

HarmoniIT



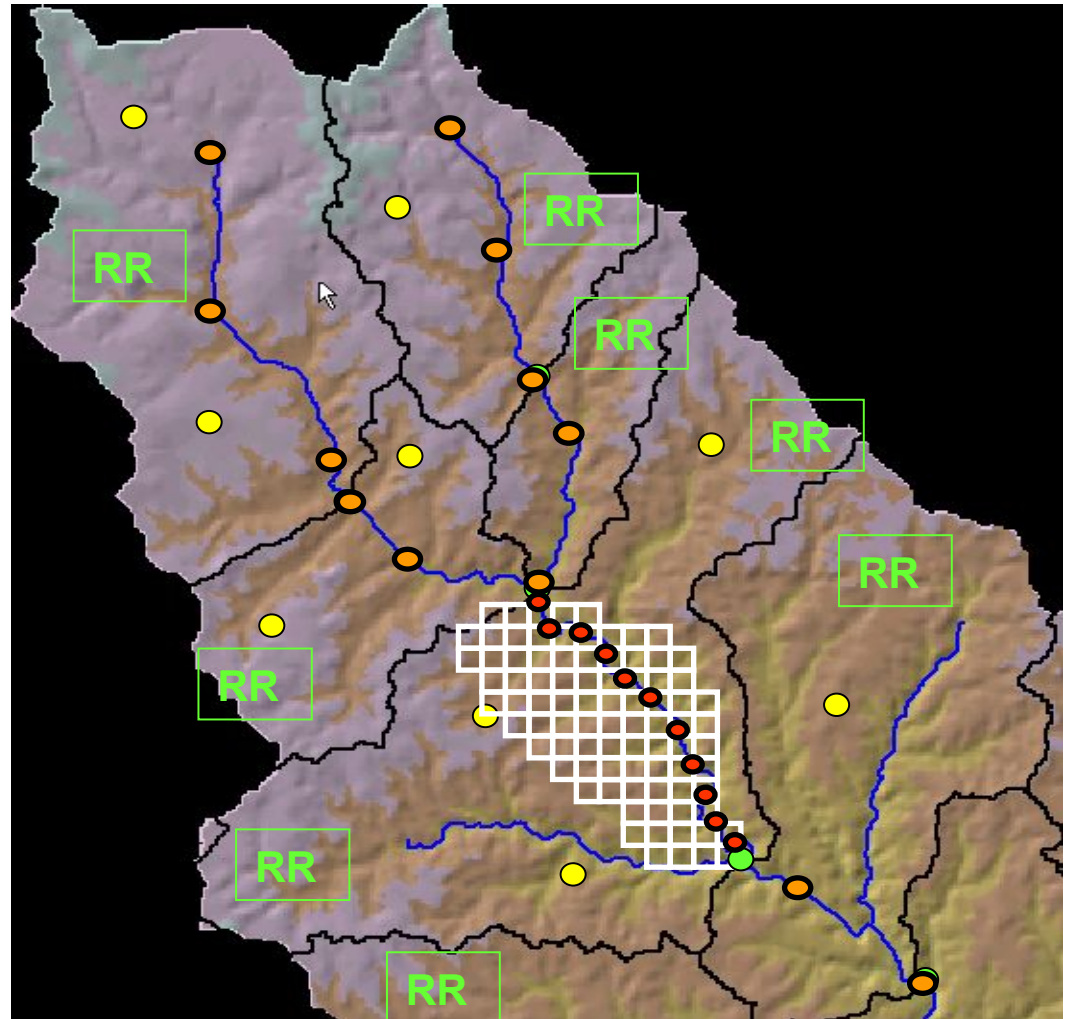
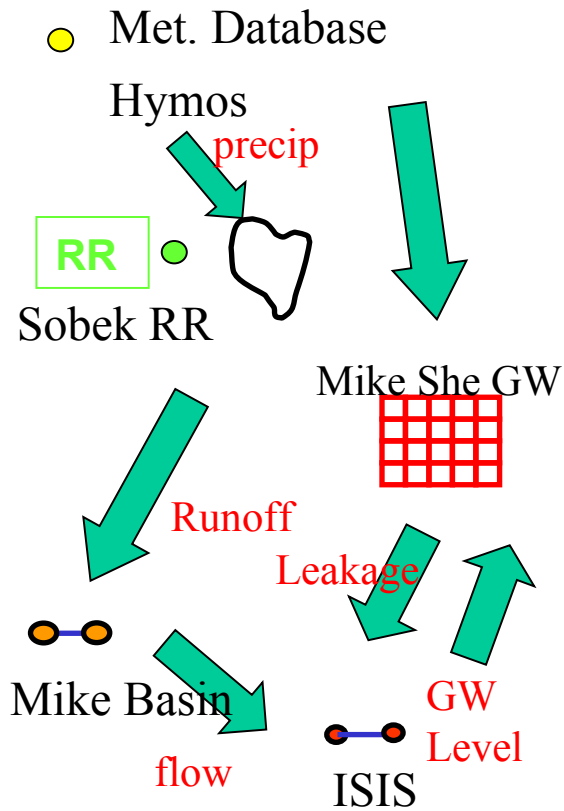
HarmoniIT

