

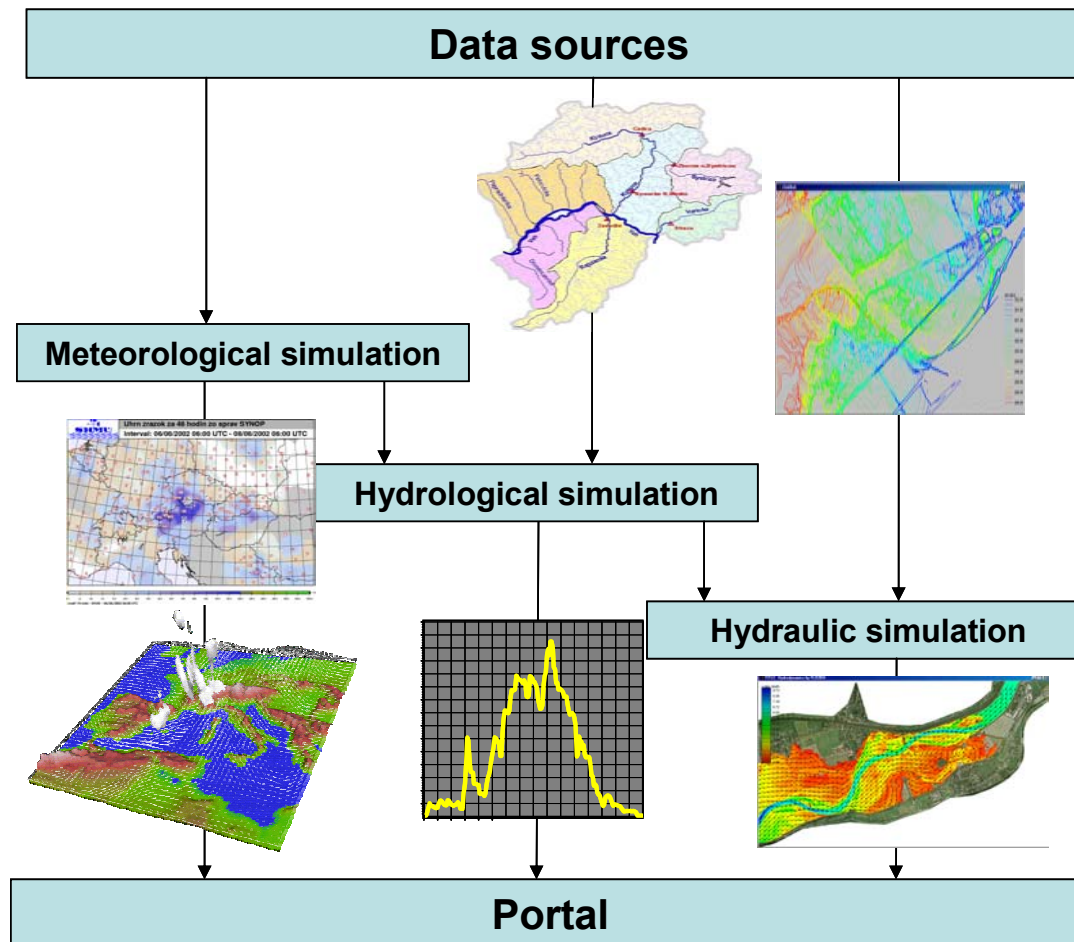
# Grid-based Virtual Organization for Flood Prediction

