OCT v1.0-stable

Maintenance Manual

Denis SAUNIER, Romain BOUTIN,

Thibaud LAMARCHE, William LE COROLER

Mars 09, 2015

Referring professor: Philippe MESEURE

catalogue ouvert du cinéma

1. Diffusion list

Diffusion list		
Organism	**Name of the receiver**	**E-mail adress**
Cinema ouvert	Robin KRIER	robin@cinemaouvert.fr

2. Version follow

Document Follow			
Version	**Date**	**Name of the author**	**Comments**
1.0	09/03/14	Thibaud Lamarche	Initial version of the document

Table des matières

3. Introduction

1 Constraints

This project contains some constraints :

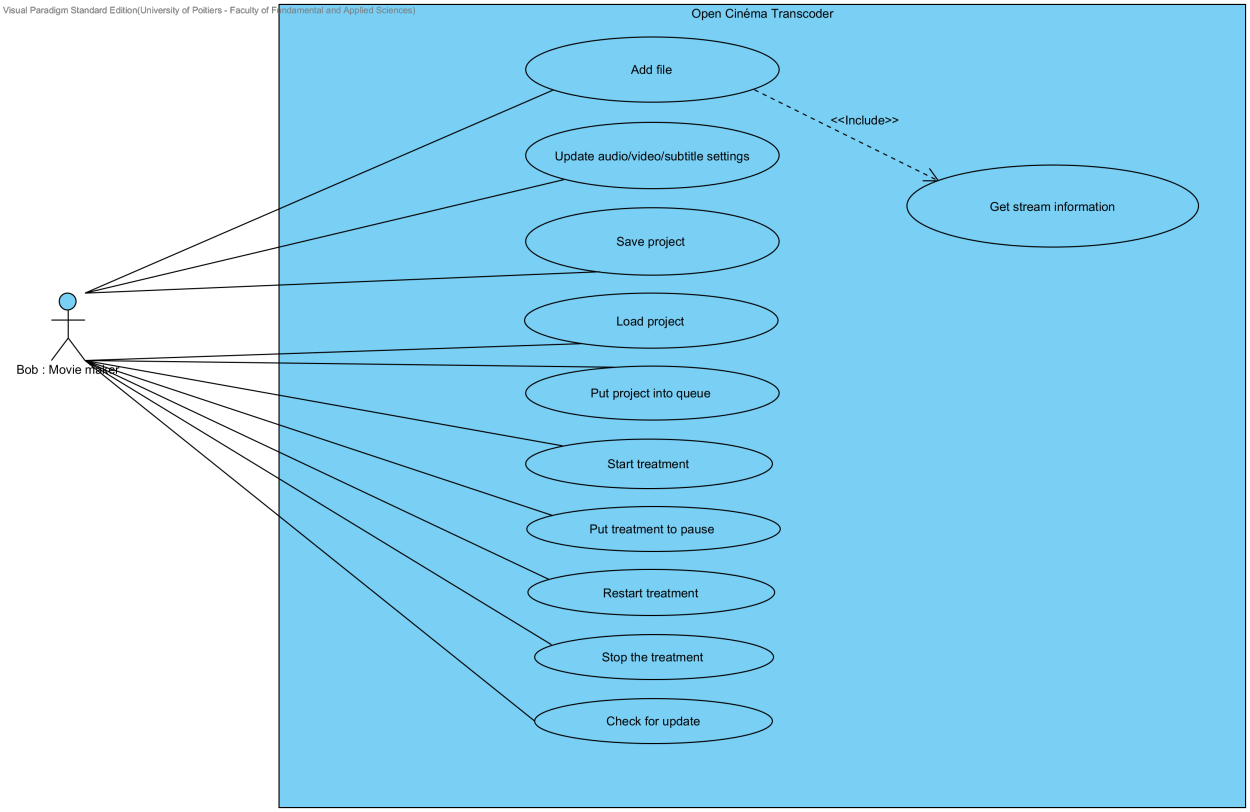
- in order to evolve (with the community help), the software must be released under a free license (GNU GPL License).

- the software must deal with multiple platforms such as Linux, Mac OS and Windows, in this specific order because Linux is aimed at the programmers community to allow further development, Mac OS because it is used by a large portion of projectionists and finally Windows to ensure that the software is available for a larger group of people.

