**Project Development Plan**

CSE, HCMUT

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| --- | --- | --- | --- |
| **Project Name** | *mPlayer – MP3 Player* | | |
| **Date** | *10/05/2013* | **Version** | *Version – 1.0* |
| **Author** | *Nguyen Van Hung*  *Ho Nhut Minh*  *Huynh Khanh Phong* | **Approver** | *PhD. Vu Tuan Thanh* |
| **Organization** | *Embedded System Class - Faculty of Computer Science and Engineering – HCMC University of Technology* | | |

**Revision History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date:** | **Change Contents** | **Author** | **Approver** |
| *0.1* | *10/03/2013* | *Document created.* | *Hung* |  |
| *1.0* | *10/05/2013* | *Modified Repository and Directory Structure, Document* | *Hung, Minh, Phong* |  |
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# Project Overview

The project includes 6 modules that must be finished within **8 weeks (4 weeks for coding)**. The features of each part are as follow:

* *File\_system*
  + *Initial SD card and prepare for further operation*
  + *Read file from SD card in FAT32 format*
  + *List music and txt files on SD card in directories on LCD*
* *Display*
  + *Display playing song’s name*
  + *Display playing lyric*
  + *Display option menu*
  + *Display list of songs*
  + *Display playing setting*
* *Play music file*
  + *Send mp3 file content to VS 1011 board*
  + *Choose file to play, play next file, play previous file*
* *Read file txt and lrc*
  + *List file txt in SD card*
  + *Read content of txt file*
  + *Display text on LCD page by page*
  + *Show lrc file as lyric to LCD when music playing*
* *Stream music from music streaming server*
  + *Connect to server – which currently is a laptop*
  + *Play music*
* *Controller*
  + *Adjust volume from mute to maximum volume*
  + *Choose song from song list*
  + *Playing mode: repeat, shuffle*
  + *By button: UP, DOWN, LEFT, RIGHT, SELECT*

# Roles and Responsibilities of the Project Organizations

| **Organization** | | **Roles and Responsibilities** | **Person in Charge** | **Department** |
| --- | --- | --- | --- | --- |
| Development Organization | Project Leader | Establish and manage the project schedule. | *Minh* | *HCMUT* |
| HW, SW Development | *File system* | *Phong* | *HCMUT* |
| *Play music file* | *Minh* | *HCMUT* |
| *Display* | *Hung* | *HCMUT* |
| *Controller* | *Hung* | *HCMUT* |
| *Read file txt and lrc* | *Phong* | *HCMUT* |
| *Stream music* | *Minh* | *HCMUT* |
| SW Configuration Management | Plan and perform the SW configuration management plan. | *Hung* | *HCMUT* |
| Unit Test | Perform a unit test. | *Minh* | *HCMUT* |
| UI APP | Perform the implementation and test. | *Phong* | *HCMUT* |

# Development Plan

## Development Schedule

Refer to [*<mPlayer WBS.xls>*](mPlayer%20WBS.xlsx)

## Development Environment

| **Item** | **Development Environment** | **Remarks** |
| --- | --- | --- |
| Desktop Environment | Personal laptop |  |
| Program Languages | C |  |
| HW Platform | LM3S6965 |  |
| IDE | Keil ARM, Source Insight | For education purpose, this software may not be registered. |
| Compiler, Build | Keil ARM |  |
| Host Operating System | WindowsXP, Windows7, Windows 8 |  |
| Word Processor for Document Creation | MS Word, MS Excel |  |
| Configuration Management | SVN – Tortoise Application |  |

### Unit Test Execution Plan

| **Path of target code** | **Class or function** | **Remarks** |
| --- | --- | --- |
| *Source\file\_system* | All functions |  |
| *Source\main* | All functions |  |
| *Source\graphic* | All functions |  |
| *Source\ebook\_lyrics* | All functions |  |
| *Source\mp3\_driver* | All functions |  |
| *Source\http\_streaming* | All functions |  |

|  |  |  |
| --- | --- | --- |
| **Category** | **Content** | **Remarks** |
| Unit Test Tool | UART with Laptop terminal |  |
| Coverage Measure Tool | N/A |  |