Miroslav Dobrucký

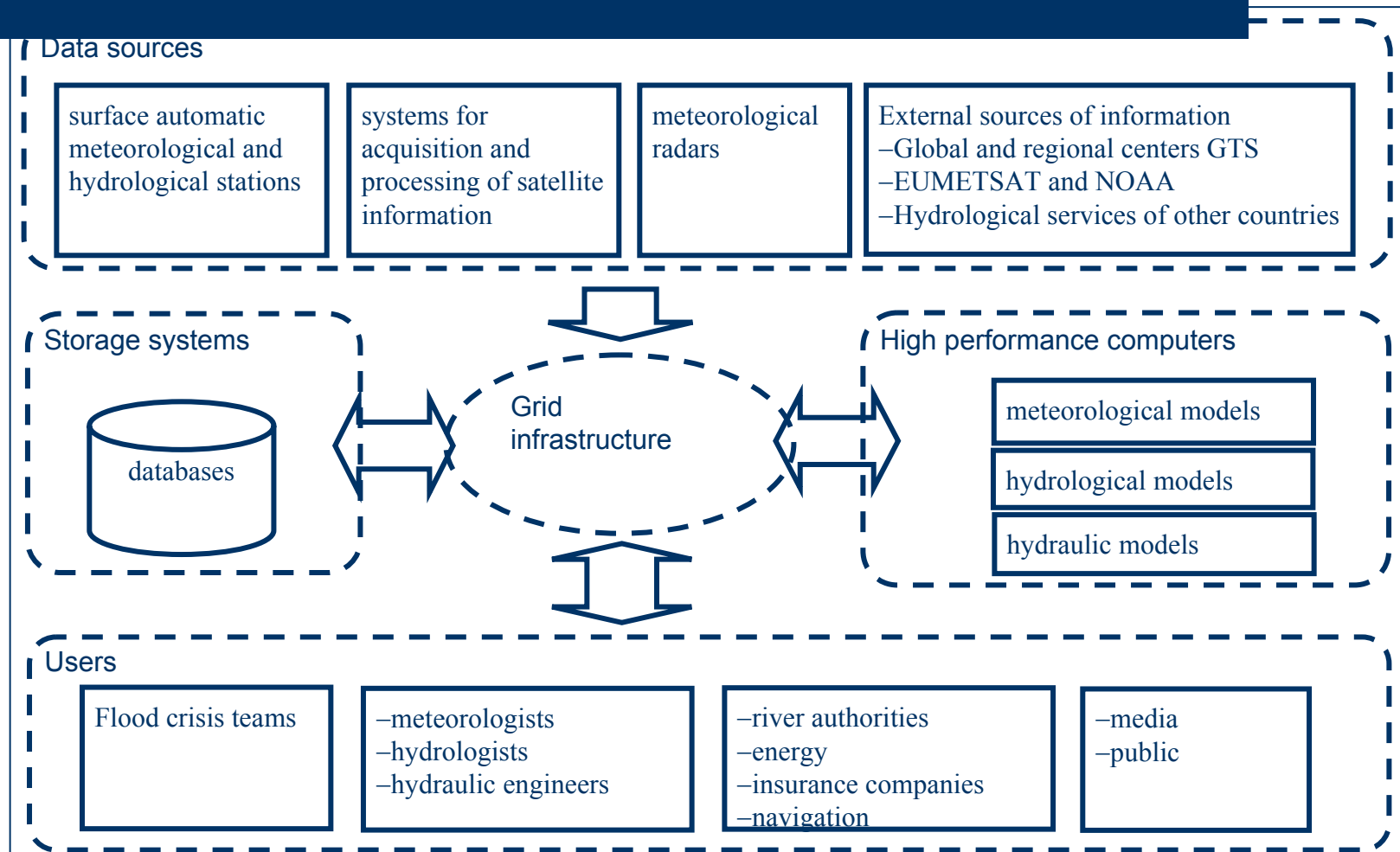
Institute of Informatics, SAS

Slovakia, [dobrucky.ui@savba.sk](mailto:dobrucky.ui@savba.sk)