4. Analysis

1 Use case diagram

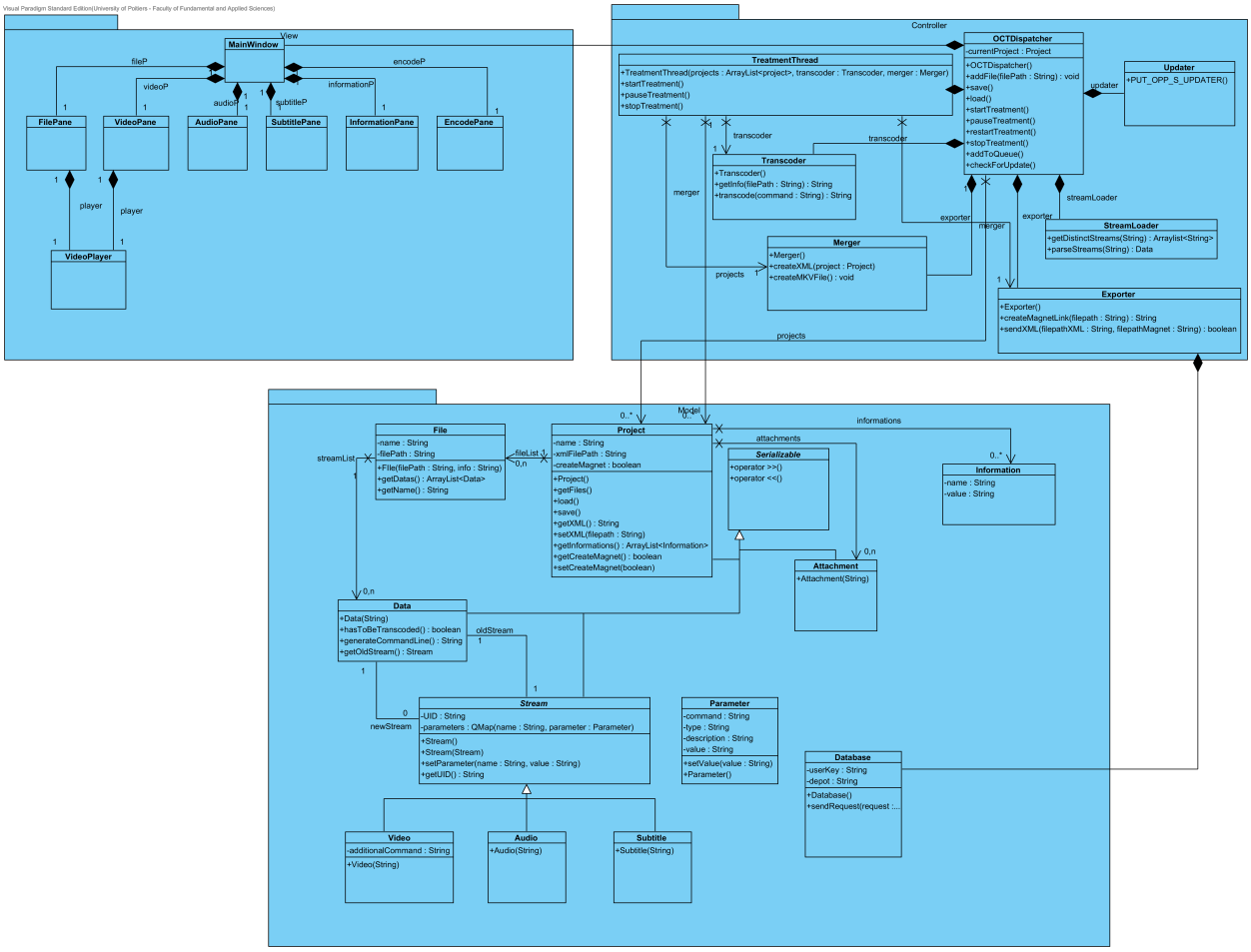
In this software the user must be able to do several actions, this use case diagram is there to represent it :



2 Class Diagram

The software is following the MVC pattern.

Here you can see the architecture of the software.



5. Class description

1 Model

Attachment

Name	Attachment.cpp / Attachment.h
Description	Attachment is used to manage attachment file information. Attachment file is all except video, audio and subtitle file.
Interaction	Project, OCTDispatcher, FilePane, InformationPane,
Critical aspect	

Audio

Name	Audio.cpp / Audio.h
Description	Audio class inherits of Stream Audio is used to manage audio file information and parameters. It create an Audio object from an XML producted by ffprobe.
Interaction	File, OCPMValidation, Project, StreamWrapper, OCTDispatcher, AudioPane, FilePane, MainWindow
Critical aspect	Constructor is based on XML producted by ffprobe.

