HarmoniT

A research project funded by the European Commission

Aiming at the development and implementation of a European Open Modelling Interface and Environment (OpenMI)

Simplify the linking of hydrology related models

Establishment of the OpenMI to assist the strategic planning and integrated catchment management required by the Water Framework Directive

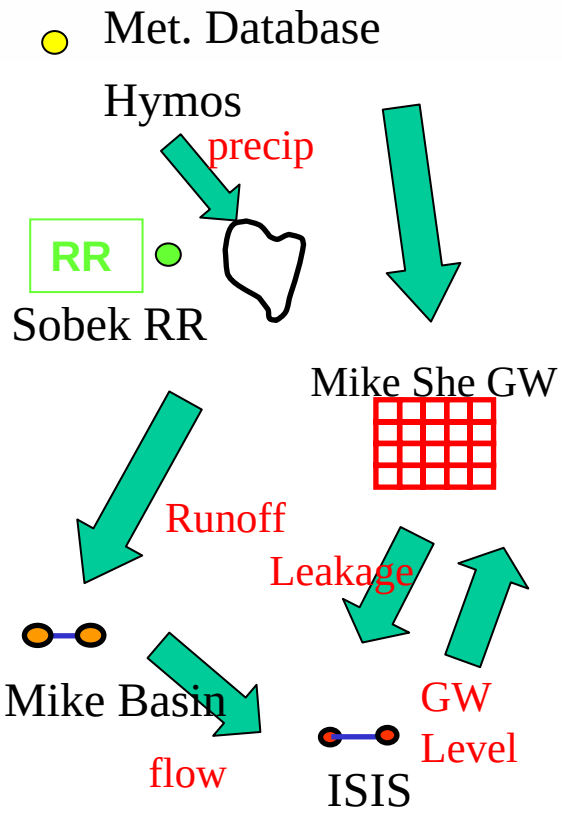
http://www.harmonit.org/

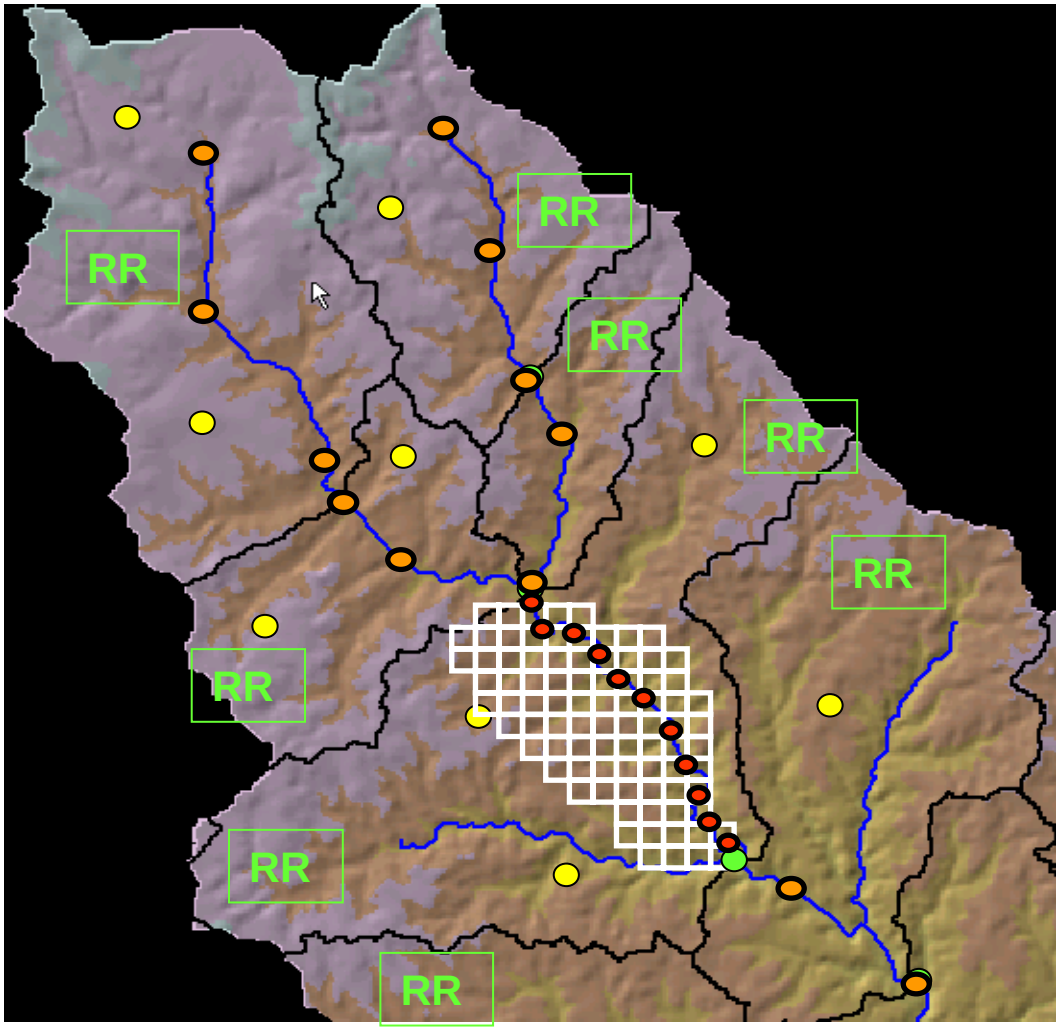
HarmoniT

OpenMI

Architecture

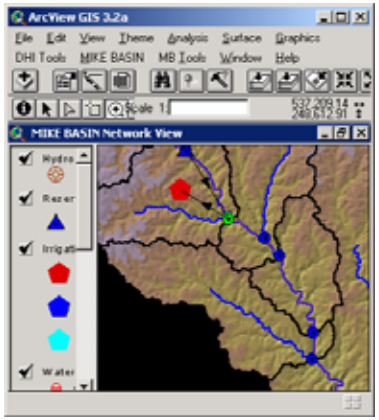
How will it work in the future? - practical