OpenMI introduction

Stef Hummel, WL | Delft Hydraulics

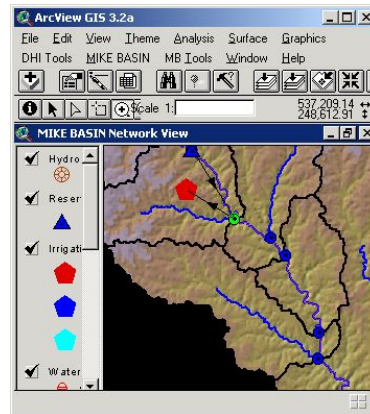
Slides deels door J. Gregersen, DHI

Combining OpenMI models



Setting up Compositions

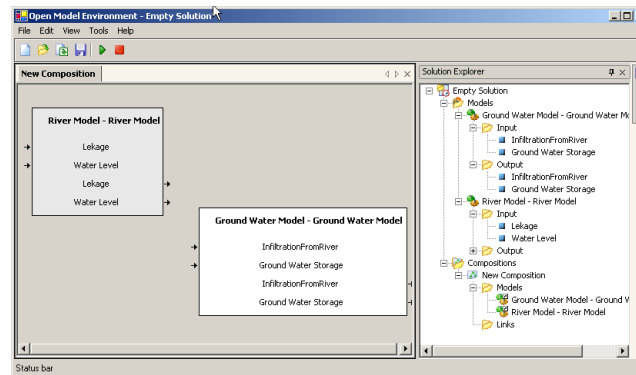
1: Populate models



Model Engine
Input files

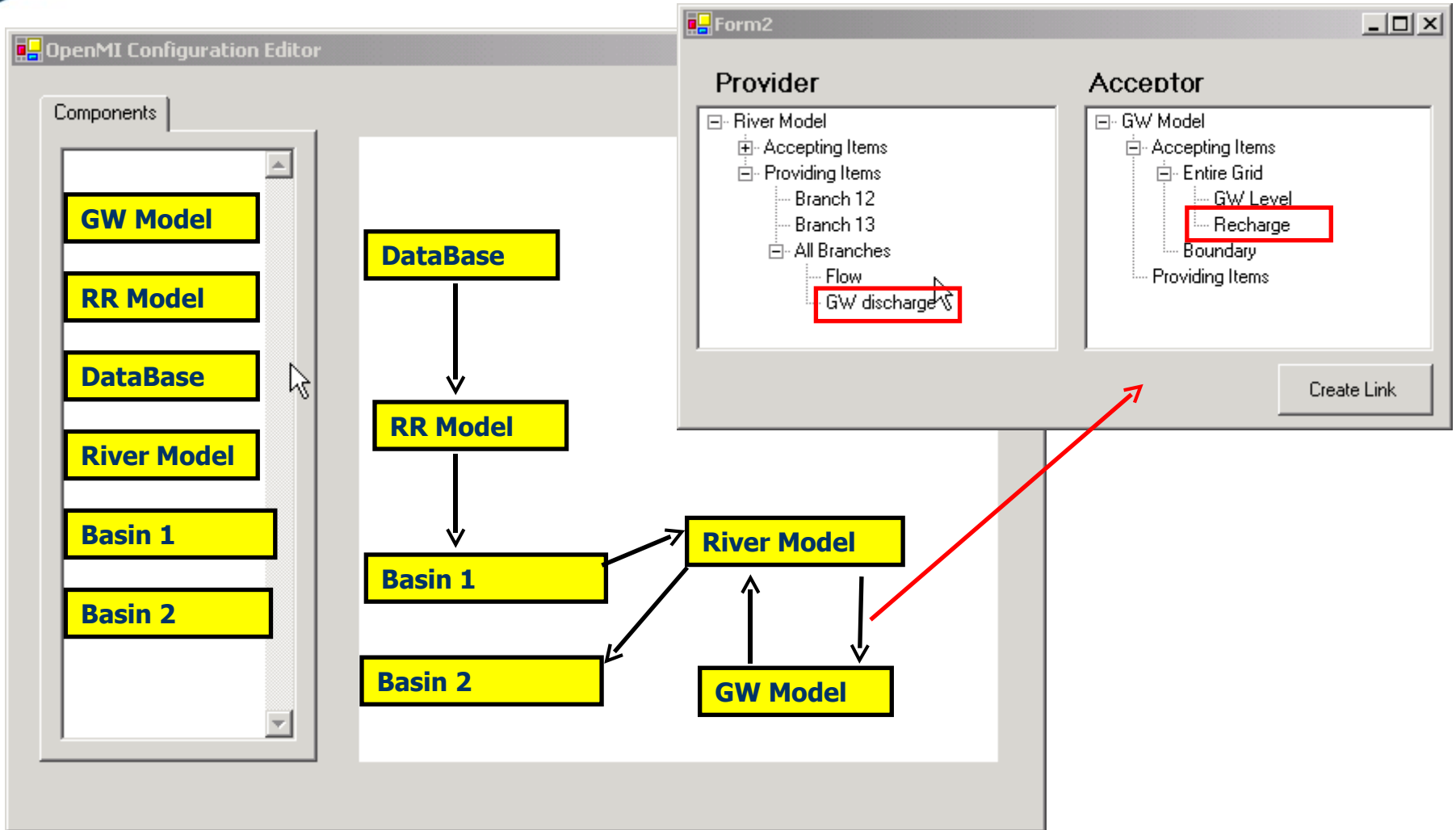
OMI file

2: Configure

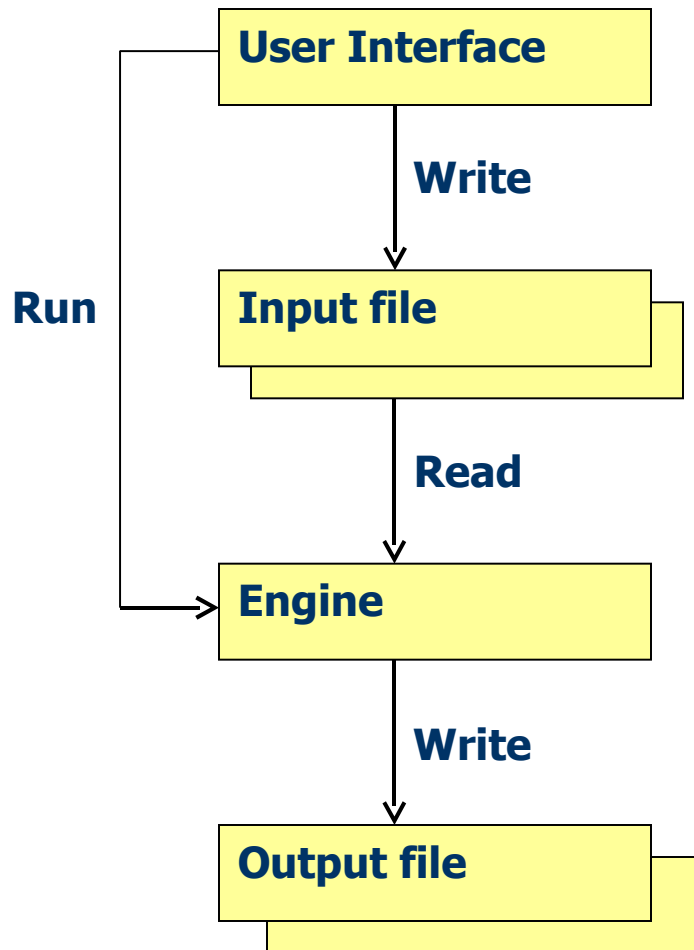


