



EUROPEAN UNION



GOVERNMENT OF ROMANIA



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Structural Funds
2007 - 2013



ENVIROBANAT
Common History, Common Future

Computational Fluid Dynamics for Air and Water dispersion of the pollutants

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WORKSHOP
‘ ‘ ENVIROBANAT2014 ‘ ‘
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PHOENICS COMMERCIAL SOFTWARE

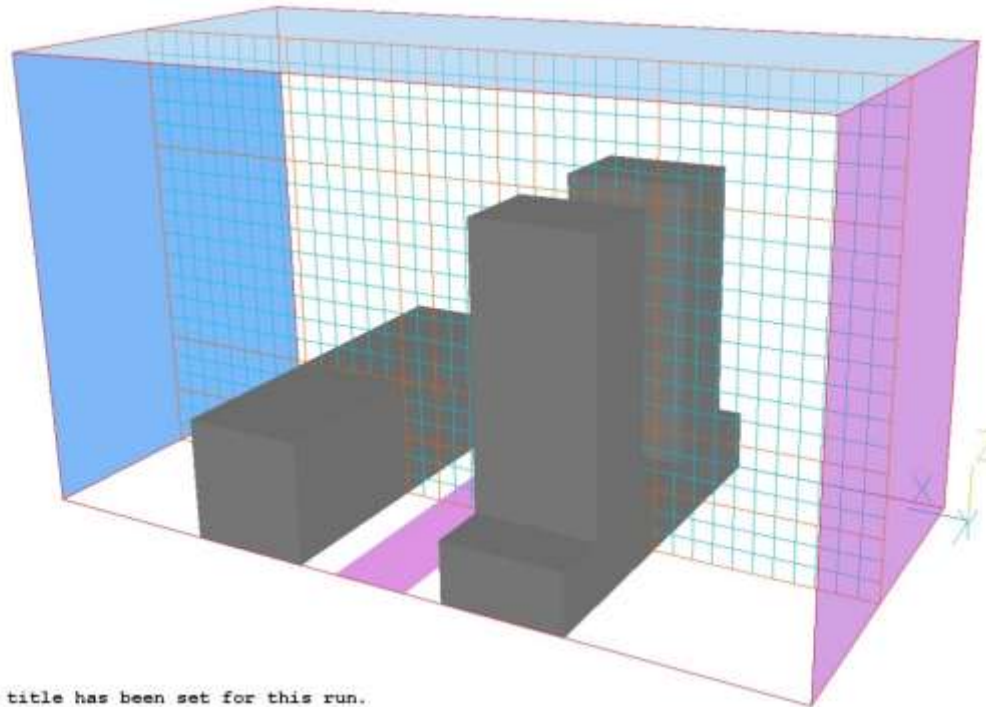
Software capabilities:

- Computational Fluid Dynamics Software
- Finite Volume Model
- Laminar and Turbulent models
- Mutliphase flows
- Chemical reactions
- Radiation models
- Structured grids
- Fine grid embedding
- Body fitting
- Transient simulations
- Parallel processing

Special purpose versions of *Phoenix*:

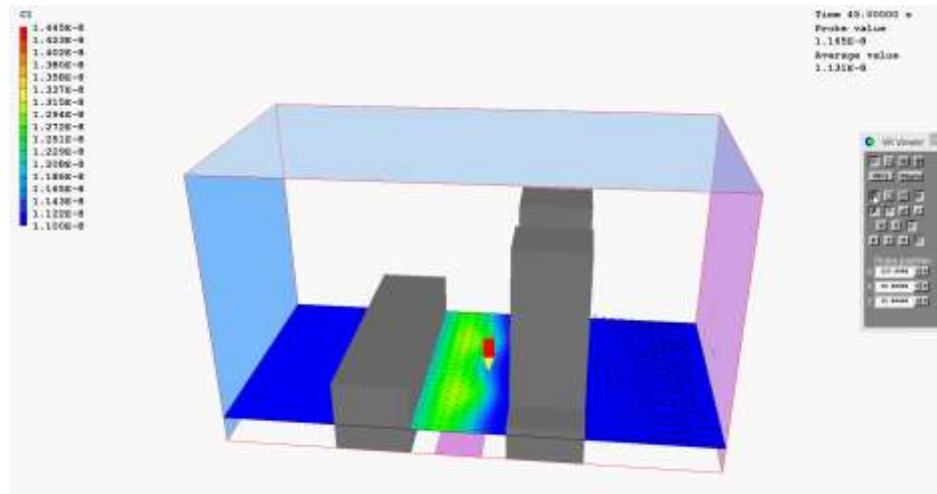
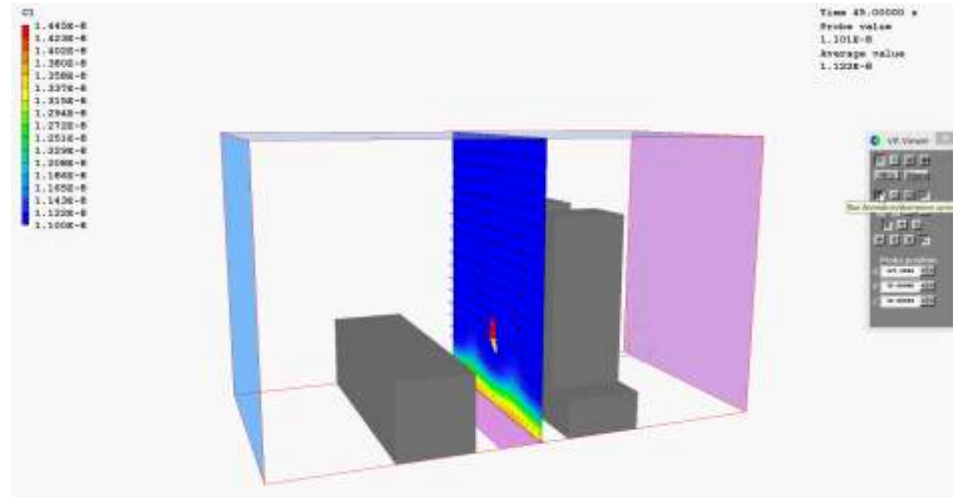
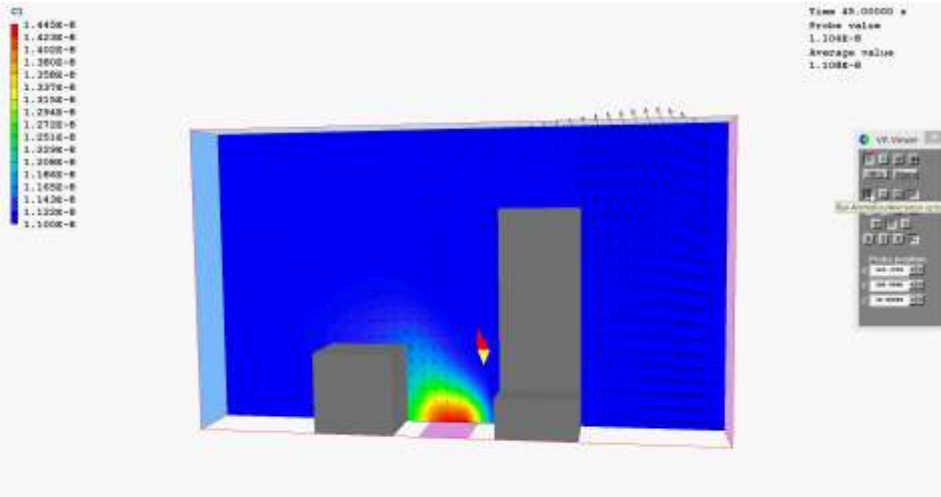
- Heat, air and smoke flow in buildings
- Cooling of electronics
- Air conditioning
- Car air-dynamics
- Environmental simulations
- Chemical-vapor-deposition reactors
- Electrolytic smelters