Setting up systems

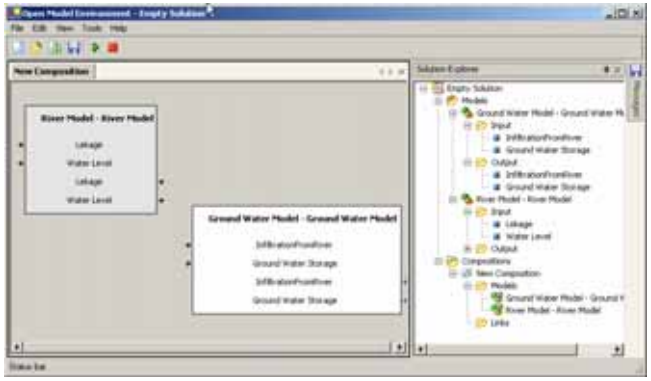
1: Populate models



Model Engine Input files

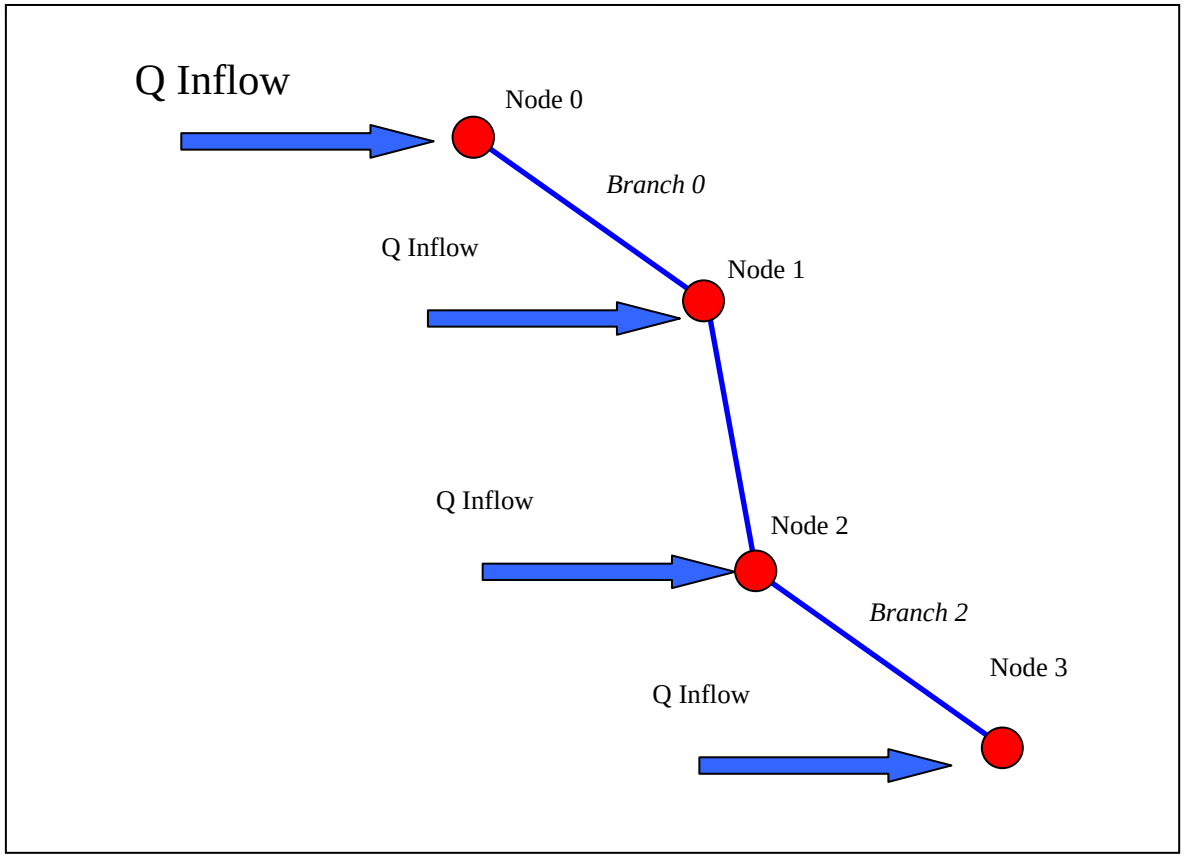
OMI file