3: Run

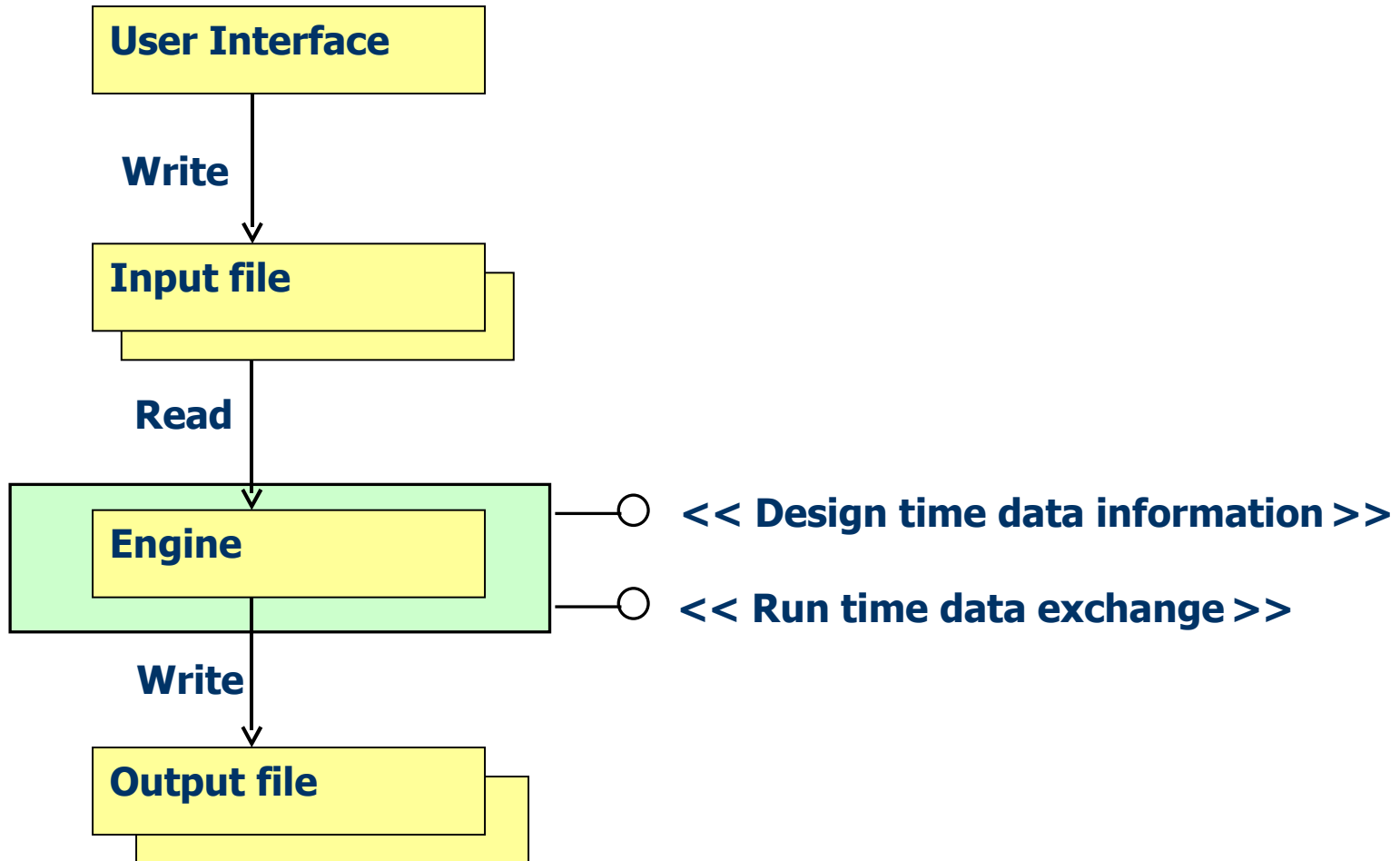
Composition Editor



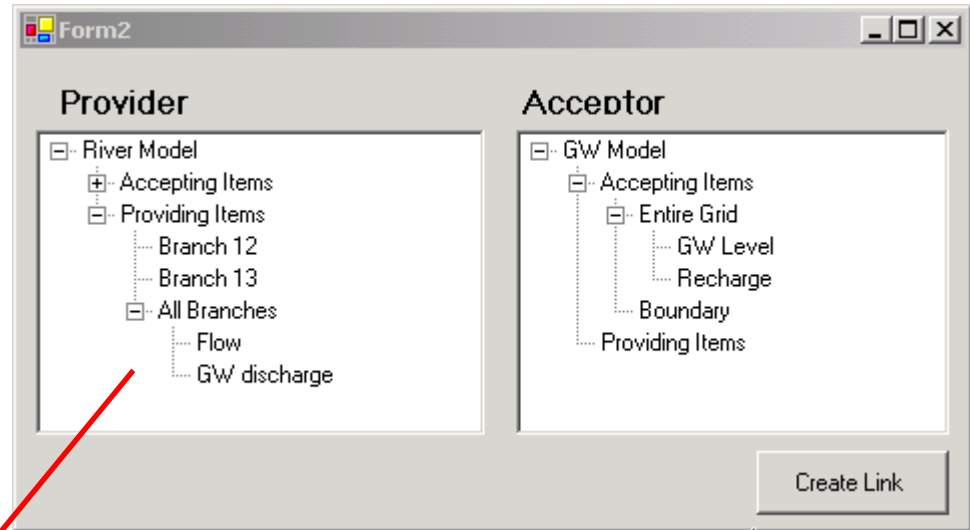
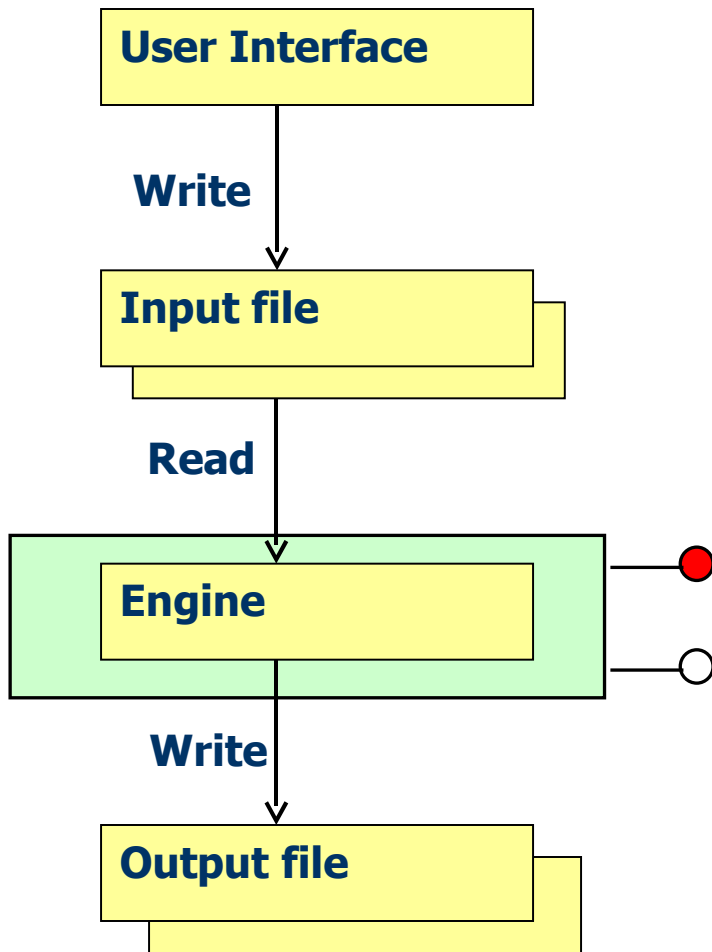
Typical Existing Model



