

Forprojektrapport

E18 E6BAC-01 Forberedelse til

Bachelorprojekt

Designing Multichannel Audio- and Video-playback system:
Showman

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Chapter 1

Project Description

Development of multi-channel audio/video playback system for touring artists. This project will integrate both hardware- and software-design with emphasis on hardware design. Approx. 70-80 percent of modern Danish and international touring artists utilize audio backing tracks (prerecorded material played back on some chosen device) and video content projected on large screens as part of their performance.

However, there are a multitude of options ranging from iPod-playback to complex, customized systems operated by technical personnel.

Common for these systems is instability, making artists to purchase redundant backup-systems in order to deliver their audience a flawless and uninterrupted performance.

In a typical scenario, at least one laptop – often several laptops – with various audio- and/or videointerfaces, handles and runs the audio backing track and video-content in sync.

This project will integrate both audio- and video-handling in a single 19" rack-mounted device and provide the user with a user-friendly GUI (Graphical User Interface) while complying with international standards for audio and video and electronic devices.

For design and implementation of the device, a research is needed in:

- Circuit/hardware design
- D/A audio converters
- Standardized audio input/output formats
- Audio file formats
- Standardized video input/output formats
- Video file formats
- Time codes for synchronization
- User feedback for feasible GUI design

This project is already in the early stages of development as part of an apprenticeship in entrepreneurship (iværksætterpraktik) at Navitas Science and Innovation.

Current status on project:

- Requirements specification finished
- FURPS finished
- Market research ongoing

The project is requesting confidentiality as the device is in development intended for market release to prosumers in the music industry, thus an eventual project partner must sign a non-disclosure agreement.

Project partner profile: Electronic Engineering student or Information and Communication Technology student.

Chapter 2

Requirement Specification

(Udkast til) kravspecifikation

Chapter 3

Project Plan

(Udkast til) projektplan, herunder beskrivelser af hvilke eksperimenter, teknologier mm, der forventes udarbejdet i løbet af afgangsprojektet.

Chapter 4

Project Research

Undersøgelse af tilsvarende projekter og relevant litteratur.

Chapter 5

Project Expectations

Evt. aftale om forventet arbejdssted og tid.

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