2: Configure

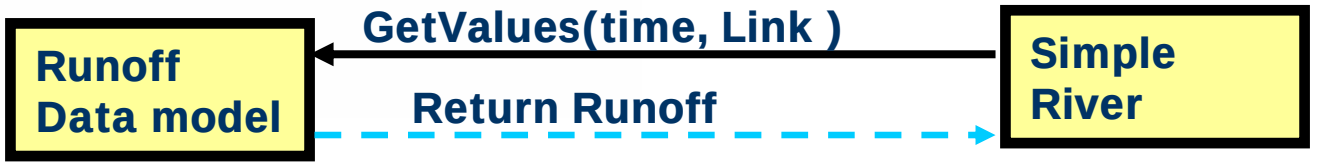


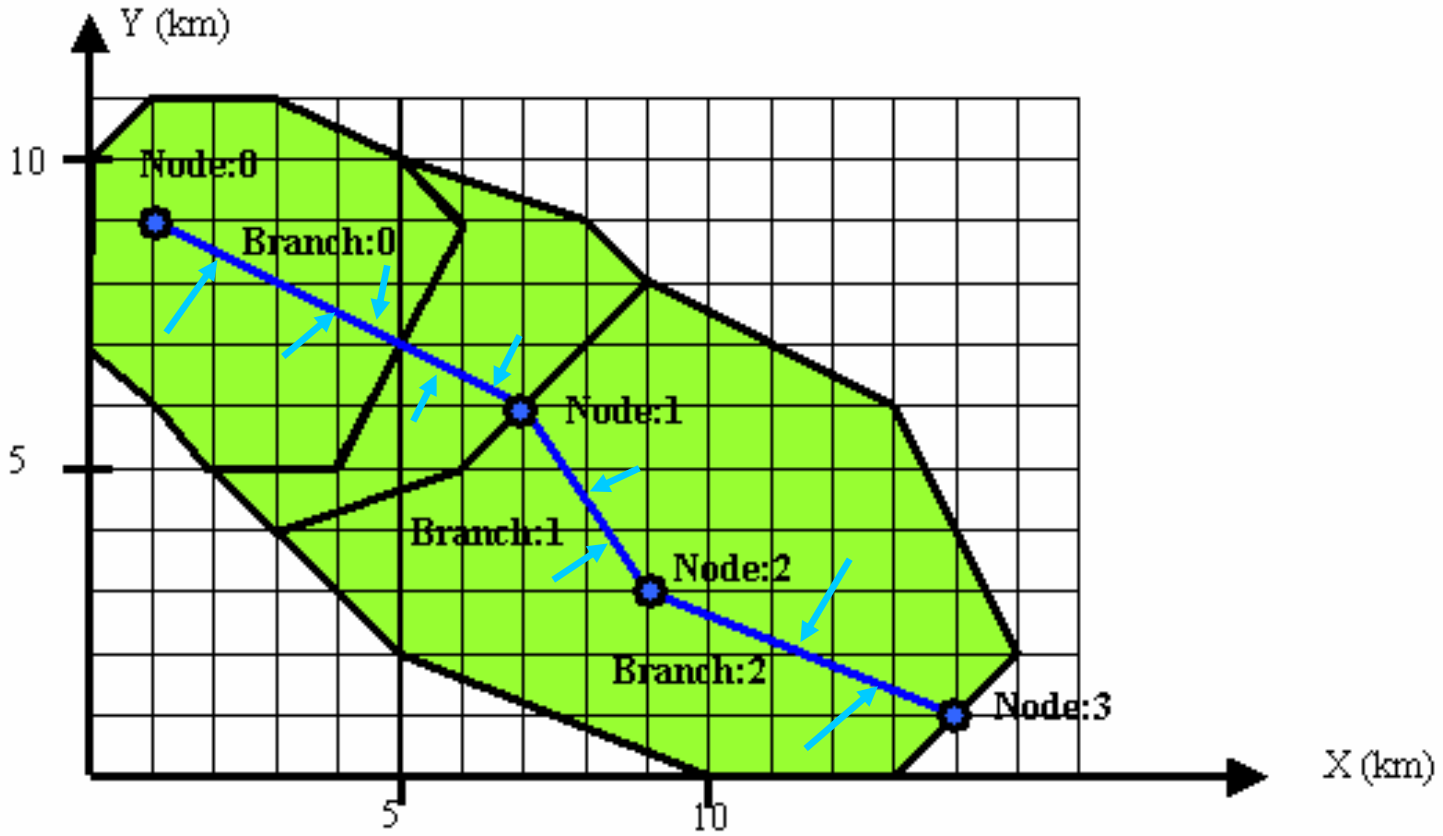
3: Run

Simple River

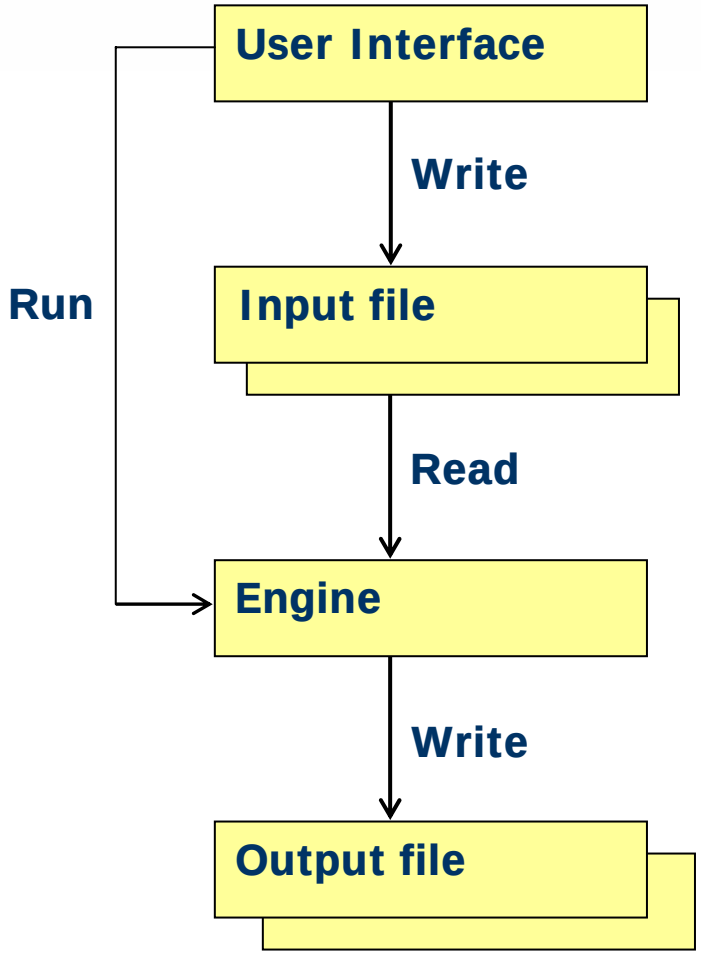


