

High Speed Digital Down-converter for Digital Radar System

NYP's School of Engineering(Electronics) has collorated with Temasek Lab@NTU to develop an FPGA-based High Speed Digital Down-converter for Digital Radar System. The project involved the development of the next generation Digital Radar Receiver that will enhance operational readiness and situational awareness of the Singapore Armed Forces. The objective of this project is to develop a reconfigurable real-time digital wideband receiver for radar sensing, which performs real-time acquisition, digital down-conversion and filtering of the radar signals. In addition, the advanced FPGA can be reprogrammed to include other radar signal processing algorithms such as windowing, matched filtering, motion compensation and imaging.



Digital Video Broadcast Test Development for Digital TV System

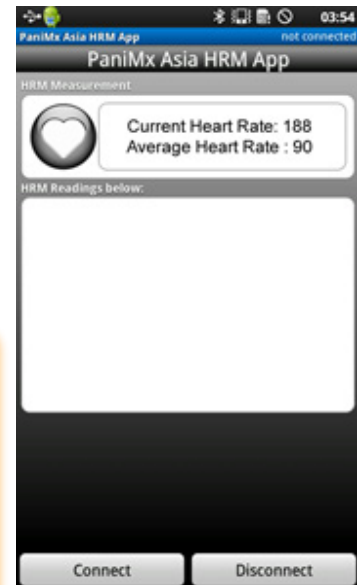
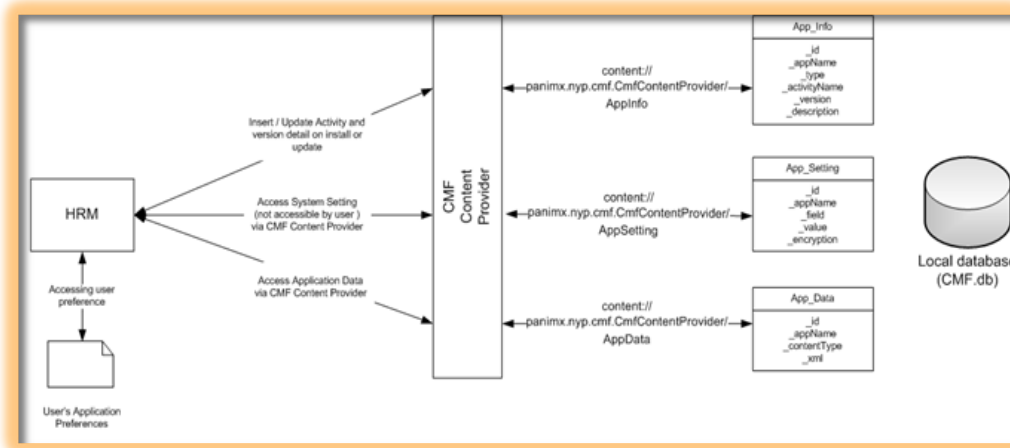
In line with the drive towards productivity and giving end users greater control and flexibility, automation of test cases helps to reduce test times and improve test accuracy. Rohde & Schwarz (R&S) engaged the Wireless Technology Centre of School of Engineering (Electronics) to develop a Digital Video Broadcast (DVB) test system that provides comprehensive quality examination of the mobile and portable DVB-H End User Terminals in a shorter time.



The test system enables R&S customers to easily configure and execute test cases thus increasing productivity in both production quality and verifications of DVB-H user terminals. A user-friendly GUI is designed to allow users to select multiple tests to be performed, with customised parameters. Test cases include carrier-to-noise performance tests, sensitivity tests, immunity tests, impulse noise interference tests and echo tests. Test reports will be generated automatically for easy reference.

Content Management Framework for HomZen System

This project was developed for PANiMX Asia Pacific Pte Ltd. It involves the design and development of a Content Management Framework (CMF) for PANiMX's HomZen System for mobile devices. The CMF provides a central repository to keep track of the connected mobile devices and their additional plug-ins that have been deployed to the HomeZen System. The CMF also serves as a central repository for the contents received from other sensors and devices interfaced to the HomZen System.



An application screen shot for a heart rate monitoring mobile app

System Overview

Android Application for FunTab Tablets

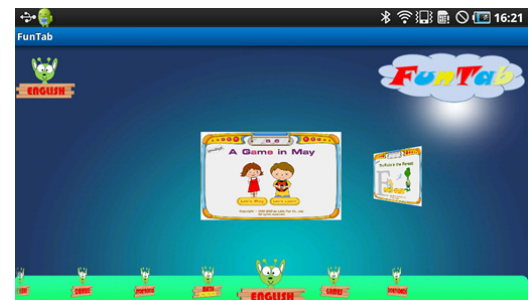
Pevoli Enterprise, a local SME that provides e-learning contents for the education industry, approached COIE to design and develop an Android application for its FunTab devices. FunTab is the mobile platform that serves and manages e-learning contents to end users.

The developed Android app has the following features:

Implement Digital Rights Management for Pevoli to manage content distribution

Enable users to access the e-learning contents which are in interactive digital media formats

Provide encryption/decryption to prevent unauthorised use of the contents on other devices



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