

McGILL UNIVERSITY

DEPARTMENT OF ELECTRICAL & COMPUTER
ENGINEERING

ECSE 456 - FINAL REPORT

A Real-Time Object Tracking System

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Abstract

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1 Abbreviations & Notation

FPGA - Field Programmable Gate Array

ASIC - Application Specific Integrated Circuit

CPU - Central Processing Unit

DFG - Delta Frame Generation

2 Introduction

2.1 Motivation

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2.2 Applications

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3 Background

3.1 Video Processing

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3.2 Optical Flow

Ben (general) & Taylor (DFG)

3.3 Kalman Filter

Ben

3.4 Fixed vs. Floating-Point

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4 Requirements

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5 Design

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5.1 Algorithm

5.2 Software

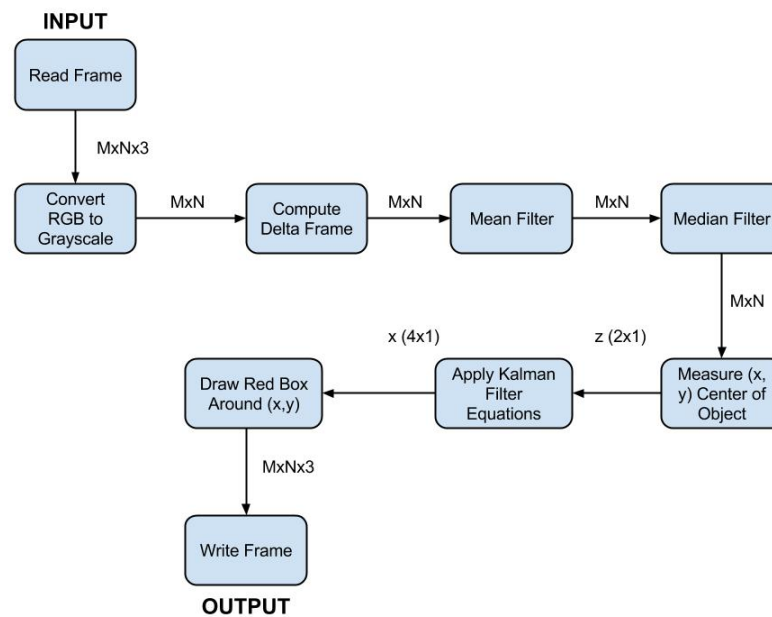


Figure 1: Software Flowchart

6 Future Work

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7 Impact on Society

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8 Allocation of Work

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9 Conclusion

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Appendices

A Additional Figures