Simple River use case

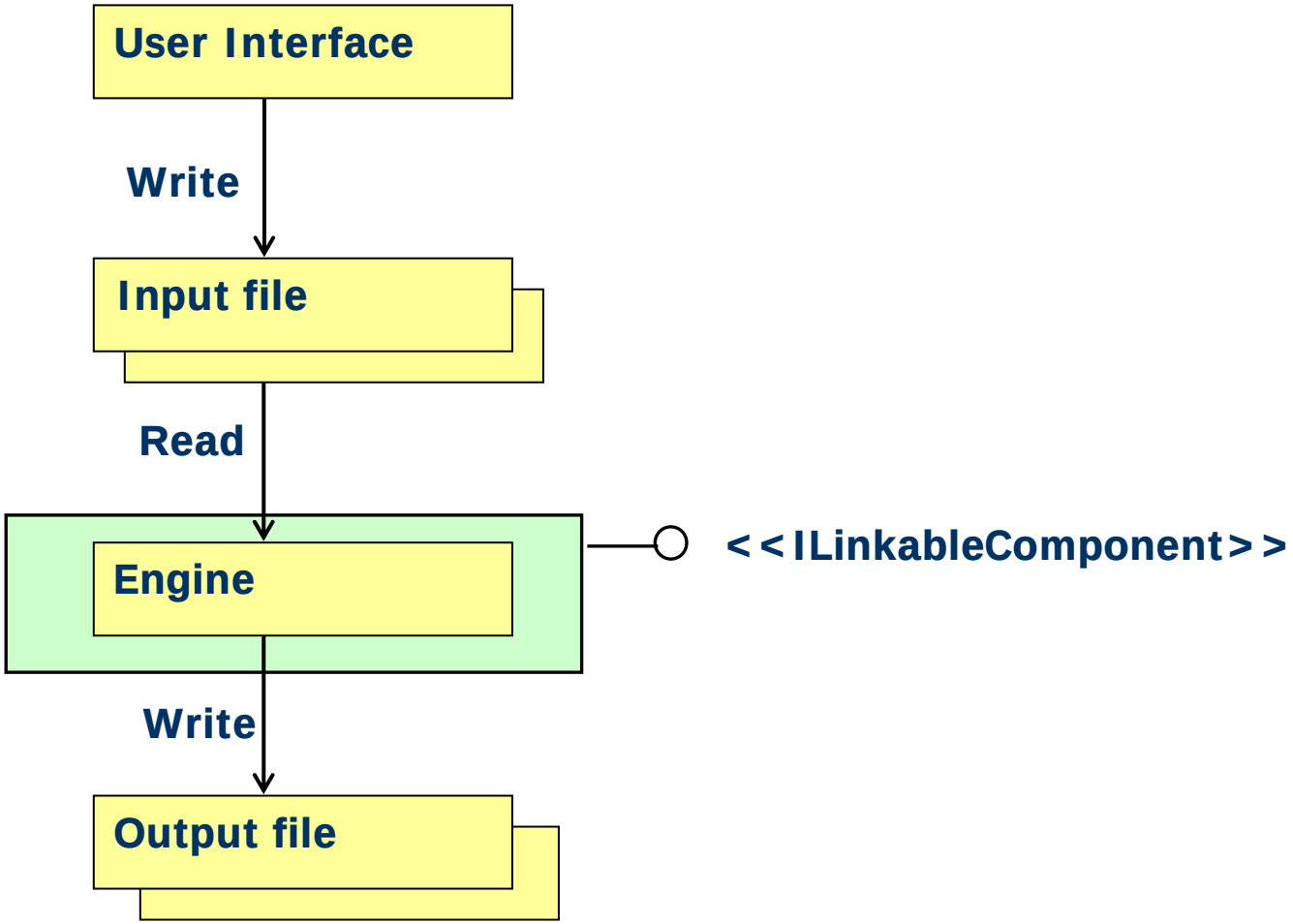




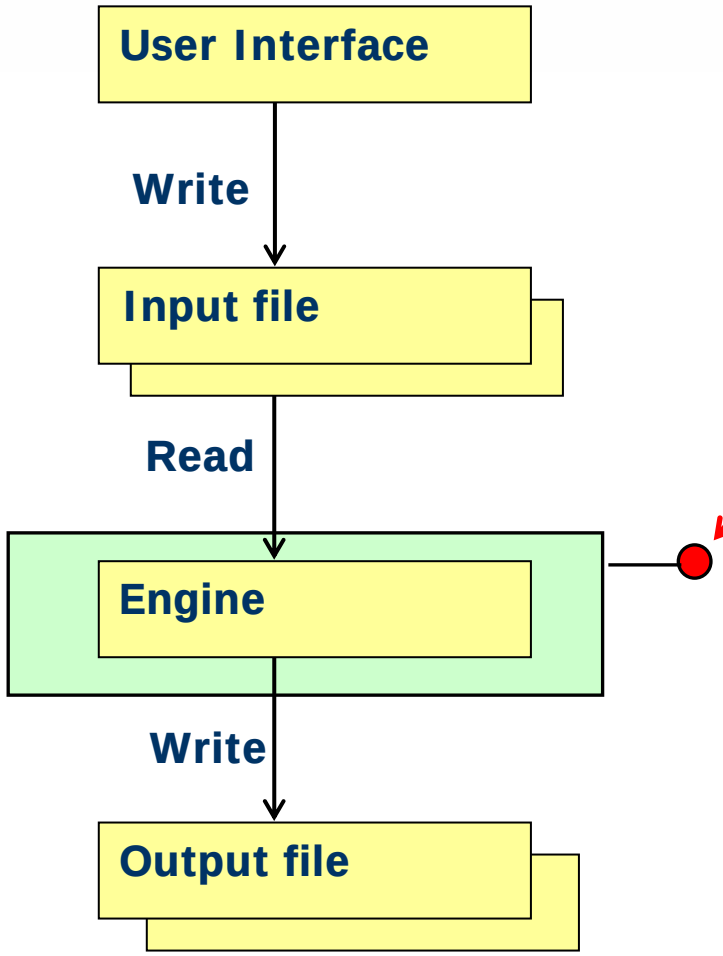
Typical Model Architecture

