



First Scheldt OpenMI LIFE Workshop

Antwerp, 25 November 2008

PROGRAMME

Introduction

The competent authorities across Europe have been watching the evolution of a new technology that could play an important role in the practical implementation of integrated water management. A particular challenge of integrated management is to anticipate the wider implications of policies and programmes of measures. Models can be valuable tools in this regard, but to date they have only been able to predict the response of a limited number of processes and how they may interact.

With the aid of EC funding, a new means, the OpenMI, has been developed by which models of almost any process, created by any supplier can be linked to help predict the response to different policy options. The potential therefore now exists to model and predict complex processes.

To demonstrate and evaluate this new technology under operational conditions, competent authorities from Belgium, the Netherlands and Greece have identified seven scenarios. This workshop will describe the four that are being run in the Scheldt basin where interesting results are beginning to emerge.

The aim of the workshop

The aims of the workshop are:

- to introduce the new OpenMI technology,
- to describe the four Scheldt scenarios (often referred to as 'Use Cases'),
- to provide a progress report on these use cases and discuss the results to date,
- to describe the plans for the future of the OpenMI.

The OpenMI, its development and testing

The OpenMI (Open Modelling Interface) standard defines an interface that allows time dependent models to exchange data at runtime. When the standard is implemented, existing models can be run in parallel and share information at each time step. This is the key to making model integration feasible at the operational level. Model integration helps the understanding and prediction of process interactions and is an essential capability for achieving the integrated approach to water management called for in the Water Framework Directive.

This new technology was developed and tested in the years 2002-2006 by a European group of Environmental Research Institutes, Universities and Integrated Water Modelling software providers, and was co-funded by the FP5 HarmonIT project. The lead partners in HarmonIT were the UK Natural Environment Research Council's Centre for Ecology and Hydrology, Deltares, DHI and HR Wallingford.

Application to operational problems in the Scheldt basin (OpenMI LIFE)

To demonstrate and evaluate the OpenMI under operational conditions, a three year LIFE Environment project was established in 2006, called OpenMI-Life. The project members are the developers of the OpenMI technology and a group of Belgian, Dutch and Greek Competent Authorities (model end users) from the Scheldt and Pinios basins; the Scheldt partners being VMM, Aquafin, Flanders Hydraulic, Deltares (formerly RIKZ) and the University of Liege.

The Scheldt Use Cases

The Scheldt basin use cases assess the impacts of:

- **Case a** : the sewer effluents of the city of Leuven on the flood risk in the river Dijle,
- **Case b** : the dredging of the lower river Dijle on the flood risk in the upper river Dijle,
- **Case c** : the flow regulation on water quality and the impact of water quality during flooding,
- **Case d** : tides on upstreams flood risk.

To make these assessments, the following models will be linked:

- **Case a** : a sewer model of the city of Leuven to a river quantity model of the river Dijle,
- **Case b** : two river quantity models on different parts of the river Dijle : an Infoworks RS model to a MIKE11 model,
- **Case c** : a river quality model (PEGASE) to two river quantity models (Infoworks RS and MIKE11) on the river Dijle,
- **Case d** : the 1D river model MIKE11 of the river Dender to a 2D river model Waqua of the Scheldt estuary.

In the course of the demonstrations, the partners will evaluate:

- The ease of understanding the OpenMI
- The ease of use of the OpenMI in terms of:
 - o Making models OpenMI compliant
 - o Linking models
 - o Running linked models
- The scientific issues that arise when models are linked, especially models from different domains
- Calibration and validation
- Uncertainty
- The operational issues arising from the fact that the models and data belong to different organisations

Who should attend ?

The workshop is designed for technical staff from universities, scientific bodies, consultants and model (end) users involved in integrated water modelling or who have a particular interest in the Scheldt and the surrounding basins.

Programme

Time	Event	Speaker
9h30 – 10h00	Registration and coffee	
10h00 – 10h15	Introduction	Roger Moore
10h15 – 11h00	Presentation of use case a : the linking of a sewer model of the city of Leuven to a river quantity model of the river Dijle	Johan Van Assel
11h00 – 11h30	Coffee break	
11h30 – 12h15	Presentation of use case b : the linking of two river quantity models on different parts of the river Dijle : an Infoworks RS model to a MIKE11 model	Neel Devroede
12h15 – 12h30	Questions / Discussion	<i>Chairman</i>
12h30 – 14h00	Lunch	
13h30 – 14h00	Demonstration of the OpenMI	
14h00 – 14h45	Presentation of use case c : the linking of a river quality model (PEGASE) to both river quantity models (Infoworks RS and MIKE11) on the river Dijle	Yves Ronse
14h45 – 15h30	Presentation of use case d : the linking of the 1D river model MIKE11 of the river Dender to a 2D river model Waqua of the Scheldt estuary	Katrijn Holvoet
15h30 – 16h00	Coffee break	

More information

- About the OpenMI :

<http://www.openmi.org>

<http://www.openmi-life.org>

- About the workshop :

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Practical information about your stay in Antwerp

See the flyer 'Welcome to Antwerp'.

Registration

To register, please go to www.openmi-life.org.