# Flood forecasting problem



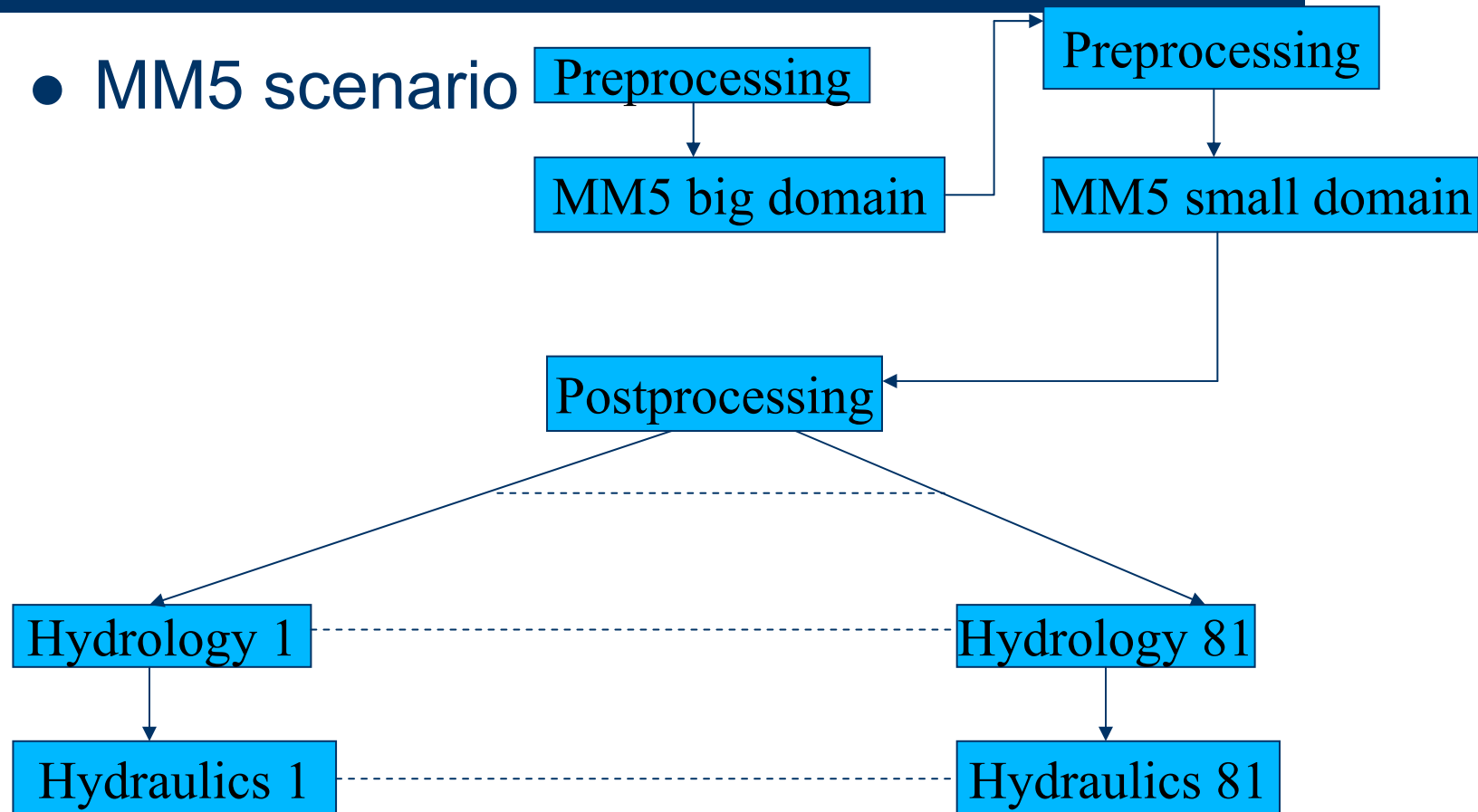
# Flood Forecasting Virtual Organization