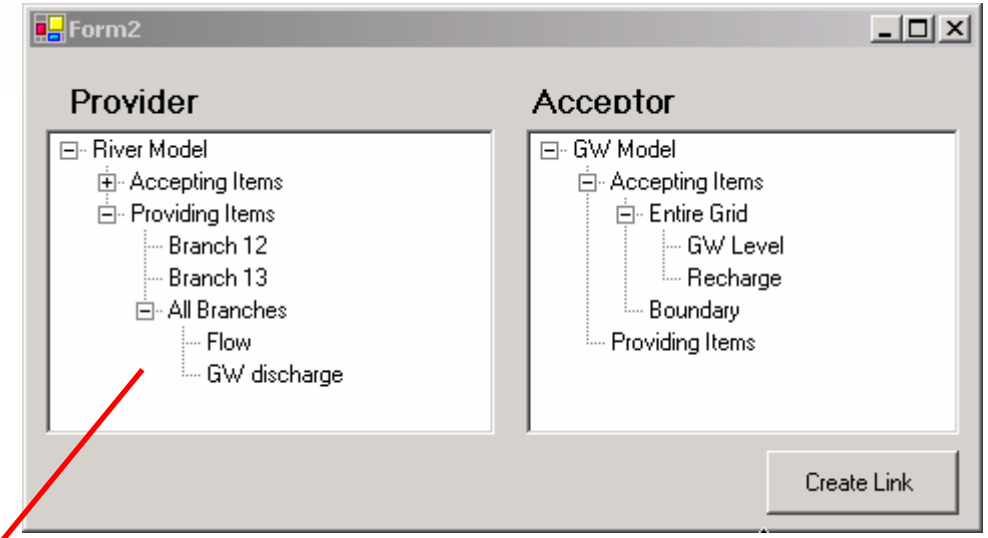


When using OpenMI



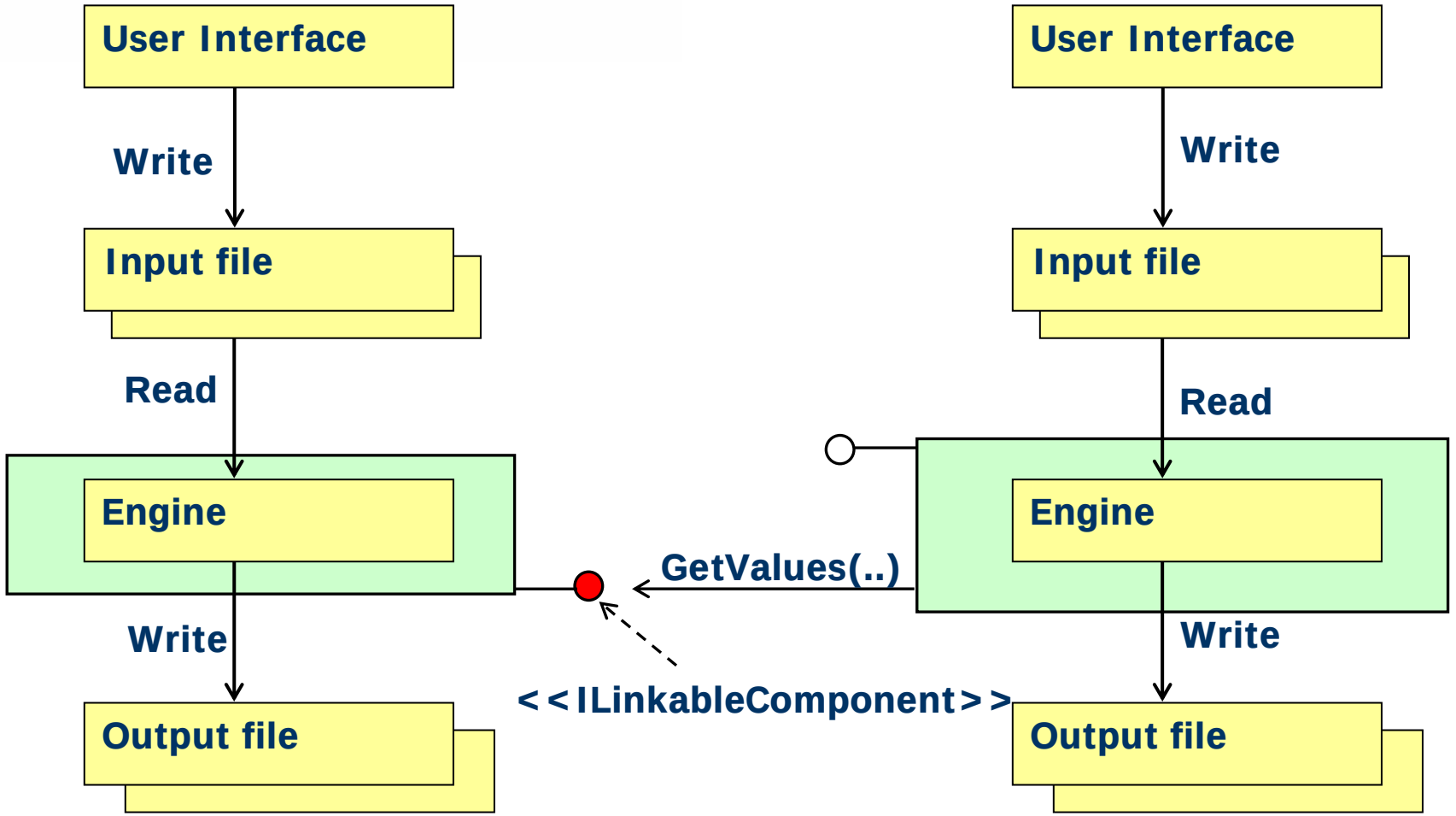
At configuration time





<<ILinkableComponent>>

At runtime


User Interface
Write
Input file
Read
Engine
Write
Output file
User Interface
Write
Input file
Read
Engine
Write
Output file
GetValues(..)
<<ILinkableComponent>>

