

UpWind – New architecture II

Project proposal for Project II – course (SS 22.8.2011)

Background

The UpWind project is an Open Source Software Development project initiated and coordinated by the UpWind team at TOL. Since 2006, we have developed an advanced navigator for sailboats together with a real world simulator against which the navigator can be efficiently tested. Today, the Navigator includes most important functionalities, e.g.:

- layered vector chart rendering
- zooming, panning
- connections to the most important sailing instruments (GPS, wind, compass)
- automatic long term and short term route planning

During last two semesters, student projects have renewed both the navigator and the simulator on a new plug-in based architecture. Plug-in architecture allows easy adding and/or replacing of features. Now, the transformation of the navigator should be finished on the new architecture. The remaining parts include the interesting functionalities of the chart rendering and automatic route planning.

Task

The vector chart rendering, and automatic long term and short term route planning will be implemented by following the plug-in architecture. Both of these features have been earlier implemented and tested, so the work will be mostly porting of code to the new architecture style.

Working methods

The project will work in agile mode (SCRUM) implementing 5-6 sprints. We will use continuous integration (CI) approach supported by SVN version control system. In this project, you will learn to use QtCreator environment together with extensive C++ experience. You should have intermediate skills in programming, but most of all – willingness to learn more.

The project will work at TOL in the UpWind lab.