Database

Name	Database.cpp / Database.h
Description	Database class is used to manage web service CODB-Depot. It send and get information in JSON from this web service
Interaction	Export
Critical aspect	Require the Internet connection

File

Name	File.cpp / File.h
Description	File is used to manage all input File except Attachment. Constructor determine number and type of sreams contained in the file.
Interaction	Project, OCTDispatcher, TreatmentThread, AudioPane, FilePane, MainWindow, SubtitlePane, VideoPane
Critical aspect	identification of streams type is based on XML producted by ffprobe.

OCPMValidation

Name	OCPMValidation.cpp / OCPMValidation.h
Description	OCPMValidation is used to load / check validation it also uses to load preconfiguration
Interaction	OCTDispatcher, AudioPane, FilePane, InformationPane, SubtitlePane, VideoPane
Critical aspect	load file from XML formated as OCPT recommendation

Parameter

Name	Parameter.cpp / Parameter.h
Description	Parameter is used to manage streams parameters. it contains commande line used to transcode a stream.
Interaction	Audio, File, OCPMValidation, Stream, Subtitle, Video, OCTDispatcher, AudioPane, FilePane, SubtitlePane, VideoPane
Critical aspect	

Project

Name	Project.cpp / Project.h
Description	Project is used to manage the global project. it create commande line for the transcoder and the merger
Interaction	Exporter, Merger, OCTDispatcher, TreatmentThread, and all classes form View
Critical aspect	

Serializable

Name	Serializable.cpp / Serializable.h
Description	Init serializable values for all the model
Interaction	Used by the OCTDispatcher in the constructor
Critical aspect	

Stream

Name	Stream.cpp / Stream.h
Description	superclass of Audio, Subtitle and VIdeo
Interaction	same as Audio, Subtitle and Video
Critical aspect	

StreamWrapper

Name	StreamWrapper.cpp / StreamWrapper.h
Description	StreamWrapper is used to manage a stream. it contains two stream, the original and one with the modification to apply
Interaction	same as Audio, Subtitle and Video
Critical aspect	

Subtitle

Name	Subtitle.cpp / Subtitle.h
Description	Subtitle class inherits of Stream Subtitle is used to manage subtitle file information and parameters. It create an Subtitle object from an XML producted by ffprobe.
Interaction	File, OCPMValidation, Project, StreamWrapper, OCTDispatcher, FilePane, MainWindow, SubtitlePane
Critical aspect	Constructor is based on XML producted by ffprobe.

Video

Name	Video.cpp / Video.h
Description	Video class inherits of Stream Video is used to manage audio file information and parameters. It create an Video object from an XML producted by ffprobe.
Interaction	File, OCPMValidation, Project, StreamWrapper, OCTDispatcher, FilePane, MainWindow, VideoPane
Critical aspect	Constructor is based on XML producted by ffprobe.

2 View

AudioPane

Name	AudioPane.cpp / AudioPane.h
Description	AudioPane is used to manage audiopane.ui it shows informations about audio input file and allow operation on them
Interaction	MainWindow
Critical aspect	

EncodePane

Name	EncodePane.cpp / EncodePane.h
Description	EncodePane is used to manage EncodePane.ui it shows informations about the project and allow operation on them
Interaction	MainWindow
Critical aspect	

FilePane

Name	FilePane.cpp / FilePane.h
Description	FilePane is used to manage FilePane.ui it shows informations about files and streams contained in the project. it allows add / remove file from the project. it also shows if file is valide about OCPM .
Interaction	MainWindow
Critical aspect	refresh method particulary fat!

InformationPane

Name	InformationPane.cpp / InformationPane.h
Description	InformationPane is used to manage InformationPane.ui it allows to fill in OCPM information field
Interaction	MainWindow
Critical aspect	

MainWindow

Name	MainWindow.cpp / MainWindow.h
Description	MainWindow is used to manage MainWindow.ui it is used to create all pane of the window according to the file contained on the project
Interaction	
Critical aspect	

MyDelegate

Name	MyDelegate.cpp / MyDelegate.h
Description	MyDelegate is used to manage the QListView on EncodePane
Interaction	EncodePane, FilePane
Critical aspect	

MyModel

Name	MyModel.cpp / MyModel.h
Description	MyModel is used to manage the QTableView on FilePane
Interaction	FilePane
Critical aspect	

ParametersDialogue

Name	ParametersDialogue.cpp / ParametersDialogue.h
Description	Class used to display the parameters window used to manage settings
Interaction	Opened by the MainWindow
Critical aspect	

QueueListView

Name	QueueListView.cpp / QueueListView.h
Description	This class extends the QListView to manage the project list displayed in the encode pane
Interaction	Used in the encode pane
Critical aspect	

