Technische Universiteit Delft

TI3800 Bachelorproject

A non-centralized approach to Video on Demand on mobile devices

Architectural Design

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Abstract

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Chapter 1

Proposed Architecture

In this chapter the proposed prototype will be separated into different subsystems to give more insight into how to build the system. First the different subsystems will be elucidated, followed by an explanation on how the different subsystems interact with each other. The way the system stores data is clarified in section 1.2. Different threads might try to alter the same part of data which causes a concurrency issue, when this would be possible and how the team will attempt to solve this is described in section 1.3. How information flows from subsystem to subsystem in different use cases can be seen in section 1.4. Another important part of the system is how it deals with starting and stopping as well as crashes, how this will be implemented is explained in the final section.

1.1 System composition

In this section, the different subsystems are elucidated, followed by how they are combined together to form the proposed architecture of the prototype.

1.1.1 Subsystems

- **VLC**
    - LibVLC
    - LibVLCcore
    - VLC modules
    - Buffer
    - VLC media player

- **Tribler**
  - Core
  - Video Player control
  - Libtorrent
- **GUI**
  - start
  - VLC media player

1.1.2 Composition

In figure 1.1 a visual overview of the proposed architecture can be found. In this figure, the different subsystem are combined in to one system.

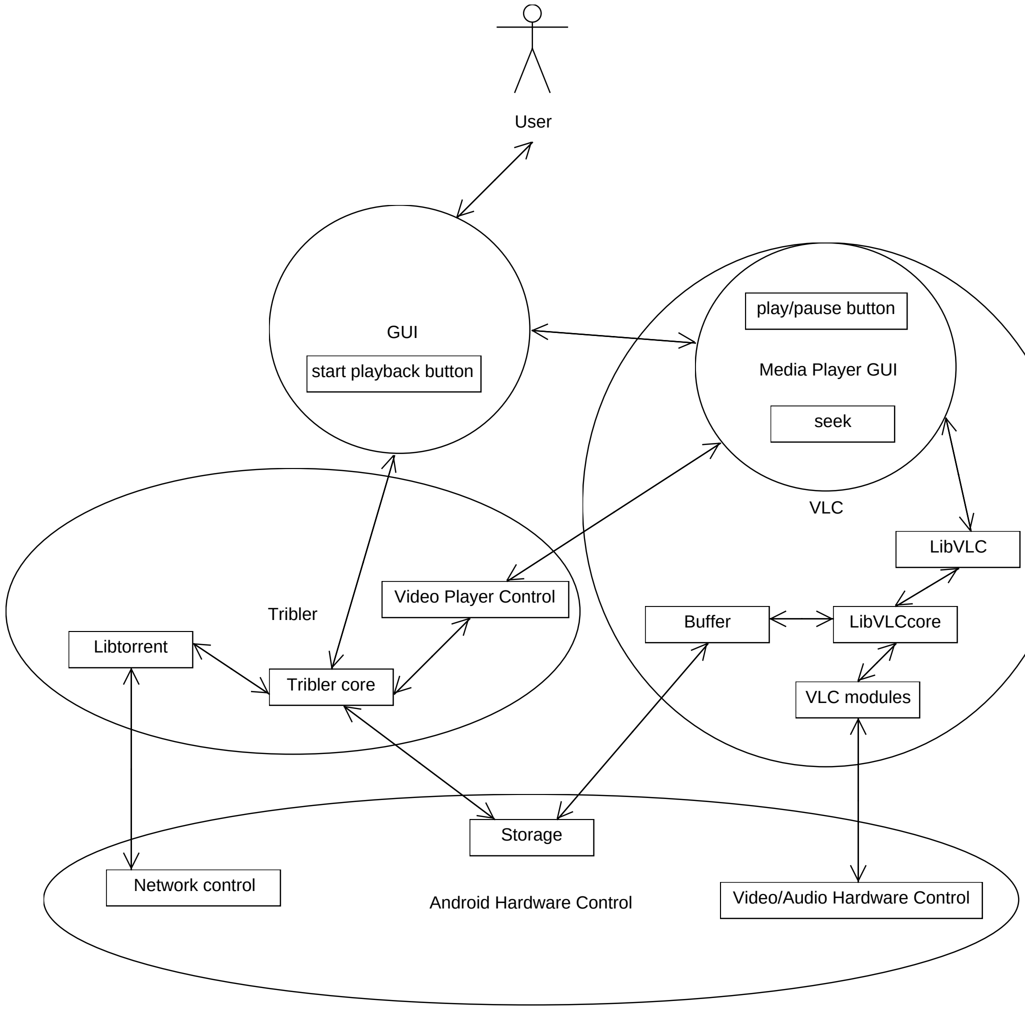

Figure 1.1: The proposed architecture of the prototype

1.2 Persistent data management

1.3 Concurrency

1.4 Software control

1.5 Boundary Conditions