Trade-Off Analysis of FLOSS technologies for implementing Human Machine Interfaces

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Resumen

The main purpose of this Master Thesis is to perform a comparative study of some of the most popular Open Source solutions used in the implementation of Human Machine Interfaces.

1. Objectives

The objective of this Master Thesis is:

Perform a comparative study of some of the most popular Open Source solutions used in the implementation of Human Machine Interfaces

This objective can be splitted in the following high-level tasks:

1. Select a set of representative technologies for different environments (web, desktop and mobile devices)
2. Define a checklist of points to be analyzed for each solution
3. Analyze each solution separately
4. Study if there are proprietary solutions competing with the Open Source solution
5. Summarize pros and contras of each solution
6. Compare the list of pros and contras between solutions

2. Motivation

The study of solutions available for implementing Human Machine Interfaces is quite interesting for me due to the fact that my work is very related with this kind of software applications and in the other side I personally like a lot this field.

3. Experience in HMI environments

Profesionally and for other personal projects I have a basic knowledge of several APIs for building Desktop HMIs such as Java Swing and Eclipse RCP and also know several web frameworks like Struts, Spring MVC, Liferay, Joomla, Yii etc...

4. Involved Technologies

- Java EE: Large Experience in several professional projects
- Java Swing API: Large Experience in several professional projects
- Eclipse RCP: Basic experience in a couple of professional projects
- PHP: Basic experience
- Ruby: Basic experience
- Python: No previous experience apart from the knowledge adquired during the Developement subject of the Master
- Android: No previous experience

5. Proposed Schedule

The following tentative schedule is proposed:

1. Select a set of representative technologies: December 2011
2. Define a checklist of points to be analyzed for each solution: January 2012
3. Analyze each solution, summarize pros and contras: April 2011
4. Compare solutions: May 2011
5. Thesis delivery: June 2012

6. Other issues

My idea is to follow and iterative process for the Thesis, starting from the very beginning to write the memory which will be an evolving document.