SubtitlePane

Name	SubtitlePane.cpp / SubtitlePane.h
Description	SubtitlePane is used to manage SubtitlePane.ui it shows informations about Subtitle input file and allow operation on them
Interaction	MainWindow
Critical aspect	

VideoPane

Name	VideoPane.cpp / VideoPane.h
Description	VideoPane is used to manage VideoPane.ui it shows informations about Video input file and allow operation on them
Interaction	MainWindow
Critical aspect	

VideoPlayer

Name	VideoPlayer.cpp / VideoPlayer.h
Description	Used to display the video streams
Interaction	Used in video and subtitle panes
Critical aspect	

3 Controller

Exporter

Name	Exporter.cpp / Exporter.h
Description	Exporter is used to interact with the database, it also used to create magnet Link and Torrent.
Interaction	OCTDispatcher, TreatmentThread
Critical aspect	Require mkTorrent, OCT.jar, and a the Internet connection

LoggerSingleton

Name	LoggerSingleton.cpp / LoggerSingleton.h
Description	This loggerSingleton to display the log in the interface and in a log file
Interaction	used by the qApp to redirect qDebug qWarning …
Critical aspect	

Merger

Name	Merger.cpp/ Merger.h
Description	Merge is used to merge files on a MKV via *MKVmerge*.
Interaction	OCTDispatcher
Critical aspect	

OCTDispatcher

Name	OCTDispatcher.cpp / OCTDispatcher.h
Description	OCTDispatcher is used to manage all the program. It’s the “main” class
Interaction	All
Critical aspect	

Transcoder

Name	Transcoder.cpp / Transcoder.h
Description	Transcoder is used to transcode stream / file via *ffmpeg.* It also used to get informations from file via *ffprobe*.
Interaction	OCTDispatcher
Critical aspect	

TreatmentThread

Name	TreatmentThread.cpp / TreatmentThread.h
Description	TreatmentThread is used to execute Operation like merge or transcode on a thread.
Interaction	OCTDispatcher
Critical aspect	

Updater

Name	Updater.cpp / Updater.h
Description	Updater is used to manage and update the version of the program
Interaction	Used in the MainWindow
Critical aspect	

Utils

Name	Utils.cpp / Utils.h
Description	Utils is a class with static methods like convertion methods, md5, sha-1
Interaction	
Critical aspect	

6. Maintenance

1 Dependencies

The software uses these libraries:

- MKVtoolnix (used to merge file on MKV)
- ffmpeg (used to get information from file and transcode)
- QtAV (used for the videoplayer on the HCI)
- MKTorrent: (used to create the torrent file)
- CODB-Depot: (database needed to share mkv and know the actual OCPM recommendation)
- QtNetwork to manage the conenction to the BDD
- QtXml & XMLPattern to manage the ffmpeg informations

2 Compilation

The compilation can be done on Windows, Linux and MacOs with QtCreator.
For more explanation, take a look at this link:
How to compile

3 Change version number of OCT

The version number of the software program is shown in the configOCT.h file. To modify the version, you must change the value of the variable “VERSION”.

```
//va.b.c
 // a = number for the release
 // b = number for the minor version
 // c = number for the small changement
 const QString VERSION = "v0.0.1";
```

4 Update

To upgrade OCT, the software checks the version number from the release on the http://cinemaouvert.fr/ website.
The web tree is http://cinemaouvert.fr/update/OCT/ “NAME OF OS” / latest /
In the folder “latest”, you can find the installer and a file “version.txt” with the version number inside.

If you want to update the name of the installers, take a look at the file configOCT.h.

5 Creating installers

We have created an installer for several operating system. For Windows, we generate an installer with “Inno Setup Compiler”, for Ubuntu/Debian a .deb with “Debreate” and for Mac OS a .pkg with “packageManager”.

6 Licence

The software is delivered under the version 3 of the GNU GPL license. For all details about GPL license, refer to the following page http://www.gnu.org/licenses/gpl.html

7. Deployment

1 Translation

The software use a translation system. The default language is English, the other languages can be integrated from translation files.

How to How to translate

2 Installers

We have created an installer for several operating system. For Windows, we generate an installer with “Inno Setup Compiler”, for Ubuntu/Debian a .deb with “Debreate” and for Mac OS a .pkg with “packageManager”.
How to create an installer

3 Generate the Doxygen

To generate the Doxygen documentation, you can download Doxywizard and install Doxywizard with Graphviz.

Download link: http://www.stack.nl/~dimitri/doxygen/manual/doxywizard_usage.html

Then, you must get doxyFile on your local repository of OCT and run Doxywizard with the doxyFile.