Simple River

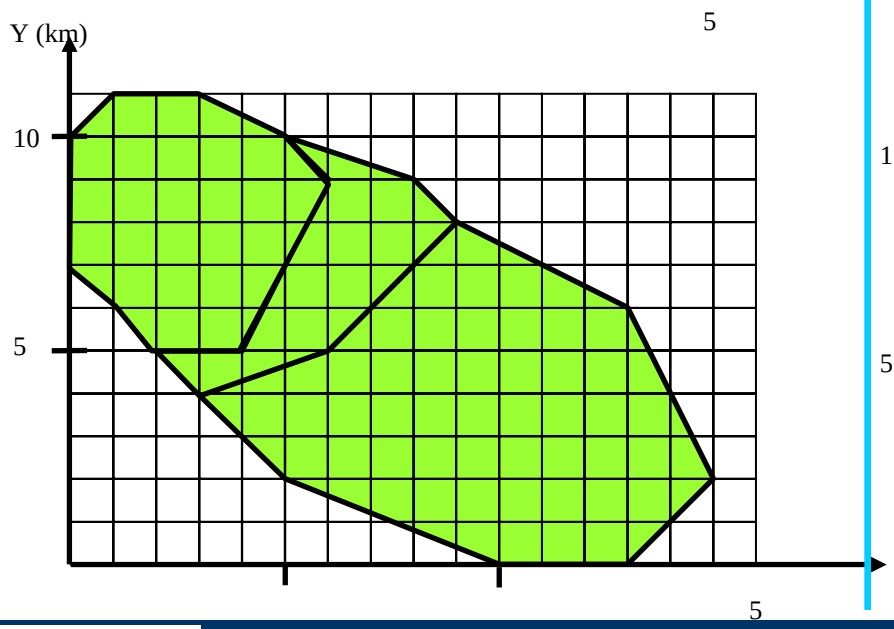
Runoff Model

OutputExchangeItem

Quantity ID : Runoff

DataOperaiton : Distributed

ElementSet : Polygons

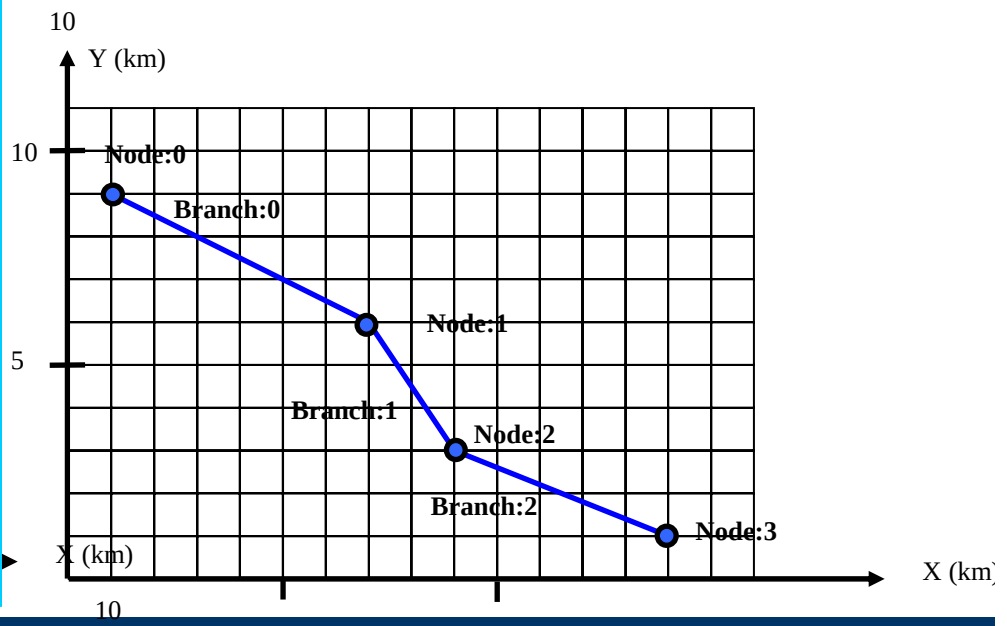


Simple River

InputExchangeItem

Quantity ID : Inflow

ElementSet : Polyline

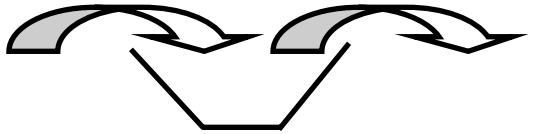


Org.OpenMI.Utilities

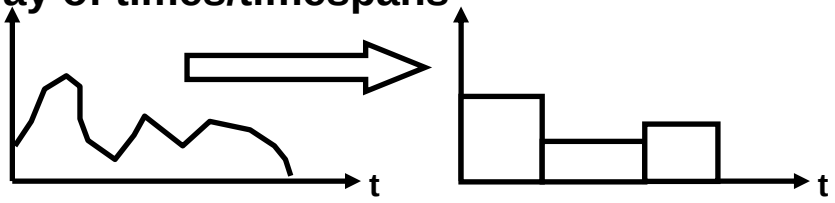
Org.OpenMI.Utilities.Buffer

SmartBuffer

Buffers results from the engine core



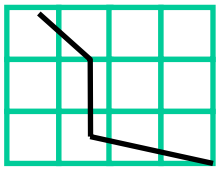
Mapping of values associated to one array of times /timespans to values represented on another array of times/timespans



Org.OpenMI.Utilities.Spatial

ElementMapper

Mapping of values associated to one ElementSet to be represented on another ElementSet



Org.OpenMI.Utilities.Wrapper

SmartWrapper

Generic wrapper suited for time stepping model engines