When using OpenMI



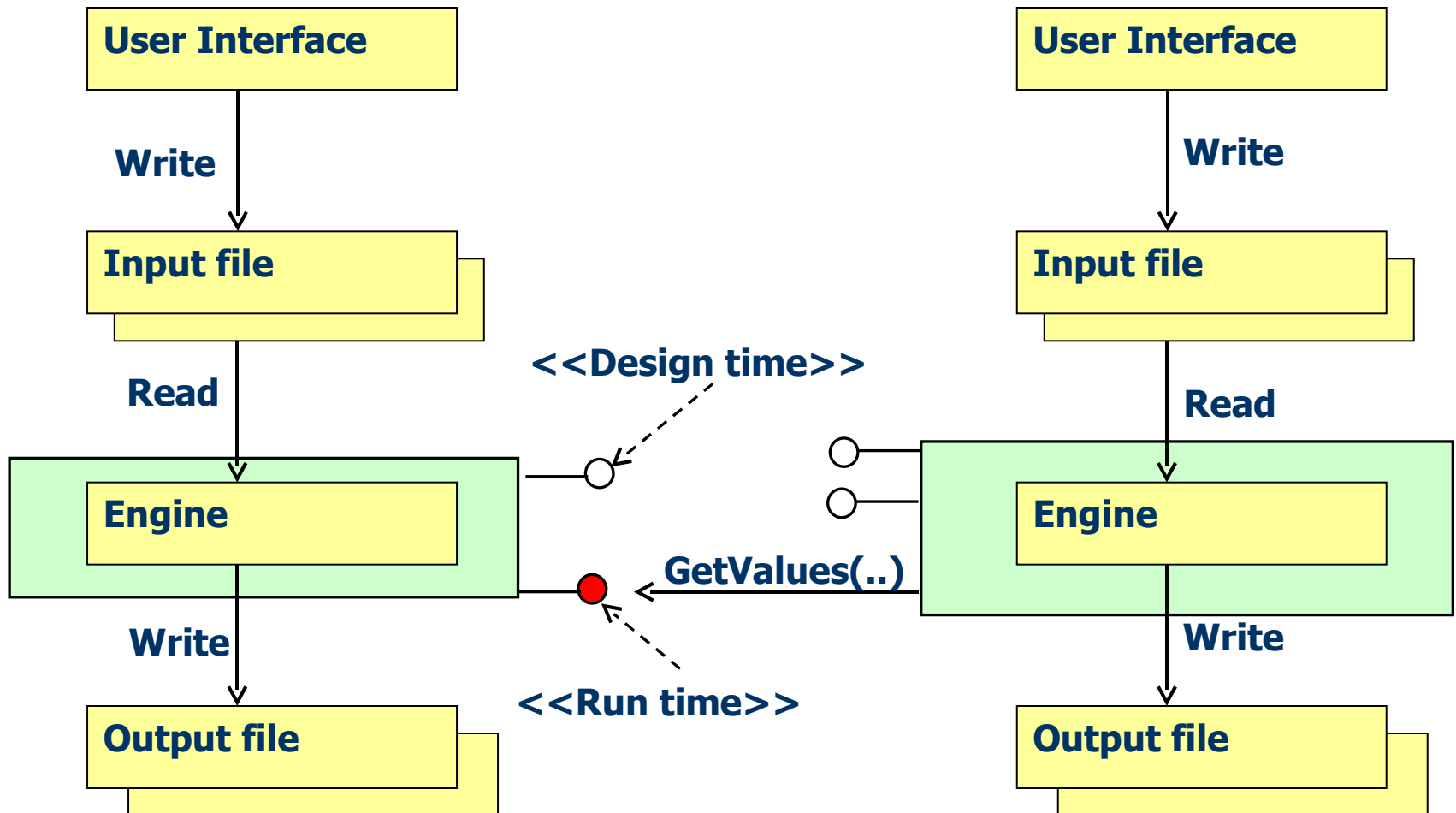
At configuration time



