

Recent development in the field of distributed and decentralized cyber-physical systems led to emerge of DEECo model. As many DEECo use cases are embedded applications it is interesting to evaluate DEECo on embedded hardware.

Currently there is only reference DEECo implementation which is written in Java thus cannot be used for embedded applications. As part of this thesis C++ DEECo mapping and embedded CDEECo++ framework were designed using FreeRTOS operating system for task scheduling and synchronization.

An example application designed for the STM32F4 board demonstrates usability of the framework.

This thesis contains description of the DEECo mapping into the C++ language, source codes of the CDEECo++ framework, documentation and example application including basic measurement of its real-time properties.