one year of game development experience each – revealed interest in the development of augmented reality applications but very mixed expectations of the field’s future in regards to both gaming and education; some participants noted a lack of knowledge of sensor technology. This combination of interest, skepticism and lack of experience suggests that an investigation into the prospects of augmented reality gaming could (currently) prove beneficial to game design students.

# Literature review

## Augmented Reality

### Definitions and taxonomies

### Applications

#### Industrial

#### Education and expertise transfer

#### Augmented reality games

### Current technology

### Outlook

#### Possibilities

#### Limitations

## Sensors

### Overview – sensors and actuators

### Sensors in games

### Sensors in augmented reality

# Development of a framework for sensor-supported augmented reality games

# Declaration of authenticity

# Appendix