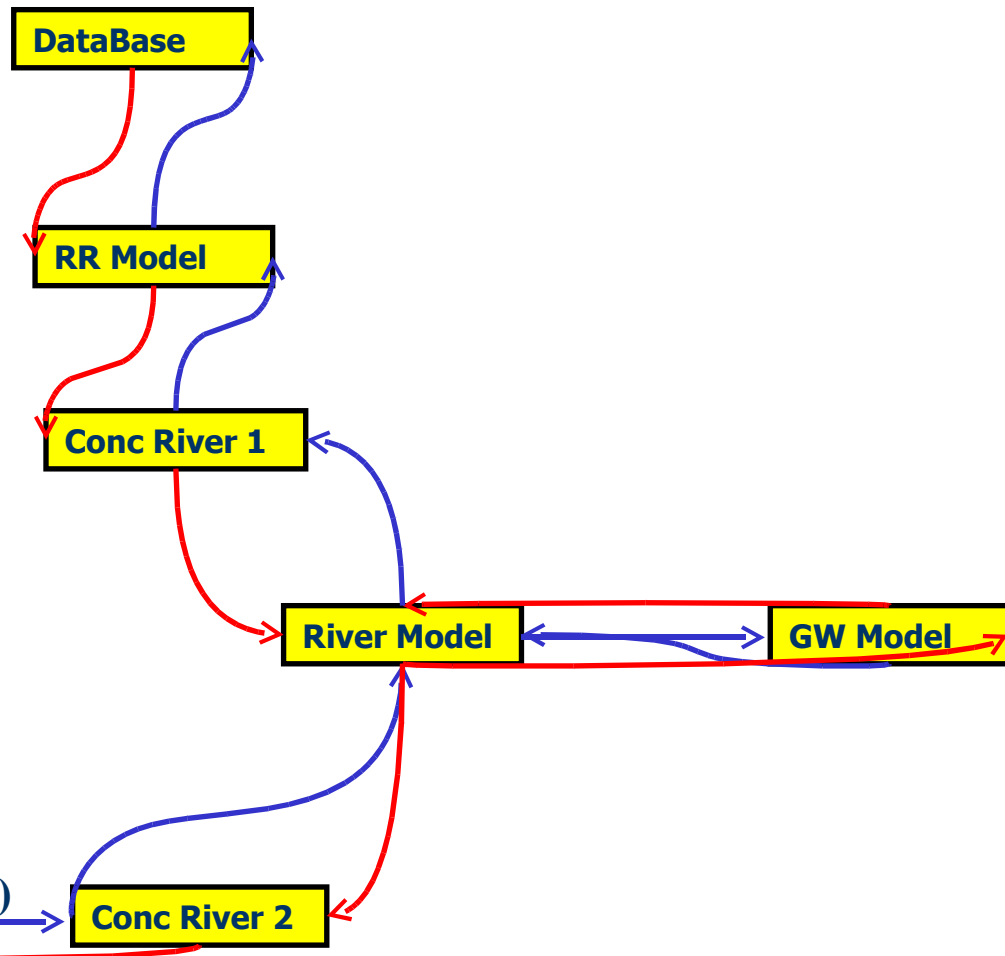
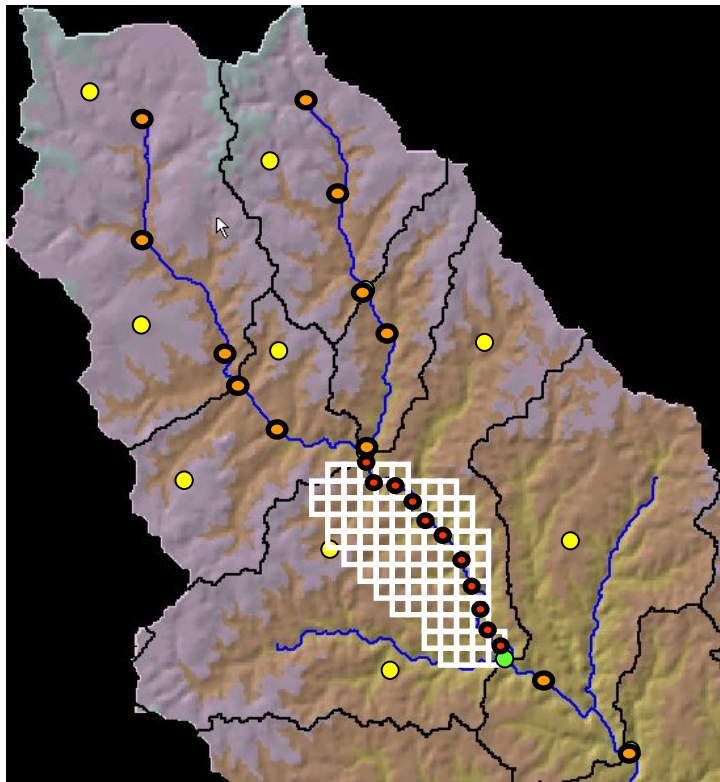
<<Design time data information>>