Urban dispersion modeling

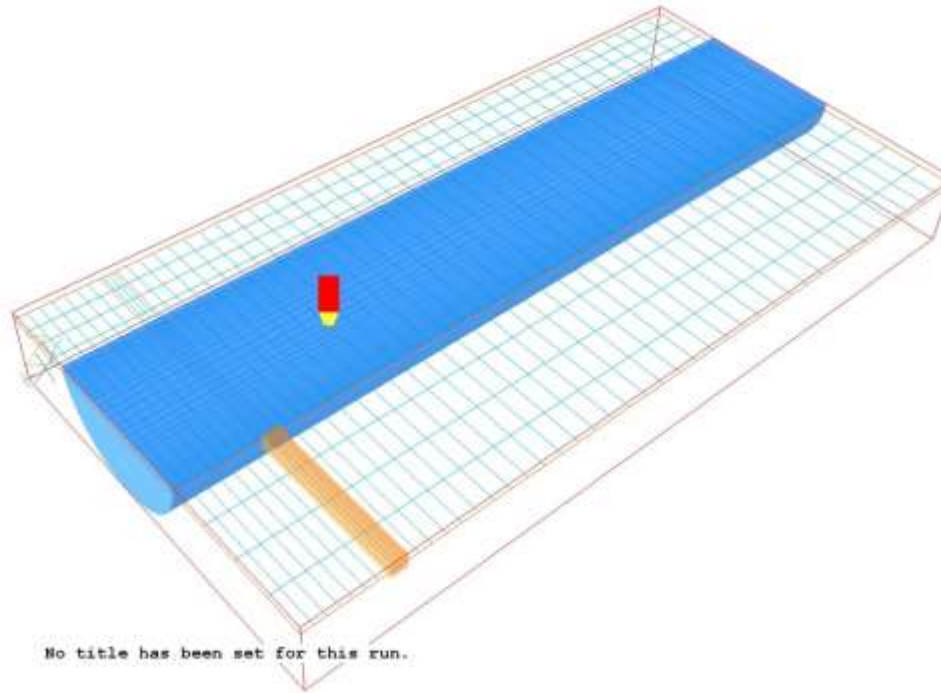


Mesh: 40 x 21 x 20 nodes
Turbulent regime, k-e model
Hybrid discretization scheme
Transient simulations, 40 time steps
Fluid flow and concentration equations

