URN etd-0407109-183723-1948
Author Jie-Wei Yang
Author's Email Address No Public.
Statistics This thesis had been viewed 48 times. Download 0 times.
Department
Year 2004
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title FIC Decoder Design for DAB Receivers
Date of Defense 0000-00-00
Page Count 55

Keyword
DAB
FIC

Abstract
Digital Audio Broadcasting (DAB) was initially developed by the digital broadcasting technology research institute of Germany in 1980. It can be regarded as the third generation of broadcast system following the AM and FM radio systems. It also can be considered as a great revolution of broadcasting technologies. DAB employs the Orthogonal Frequency Division Multiplexing (OFDM) technology, which can convey a large number of information in a limited transmission bandwidth. Beside CD-like quality radio programs, the DAB system also can carry text, pictures, data and even videos. By using digital communication technologies, DAB offers further advantages, such as having good receiving ability under the multipath, shadowing, moving reception conditions; providing a good error protection and achieving a Single Frequency Network (SFN) reception environment.
While the DAB is promoting extensively, the portable multimedia products, such as PDA, mobile telephone have become more and more popular. It general, PDA and mobile telephone have a JAVA built-in design. The combination of DAB, PDA and and mobile telephone all in one is an obvious trend in the near future. Viewing this trend, we are motivated to investigate the JAVA-based decoder design of Fast Information Channel (FIC) of DAB receiver in this thesis. The FIC contains a complete key information about the DAB program services, for example transmission rate, channel information, data rate, error protection and service information etc... In order to decode (obtain) the Main Service Channel (MSC) of DAB which follows after FIC, we have to decode the FIC information first. In this project, we design a JAVA-based FIC decoder which can decode the DAB FIC bit stream. We also develop a Graphical User Interface (GUI) to present the decoded FIC information. Our Java-based FIC decoder has already been verified though a test bench of DAB bit stream signal provided by BBC.
Advisory Committee Yu-Chao Tang - advisor

Yu-Pin Chang - advisor

Files No Any Full Text File.
Date of Submission 2005-08-18