<< Run time data exchange>>

At runtime



OpenMI principle II: Pull driven



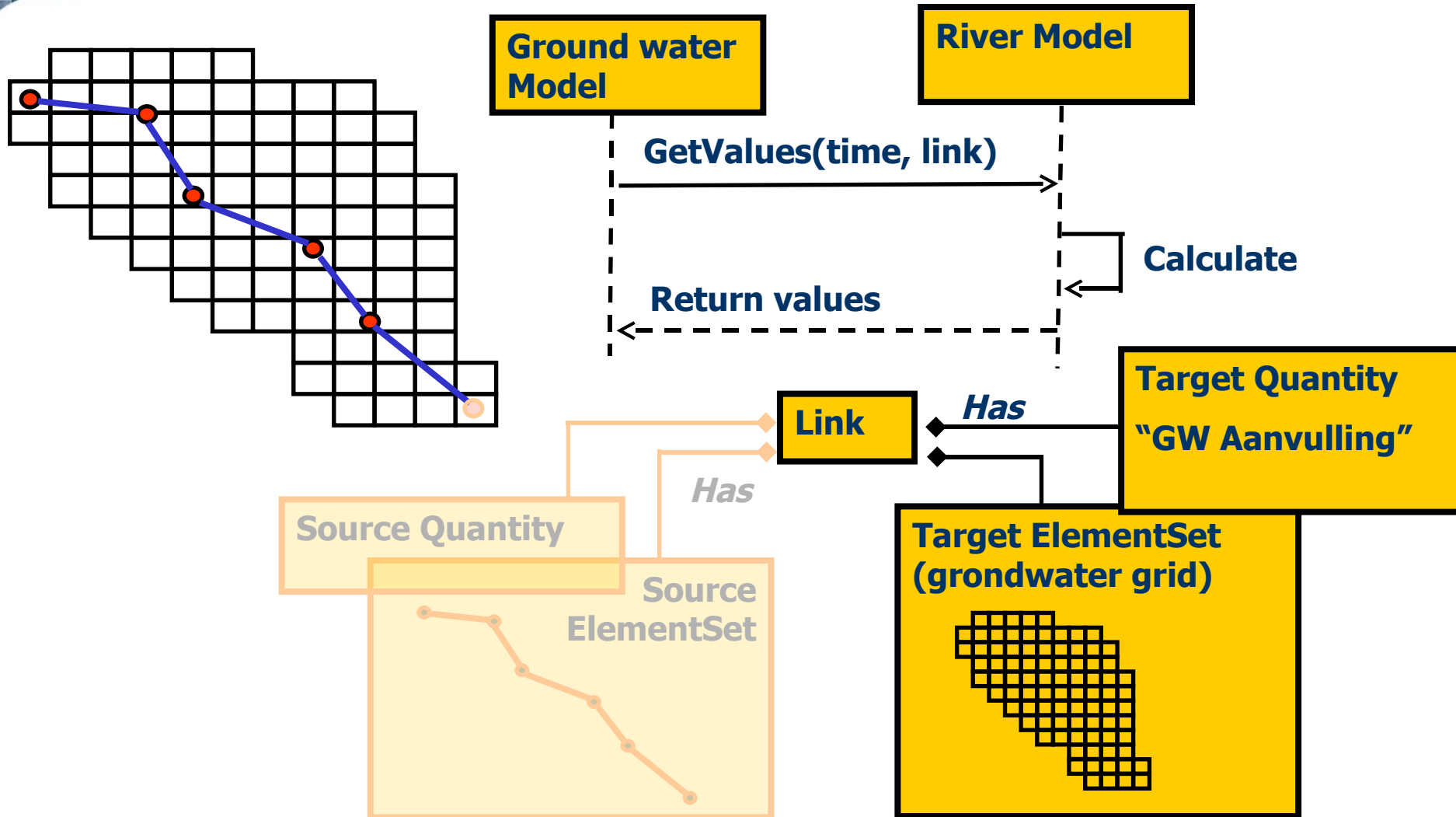
Run

Trigger

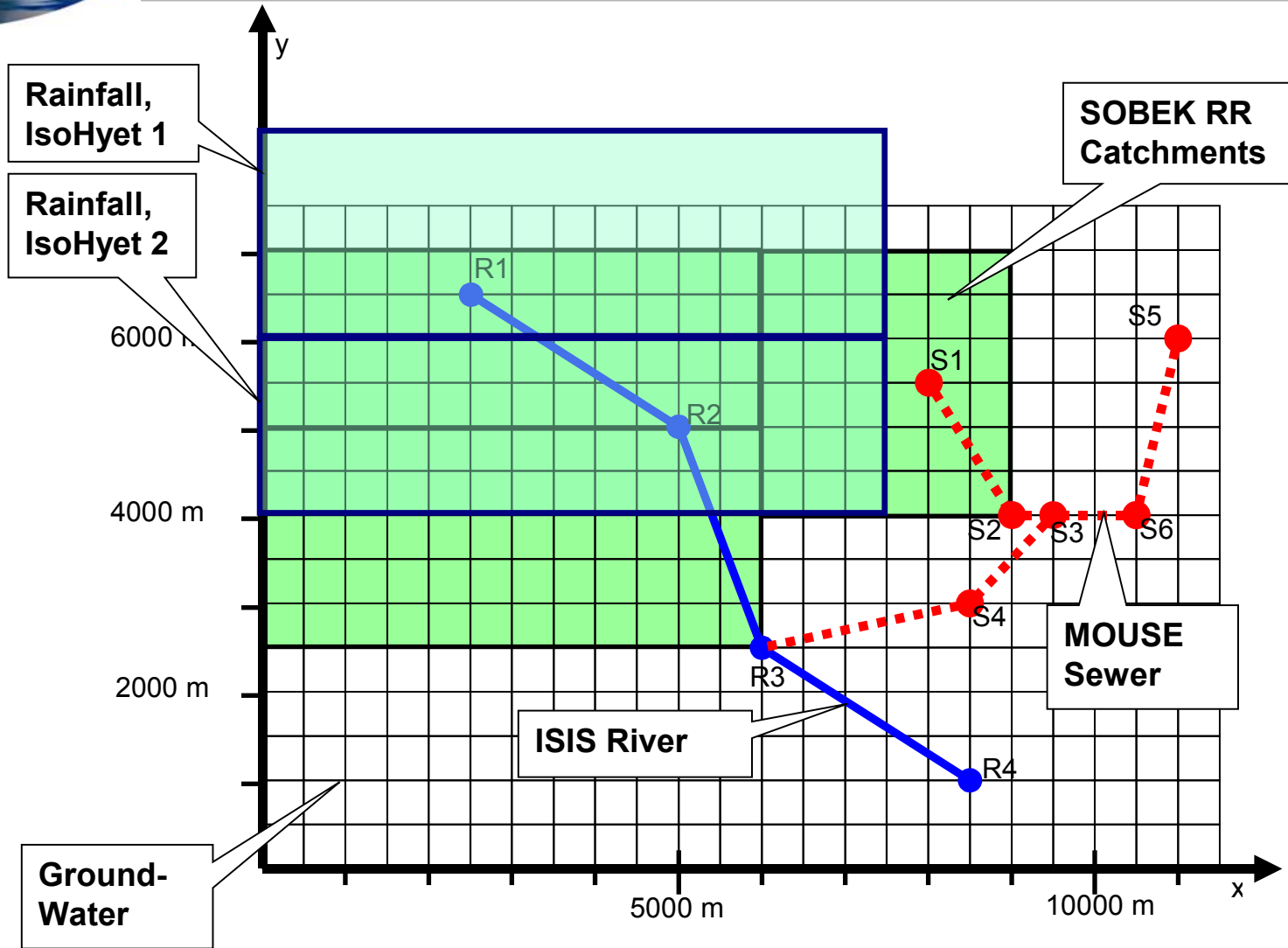
GetValues()

