

# Implementation of the OpenHart workflow in DAE platform

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# OpenHart

## OpenHart

- OpenHart is competitive exam set up by the National Institute of Standards and Technology.
- Teams of developers are evaluated on their performance in handwriting documents transcription and translation.
- The evaluation tool is not really handy.

# QGAR

## QGAR

- QGAR is a research team of the laboratory “Loria”.
- They are working in the area of graphics recognition and document analysis.
- Implementation the OpenHart evaluation system on DAE platform.

# What we had to do

## People involved

- Bart LAMIROY (QGAR)
- Jean-François SCHEID (Télécom Nancy)
- Clément AUDAM, Julien BIDOLET, Pierre PEZOT

## Proof of concept

Proof of concept: OpenHart implementation on the DAE platform using web services.

Organization:

- Meetings
- Working time
- Tools

## Our work

### DAE Analysis

#### The goal

Create and link two simple web-services :

- Generate a list of random images URL in DAE
- For each, download and rotate the image

#### Attempts to communicate with DAE

- Use pre-generated URL to send a request
- Use the WSDL representation of web-services
- Simply execute web-services with Taverna

# Our Work

## OpenHart Analysis

### The goal

Modeling the OpenHart evaluation process with Taverna

### Tasks

- Create a simple model of OpenHart's pipeline
- Web services specifications
- Understand and document metrics for the algorithms' evaluation
- Try to understand the algorithm of a participant

# Our work

## Problems encountered

### DAE communication protocols

- Difficult to use different tools
- Insufficient communication

### Difficult to understand how the OpenHart pipeline works

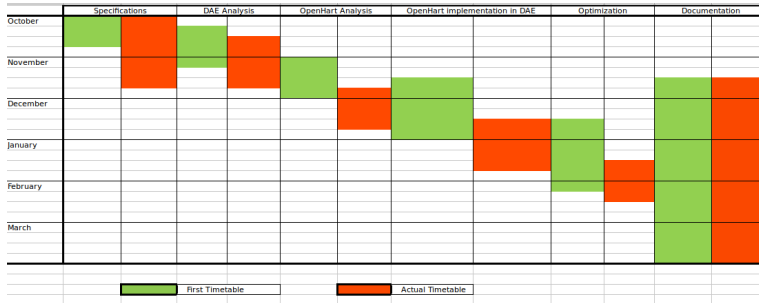
- Few documentation
- Complicated makefile



# Upcoming work

## Planned Work

The timetable has changed



Timetable comparison

# Upcoming work

What we are going to do

## Implement OpenHart in DAE

- Implement algorithms running
- Implement metrics

## Optimization

- Write an optimizations manual
- Optimize!

## Documentation

Keep documenting the code

## Conclusion

Even if we haven't finished the project, we have already learned a lot about project management and organization.  
We would like to thanks Bart Lamiroy and Jean-François Scheid for their help.