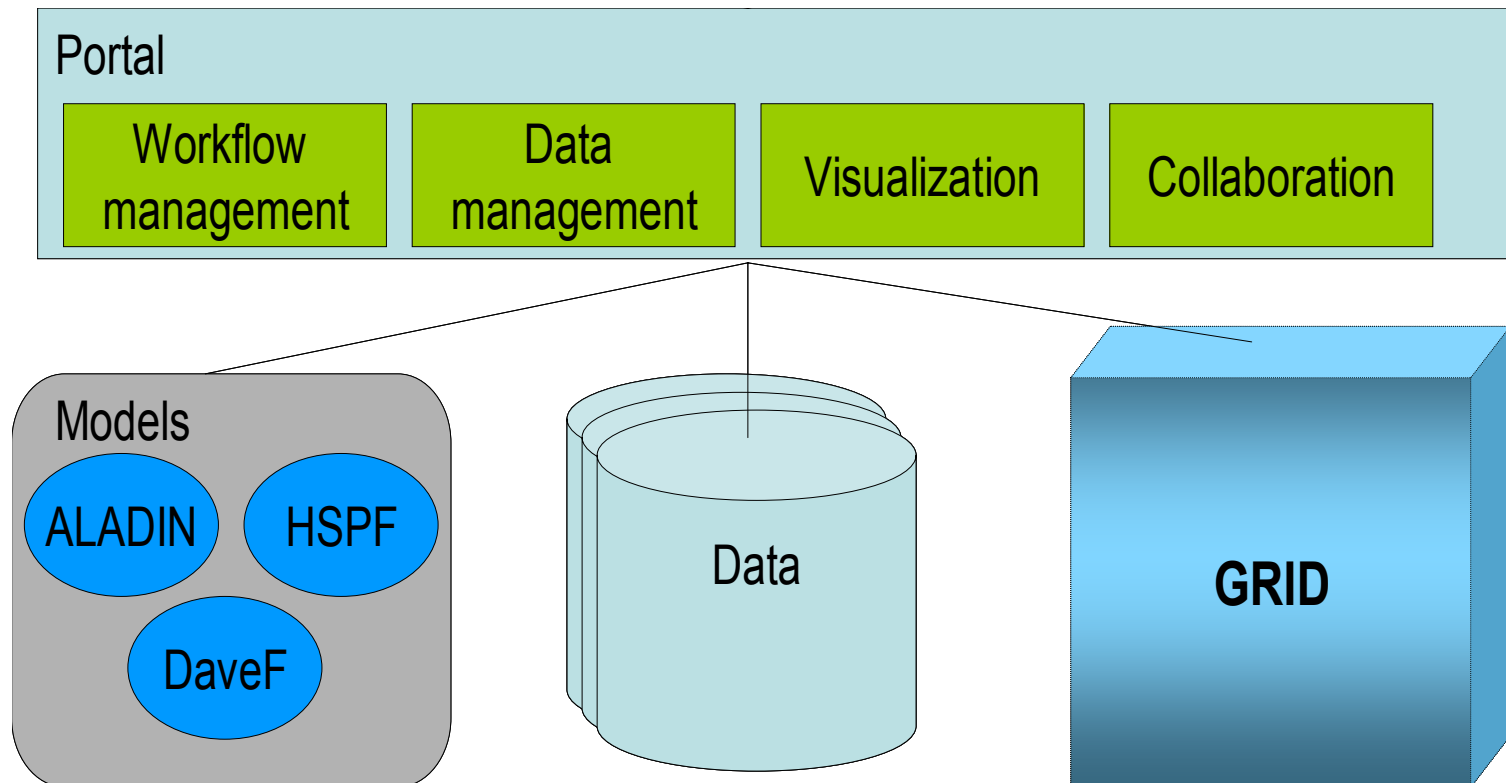


# Scenario for Grid computing

- MM5 scenario



# FloodGrid Portal





# Collaboration

Apr 16, 2004 08:54 am

My Workspace **FloodGrid**

**FloodGrid Portal**  
Institute of Informatics, Slovak Academy of Sciences

**Resources**

New... Delete Cut Copy Replace... Revise... Select all

Location: FloodGrid

<input type="checkbox"/>	<u>Title</u>	<u>Size</u>	<u>Created By</u>	<u>Last Modified</u>	
<input type="checkbox"/>	<a href="#">Current state</a>	691 KB	FloodGrid Administrator	Apr 01, 2004 01:43 pm	
<input type="checkbox"/>	<a href="#">Flood portal</a>	1 KB	FloodGrid Administrator	Apr 01, 2004 01:44 pm	
<input type="checkbox"/>	<a href="#">Globus home page</a>	1 KB	FloodGrid Administrator	Apr 01, 2004 01:59 pm	
<input type="checkbox"/>	<a href="#">Today's news</a>	1 KB	FloodGrid Administrator	Apr 01, 2004 01:45 pm	

**Users Present**

FloodGrid Admin



# Data management

- Many kinds of data in FloodGrid
  - Meteorological, hydrological, hydraulic
  - Generated by simulations or obtained from sensors
  - Permanent or periodically updated
  - Publicly available or with restricted access
- Using metadata catalog for describing data
- Data are stored in storage elements and are accessed via Grid protocols
- Operation: query, adding, modification, deleting



