The **NOAH 1D Modelling System** represents a new approach to the design of hydroinformatics tools. Object oriented methodology is utilized not only for graphical user interfaces, but also for the numerical code, providing the user with unrivalled computational speed and robustness.

NOAH 1D

Newcastle Object-oriented Advanced Hydroinformatics

Modelling System

Special Features

- Unrivalled computational speed
- Assisted model set-up
- Real time graphing of results

UNIVERSITY OF NEWCASTLE
Department of Civil Engineering

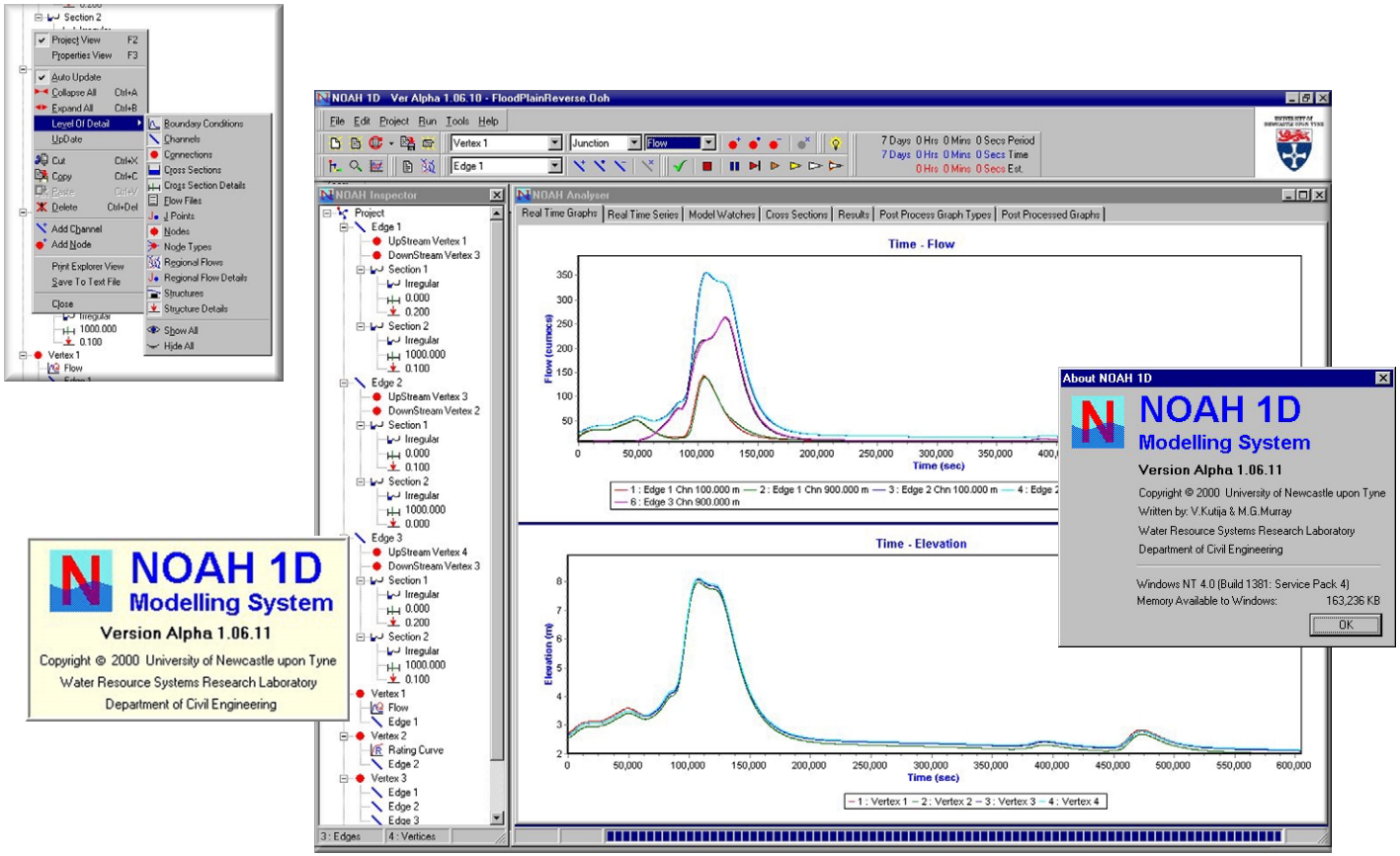
WRSRL

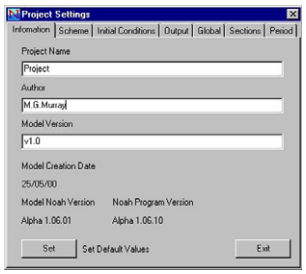
The **NOAH 1D Modelling System** provides steady and unsteady solutions for nearly horizontal flows in networks of channels and/or pipes. Solution is based on the full de Saint Venant equations for flow along a channel or pipe while a continuity equation and water level compatibility conditions are solved at junctions.

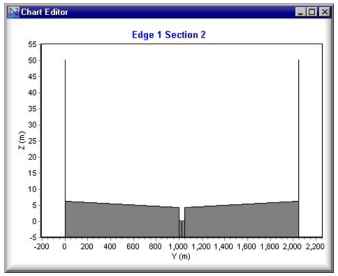
The differential equations are approximated by an implicit finite difference scheme and a Generalized Elimination Algorithm (GEA); a highly efficient direct solution method for nearly banded matrices is used to solve the resulting difference equations.

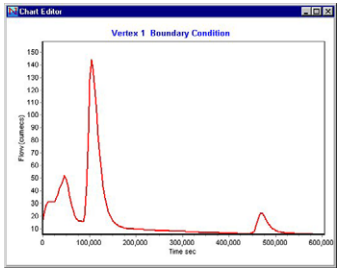
For further information, visit the website at **http://www.ncl.ac.uk/noah/** or contact Dr V. Kutija: **noah@ncl.ac.uk**

The **NOAH 1D Modelling System** is the first in a range of highly innovative NOAH hydroinformatics tools. NOAH 1D is an advanced modelling system for hydraulic networks under unsteady, predominantly free surface flow conditions. NOAH 1D incorporates the latest developments in information technology, best numerical algorithms and, for the first time in hydroinformatic tools, Object Oriented Numerics.









Features

- Branched and looped networks
- Unlimited model size
- Free-surface and pressurized flows
- Sub- and supercritical flows
- Variety of cross-sections (14)
- Different resistance formula (5)
- Very low flows and drying
- Point and diffuse flow inputs
- Choice of output customization
- Monitors variables
- Assisted model set-up
- Batch-running facilities
- Choice of computational speed

System Requirements

Minimum	Pentium P90; 32 Mb RAM; 1024×768 screen
Recommended	PII 500 MHz; 64 Mb RAM; 1152×864 screen