JANNE EETU KORHONEN

VIDEOTESTAUS MOBIILAITTEISSA

Diplomityö

Tarkastaja: Ireneusz Defee Tarkastaja 1
Tarkastaja ja aihe hyväksytty
xxxxxxx tiedekuntaneuvoston
kokouksessa xx.xx.xxxx

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ABSTRACT

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ALKUSANAT

Tämä (*d-tyo.tex*) on LaTeX-pohja Tampereen teknillisen yliopiston opinnäytetöitä varten. Samaan pakettiin kuuluu myös tiedosto *tutthesis.cls*, joka sisältää taittoteknisiä lisäyksiä LaTeX:n alkuperäiseen *report.cls*-luokkatiedostoon.

Lisäksi otsikkosivua varten tarvitaan tiedosto *tty-logo.xxx*, jonka tulee sisältää TTY:n logo. Tiedoston tulee olla joko *.eps*- tai *.pdf*-muodossa riippuen LaTeX-versiosta.

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TERMIT JA NIIDEN MÄÄRITELMÄT

$\hbar$	Redusoitu Planckin vakio
SNR	Signaali-kohinasuhde (engl.: Signal to Noise Ratio)

1. INTRODUCTION

Every second there are xx minutes of video uploaded just to Youtube.com. Most of there videos are taken with mobile devices.

Analysis, subjective or objective, for video is just starting. In year xx there where xx articles in IEEE explorer but after two year the amount of arcticles has skyrockete and there is no end.

The goal for this thesis is to make state of art analysis of current methods of video testing. I will not study transmission erros over networks. I focus on erros coming from coding, device, optics, ois(optical image stabilization), etc. I try to focus more on non-reference methods but reference video methods are also studied well for reference.

On first chapter I will introduce what is mobile device and the restrcitions of it. Also different theories behind video are introduced.

Second chapter digs in to the differnet testing methods: subjective, objective, reference, non-reference, black box and etc.

Third chapter shows comparision of different methods or practical example done with matlab. This is under evalution.

Fourth chapter is for conclusions.

2. THEORY OF VIDEO TESTING

Testing citing [1]

2.1 Blink

2.2 Noise

2.3 Jerkiness

2.4 Jellyness

2.5 Frame drop

2.6 Blockiness

2.7 Blurr

2.8 Temporal

2.9 Spatial

3. DIFFERENT TESTING METHODS

3.1 Reference testing

3.2 Non-Reference testing

3.3 Objective testing

3.4 Subjective testing

4. PRACTICAL EXAMPLE OR COMPARISION OF METHODS

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5. CONCLUSIONS

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KIRJALLISUUTTA

[1] R. Ferzli and L.J. Karam. A no-reference objective image sharpness metric based on the notion of just noticeable blur (jnb). *Image Processing, IEEE Transactions on*, 18(4):717–728, April 2009.

A. LIITTEITÄ