Resource management and prioritization in an embedded Linux system

Fredrik Johnsson
Olle Svensson

LUNDS
UNIVERSITET

Department of Automatic Control

MSc Thesis
ISRN LUTFD2/TFRT--9999--SE
ISSN 0280–5316

Department of Automatic Control
Lund University
Box 118
SE-221 00 LUND
Sweden

Printed in Sweden by Media-Tryck.
Lund 2014

Abstract

A condensed decscription of my work.

Acknowledgements

These people helped me a lot with my work.

Contents

1 Introduction

This is a description of my work.

2 Background

It is becoming more common to have multiple resource intensive services running in Axis cameras. At the same time the demands are increasing on reliable and consistent video framerate and quality. That means that there is a problem with different services for the same resources. This needs a robust method to manage and prioritize the resources between the different applications. This method must be dynamic and able to scale or close applications, some of which may be deployed after the devices was installed at the customer site.

One method was developed at

3 Game Theory Resource Manager

3.1 Background

The Game Theory Resource Manager (GTRM) [**gtrm**] was developed at the Department of Automatic Control at Lund University by among others our supervisor and examiner.

3.2 Theory

4 Implementation

4.1 Axis hardware

4.2 Constraints

We decided that creating service levels for all the applications would not be a realistic approach. This is because there are many different applications, some of which may not even be developed at Axis, and we cannot expect people to modify them to implement the service level features needed. Instead we implemented the service level part only in the video streaming application.

4.3 Code

5 Results

6 Conclusion