# Workflow management

- Manages and executes jobs with data dependences
- Cooperates with Resource Broker to find suitable computing element for running simulation
- Monitors status of jobs
- Abilities to use predefined workflow templates, spawning running workflow, modifying parameters of jobs



# Visualization

Visualization Portlet

Change dir: /vis

- davef vis viet-21-7.tgz
- davef viet-21-7 001.png
- davef viet-21-7 002.png
- davef viet-21-7 003.png
- davef viet-21-7 004.png
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- h
- d.png

**Animation**

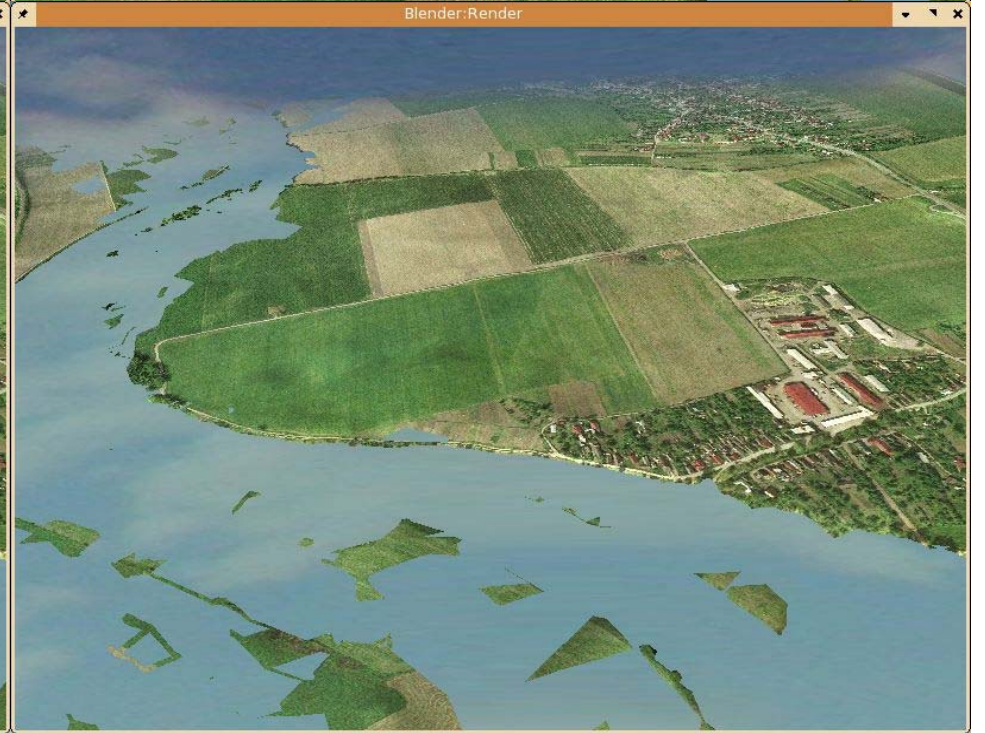
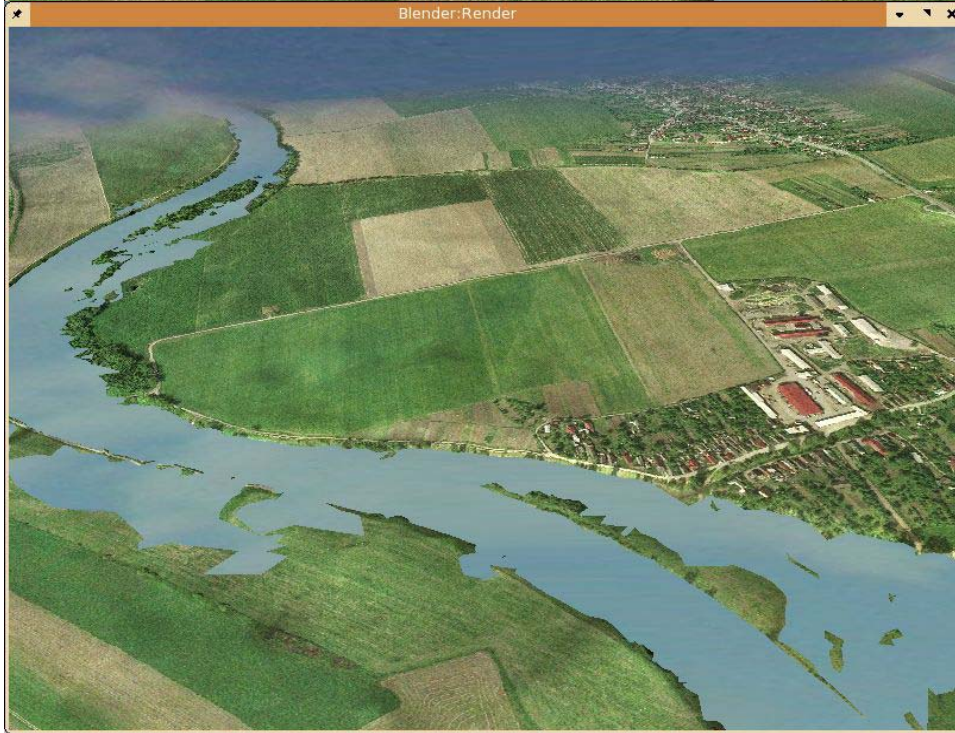
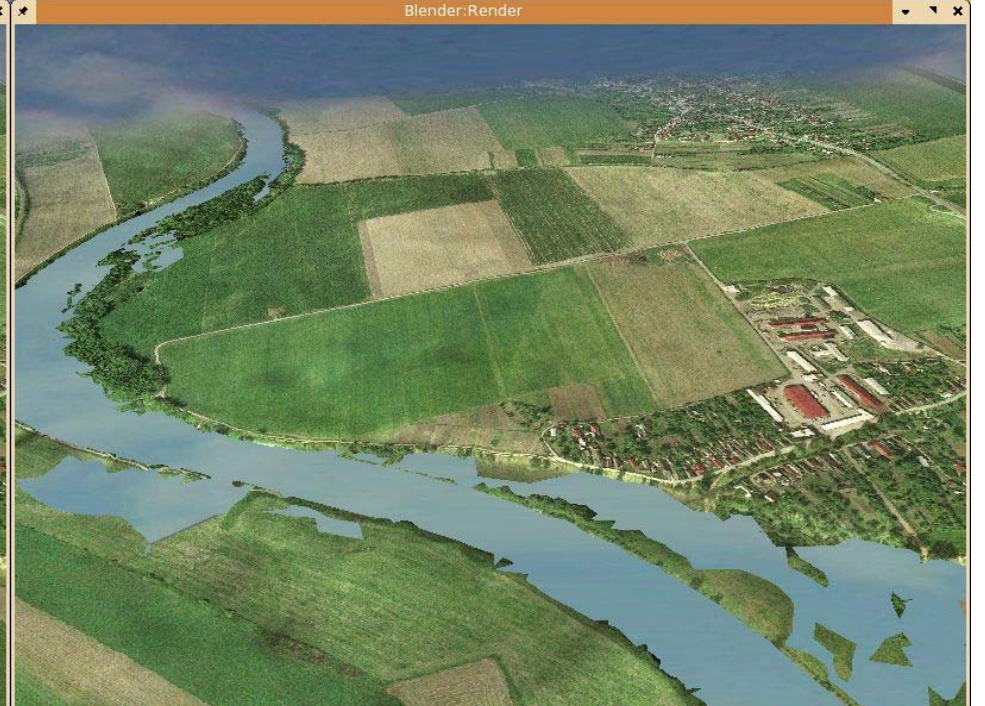
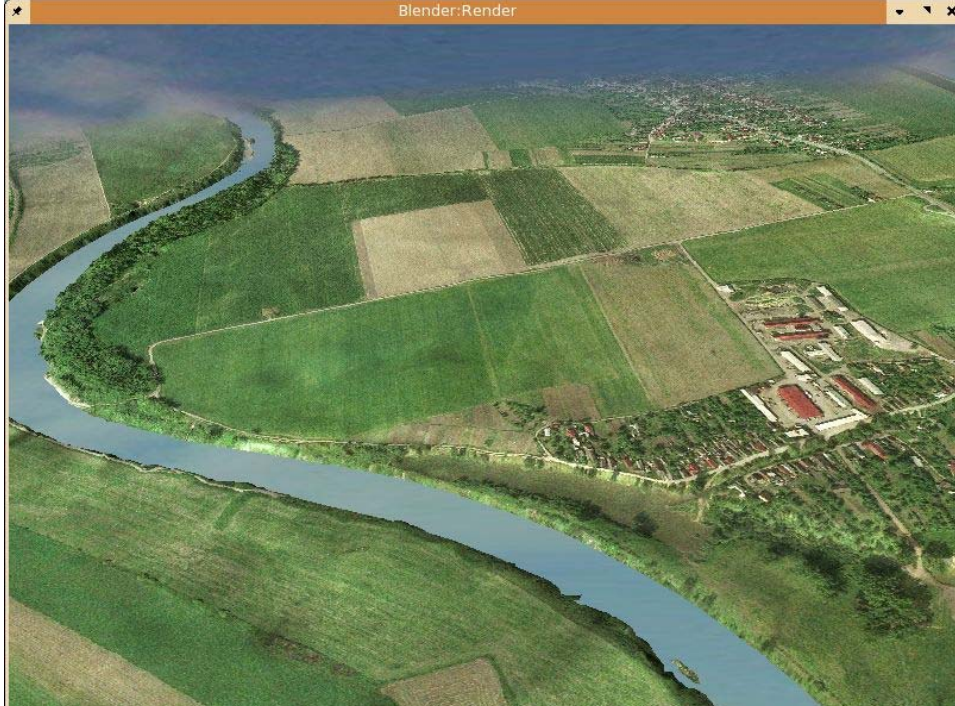
<animation stopped>

