

CARDIFF UNIVERSITY

PROJECT PLAN

Developing a video plugin for OBO-Edit
to support physiotherapy applications of
this open-source ontology editor

Author:

Thomas EDWARDS

Supervisor:

Dr. I SPASIĆ

Moderator:

Professor Paul Rosin

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Project Description

OBO-Edit is an open source ontology editor written in the Java programming language that supports the OBO format, a web ontology format. OBO format is a “Biologist friendly” alternative to OWL and has been used in order to represent a wide variety of biomedical ontologies. One successful contribution to the “OBO-Edit” project is the Term Image Plugin. The Term Image Plugin allows a user to attach an image to an ontology term and in turn will allow the user to view images related to ontology terms.

One of the projects currently being worked on as joint effort between the School of Computer Science and in Informatics and the School of Healthcare Sciences is a physiotherapy ontology designed to help the treatment of knee conditions. The project relies on detailed descriptions of several physiotherapy exercises and has been adapted to make use of the Term Image Plugin where images have been used in order for exercises to be understood in a non-interpretive manor. Where videos have been a tremendous help in the project it is still felt that ambiguity remains within the explanations of exercises.

This project will investigate the use of video in unambiguous interpretation of information and will aim to develop a plugin for use with the OBO-Edit software based on the term image plugin.

Project Aims and Objectives

Below is a list of aims and objectives for this project:

- Investigate licenses for the Term Image Plugin
As the Term Image Plugin achieves the integration of images within the OBO-Edit software one of my first tasks will be to determine how reusable the code is from the project.
- Investigate integrate-ability of the Java FX platform
The project will rely heavily on video and standardized support will be a key element of the product. If possible it would be beneficial to keep the implantation as standard as possible to aid usability.
- Investigate the practicality of having video conversion
One of the major elements of this project is to have a system that aids usability. Therefore, if possible video conversion is a desirable feature as reduces constraints on how the end user can use the product.
- Strip the Term Image Plugin of reusable assets
As the Term Image Plugin already achieves integration with OBO-Edit it will be looked at to decide if it contains any reusable assets
- Create a working video player within the Java Language
The project requires a video player to be produced. With this objective the end video player will be produced and be accessible through a standard java installation.
- Create a database link and subsequent database
The database will be used for connecting videos to locations within the ontology
- Join all modules to create the plugin
All of the aforementioned modules will need to be integrated together in order to produce the final plugin

- User testing

This project will focus a lot on the end user and therefore appropriate user testing will cover a large part of the project.

Work plan

The work plan for this project will work as a series of milestones. Below is my table of milestones and predicted dates of completion:

Milestone	Expected to be completed by	Task	Deliverables	Potential Obstacles
1	End of week 2	Initial research	Plans on what can and cannot be used from Term as well as information on extending the functionality of OBO-Edit	-
2	End of week 3	Produce video player	Have a functional Java video player outside of OBO-Edit	Compatibility issues
3	End of week 4	Produce video conversion module	A module that is able to take in a number of specified video formats and output a file friendly to the video player.	Compatibility issues
4	End of week 6	Integrate work to OBO-Edit	Beta plugin that communicates with OBO-Edit using a database for references	Compatibility issues
5	End of week 7	User testing	A list of plausible modifications and issues with the then current system	-
6	End of week 8	Bug fixes	-	Unforeseen software problems

7	End of week 9	Finalisation	At this point the plugin should be rounded off	Unforeseen software problems
8	By the end of week 11	Work on final report and cleaning up loose ends	At this point the project should be submittable	Falling behind and unresolved issues. To be countered by leeway time allocated to this milestone

References

John Day-Richter, 2013. OBO-Edit [Webpage]. Available from: <http://oboedit.org/docs/index.html> [accessed Monday, 19 January 14]

Monica Pawlan, 2013. What Is JavaFX? [Webpage]. Available from: <http://docs.oracle.com/javafx/> [accessed Monday, 19 Janaury 14]