# Configuration Management Plan

## Document

| **SW Confi-guration Item** | **Document Number** | **File Name** | **Repository and Directory Structure** | **Author** |
| --- | --- | --- | --- | --- |
| SW Proposal | MPL-DOC01 | *<mPlayer Proposal.docx>* | Documents\mPlayer\_PA\_Documents | Hung |
| SW Requirements Specification | MPL-DOC02 | *<mPlayer Requirement Specification.docx>* | Documents\mPlayer\_EA\_Documents | Phong, Minh |
| SW Development Plan | MPL-DOC03 | *<mPlayer Development Plan.docx>* | Documents\mPlayer\_EA\_Documents | Hung, Phong |
| SW System Test Plan | MPL-DOC04 | *N/A* | *N/A* | *N/A* |
| SW High & Detail Design | MPL-DOC05 | *<mPlayer Detailed Design.docx>* | Documents\mPlayer\_ER1\_Documents | Phong, Minh |
| SW System Test Design | MPL-DOC06 | *N/A* | *N/A* | *N/A* |
| SW System Test Result | MPL-DOC07 | *N/A* | *N/A* | *N/A* |
| SW Development Completion | MPL-DOC08 | *<mPlayer Completion.pptx>* | Documents\mPlayer\_CA\_Documents | Hung, Phong, Minh |

## SW Source Code

### SVN

*Checkout URL : https://subversion.assembla.com/svn/mplayer2013/*

### Version Naming Rule

|  |  |
| --- | --- |
| **SW Category** | **Version Naming Rule** |
| Product Code | mPlayer-[Major number].[Minor number] |
| Common Code | IM-[Version];  MPL-[Version];  DEV-[Version];  UI-[Version];  STEST-[Version] |

### Repository and Directory Structure

| **SW Category** |  | **Representative Component** | **Component** | **Component Path** | **SW Components** | **Developer** |
| --- | --- | --- | --- | --- | --- | --- |
| Product | Integration | N/A | MPLAYER | \Project | Integration | All team members |
| Common | Modules | N/A | MAIN | \Source\main | Controller, main program | Hung, Minh |
| N/A | MP3 DRIVER | \Source\mp3\_driver | Interface for VS1011E | Minh |
| N/A | STREAMING | \Source\http\_streaming | Music streaming | Minh |
| N/A | EBOOK | \Source\ebook\_lyrics | E-book and lyrics reader | Phong |
| N/A | PERIPHERAL | \Source\peripheral | Peripheral select and deselect | Hung |
| N/A | BUTTONS | \Source\buttons | Buttons state machine | Minh |
| N/A | FILE SYSTEM | \Source\file\_system | File system manager | Phong |
| N/A | GRAPHIC | \Source\graphic | Display graphic | Hung |
| N/A | LIBRARIES | \Library | Libraries | N/A |

## Baseline

| **Category** | **Baseline Name** | **Configuration Item** | **Approval Schedule** |
| --- | --- | --- | --- |
| Technical Document | EA | SW Development Plan | 10/03/2013 |
| SW Requirements Specification | 10/03/2013 |
| SW System Test Plan | 17/03/2013 |
| ER1 | SW High Level Design | 06/05/2013 |
| SW Detailed Design | 06/05/2013 |
| CA | SW System Test Report | 20/05/2013 |
| SW Development Completion Report | 20/05/2013 |
| SW Source Code | Initial version | mPlayer-0.1 | 06/05/2013 |
| CA | mPlayer-1.0 | 20/05/2013 |

# Risk Management Plan

Refer to [*<* *mPlayer Risk Checklist.xls>*](mPlayer%20Risk%20Checklist.xlsx)