Energy Management for IoT - Report Lab 02

Flavia Caforio (s257750) - Samuele Yves Cerini (s256813)

February 19, 2020

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1 Introduction

The goal of this second laboratory is to demonstrate how image manipulation can be used to tradeoff image quality to reduce the energy power consumption in emissive displays, like OLED ones. We will implement and test different techniques to modify a set of demonstrative images: we will evaluate the effect of the modifications both qualitatively and quantitatively. Finally we will also evaluate the gains (if any) in terms of power consumption, trying to define a trade-off between the image quality and the gains obtained in terms of power consumption. Finally, as an additional requirement, we will visualize these images onto a proper OLED (thus, emissive) display. The overall laboratory, and hence, the report, is divided into 2 main parts:

- Image manipulation, Distortion estimation and Power consumption
- Interfacing with the external OLED display and image manipulation on-the-edge