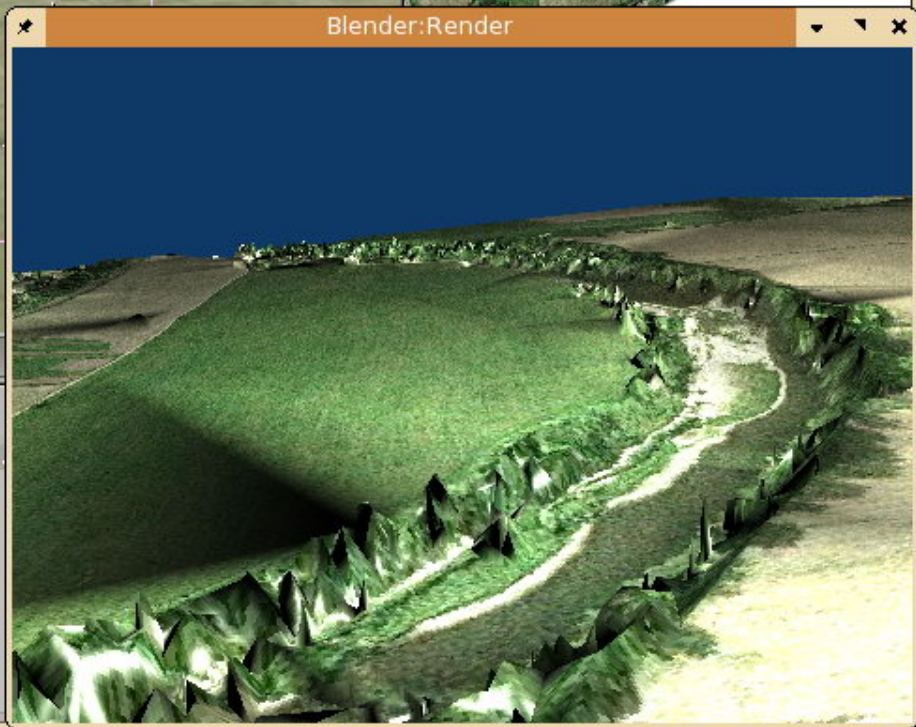
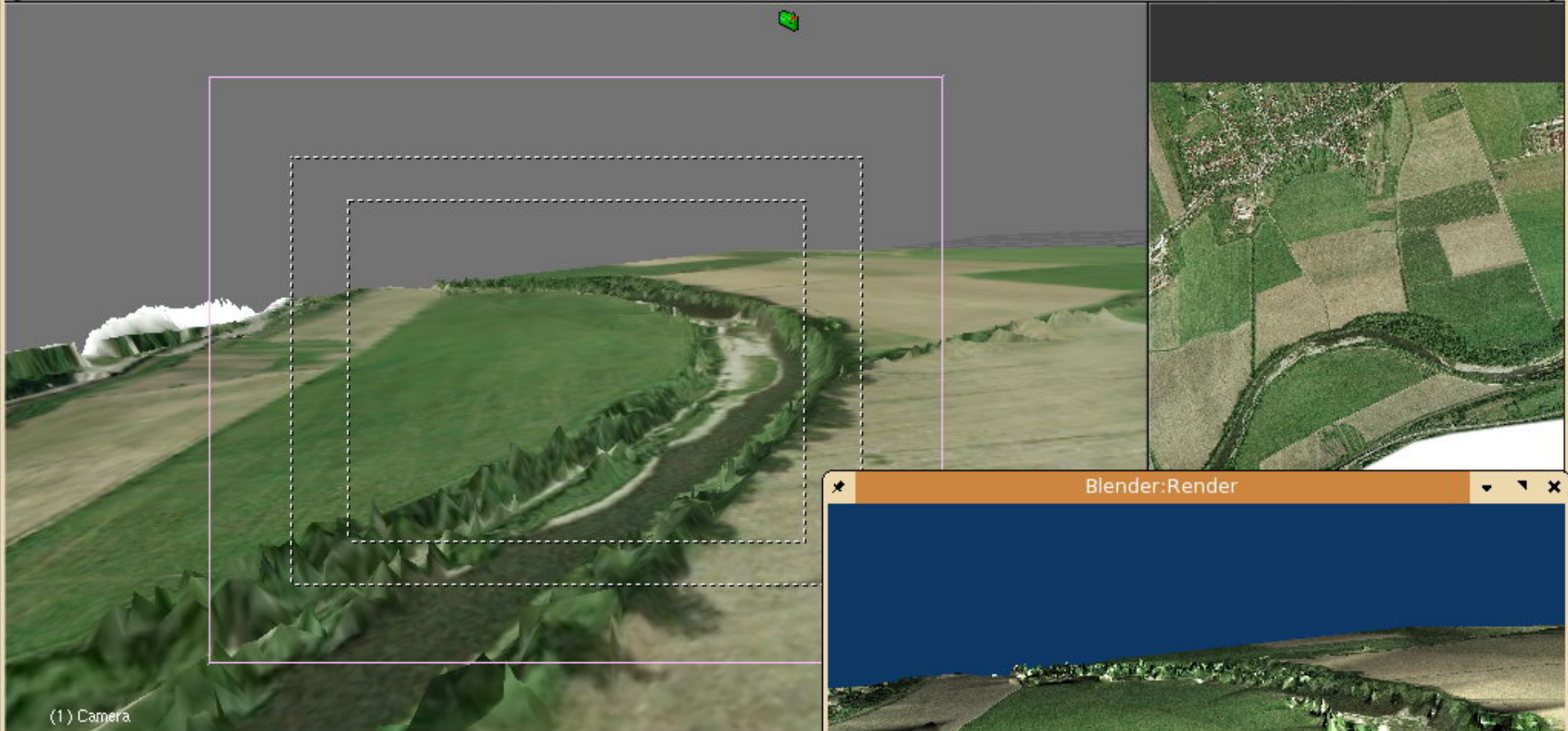
Interval: 1 sec

Start Stop < >

0.00 m  
2.00 m  
4.00 m  
6.00 m  
8.00 m







View Select Object Object Mode

Panels

Output

- /tmp/
- //backbuf
- //ftype

Backbuf Edge Edge Setting

Render

RENDER Shado Env Ma  
Blender Internal Pan Ray Radi

OSA	MBLUR	100%
5 8 11 16	f: 0.50	75 50% 25%

Xparts: 1 Yparts: 1 Fields Odd x  
Gauss 1.00  
Border Gamm

Sk Premu Key

DispVie DispWi Extensio

**Thank you for your attention**

**Now is time for live demo**