Transient CFD simulations of the urban dispersion made by *Phoenics*

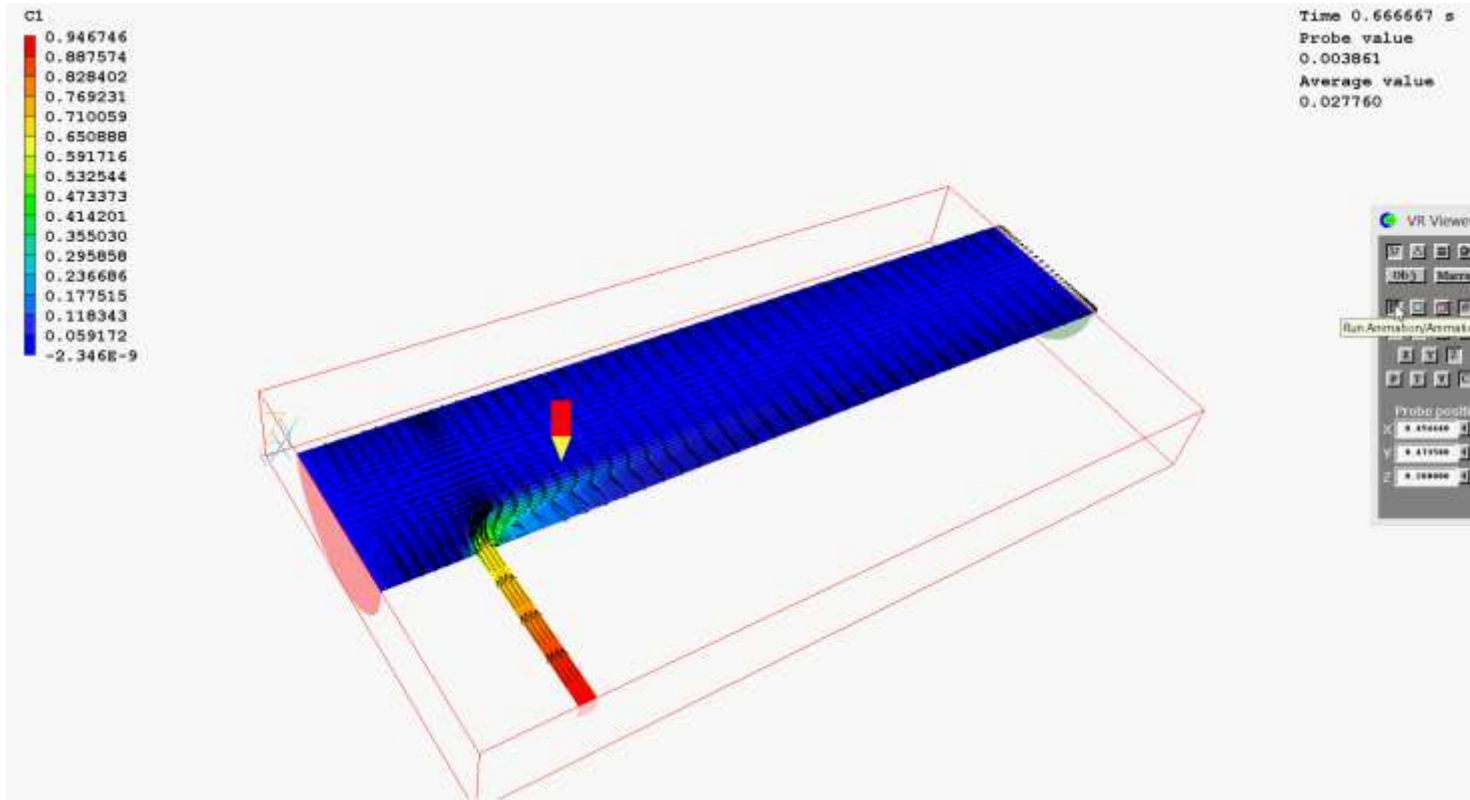


Dispersion modeling of the pollutants in the water

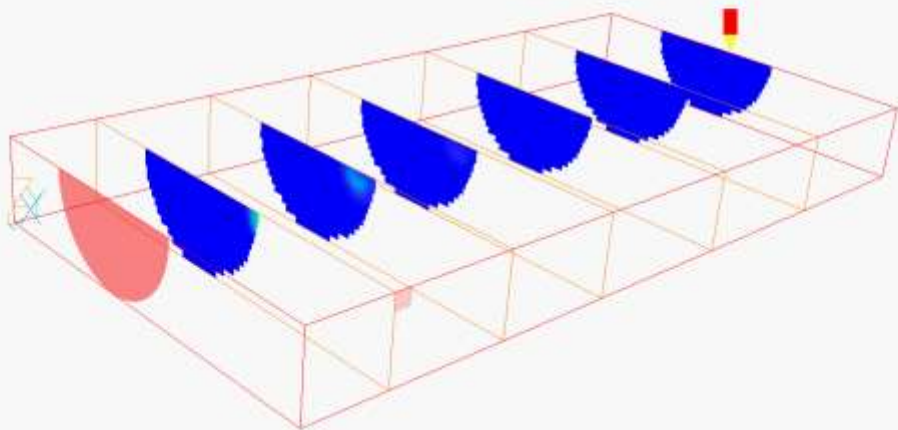
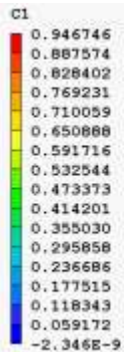


Mesh: 41 x 46 x 16 nodes
Turbulent regime, k-e model
Hybrid discretization scheme
Transient simulations, 20 time steps
Fluid flow and concentration equations

Transient CFD simulations of the river dispersion of pollutants made by *Phoenics*



Transient CFD simulations of the river dispersion of pollutants made by *Phoenics*



Time 0.666667 s
Probe value
8.196E-5
Average value
8.590E-5



THANK YOU VERY MUCH FOR YOUR ATTENTION