

Developing a DVB-I Parser Library in Dart and GUI App in Flutter

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Abstract—DVB-I is a standards-based solution for delivering television via the internet. In this project, we aimed to develop an efficient DVB-I parser library in Dart and a GUI app in Flutter to present TV services on Android devices.

We used the Dart programming language to write the DVB-I parser library and Google's cross-platform Flutter framework to develop the GUI app. The parser library was designed to implement the required REST APIs and XML parsing according to the DVB-I specification. The GUI app was developed to use the DVB-I parser library to present TV services on Android devices.

We successfully developed an efficient DVB-I parser library in Dart that implements the required REST APIs and XML parsing according to the DVB-I specification. However, we faced challenges in developing the GUI app in Flutter due to multiple bugs in the libraries we used and sparse documentation. Despite these challenges, we were able to develop a working GUI app that uses the DVB-I parser library to present TV services on Android devices.

Our project demonstrates the feasibility of using Dart to write an efficient DVB-I parser library and Flutter to develop a GUI app that presents TV services on Android devices. However, the challenges we faced in developing the GUI app highlight the importance of robust libraries and documentation to support developers in using these technologies.

Index Terms—IP-TV, DVB-I, Flutter, Dart, Cross Platform

I. INTRODUCTION

In this project, we aimed to develop an efficient DVB-I parser library in Dart and a GUI app in Flutter to present TV services on Android devices. The DVB-I standard is a standards-based solution for delivering television via the internet and offers a discovery mechanism to signal and discover television services, using a set of REST APIs allowing clients to retrieve a list of services in an XML-based format. Our primary objective was to create a parser library that can efficiently handle the DVB-I service list registry and provide all the necessary information required to present the TV service in the client app. Additionally, we aimed to create an Android GUI app using Flutter that uses the DVB-I parser library to present the TV services to the user.

The development of the DVB-I parser library involved reading the DVB-I standard and manually emulating REST requests as specified by the specification. We also familiarized ourselves with the Dart programming language and experimented with simple coding examples to gain proficiency with the language. Once we had a good understanding of the standard and the language, we designed and developed the

DVB-I parser library using Dart, implementing the required REST APIs and XML parsing.

The development of the Android GUI app using Flutter involved building an intuitive user interface to present the TV services to the user, as well as incorporating the DVB-I parser library to retrieve and display the information for each service. We faced challenges while developing the app, including multiple bugs in libraries used and sparse documentation, which affected the app's functionality and usability.

In this evaluation, we will assess the success of our project in achieving its goals and evaluate the performance and usability of the DVB-I parser library and Android GUI app developed. We will also discuss the challenges encountered during development and recommend future improvements to enhance the overall functionality and usability of the app.

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TABLE I
TABLE TYPE STYLES

Table Head	Table Column Head		
	Table column subhead	Subhead	Subhead
copy	More table copy ^a		

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Fig. 1. Example of a figure caption.

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ACKNOWLEDGMENT

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