Conc River 2

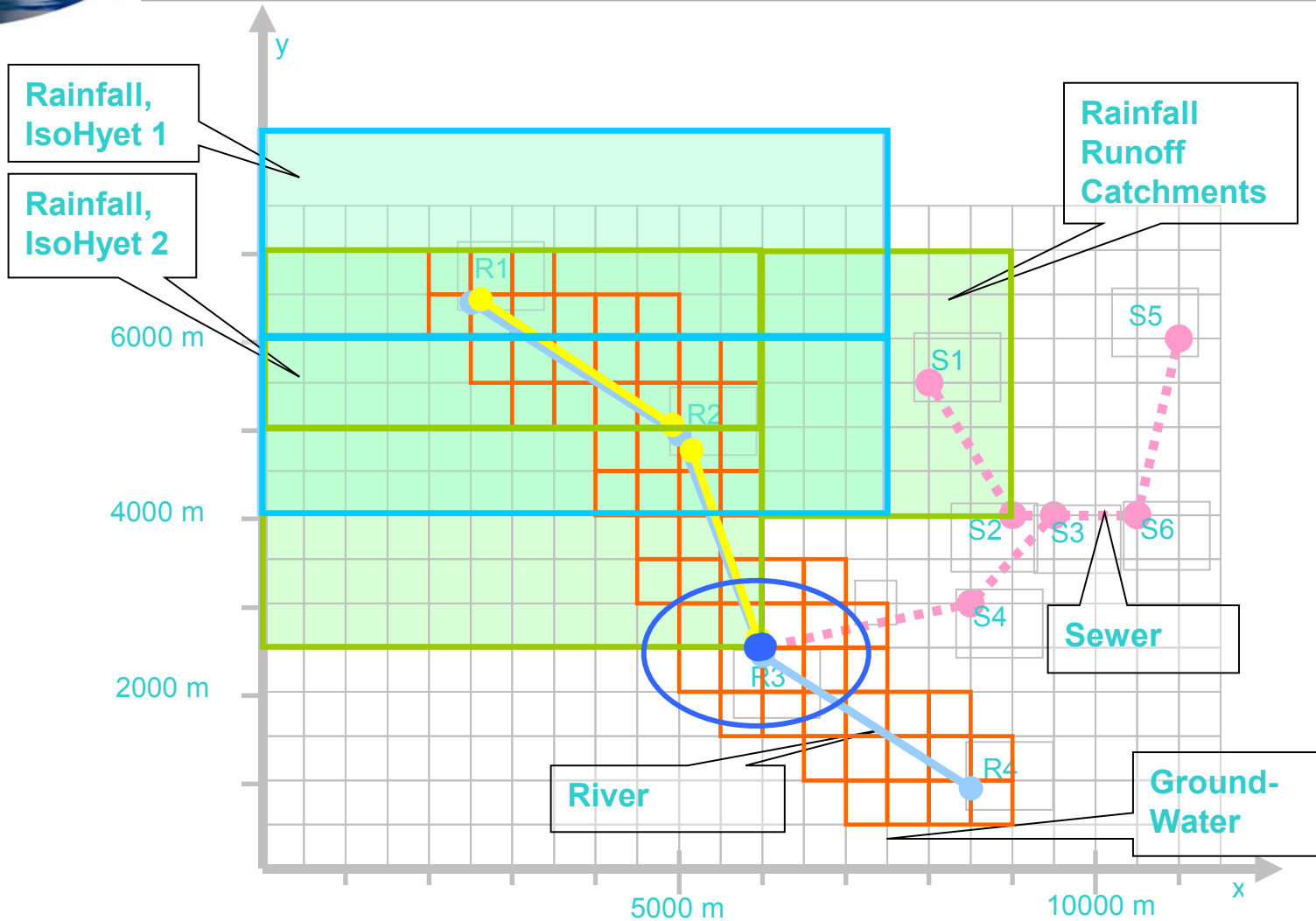
OpenMI pull command: **GetValues(...)**



ElementSets, HarmoniIT use case



ElementSets



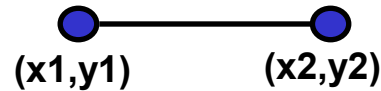
Element

- ID Based “Node127”

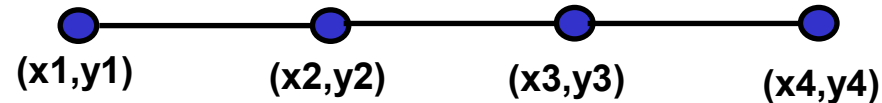
- Point



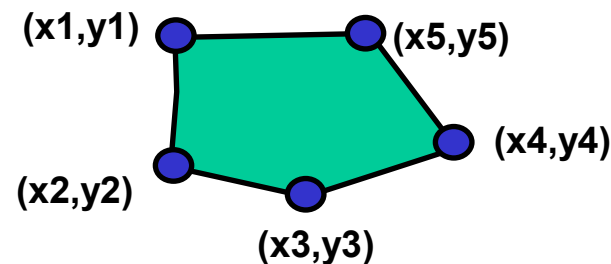
- Line



- Polyline



- Polygon



- ID ("Runoff")
- Description ("Rainfall runoff")
- Dimension (e.g. $L^3 T^{-1}$)
 - GetPower (<dimensionBase>)
- Unit:
 - ID ("CFS")
 - Descr ("Cubic feet per second ")
 - ConversionFactorToSI (0,0283168439)
 - OffsetToSI (0)

- InputExchangeItem
 - Quantity
 - ElementSet
- OutputExchangeItem
 - Quantity
 - ElementSet
 - [DataOperations
 - ID
 - Arguments]