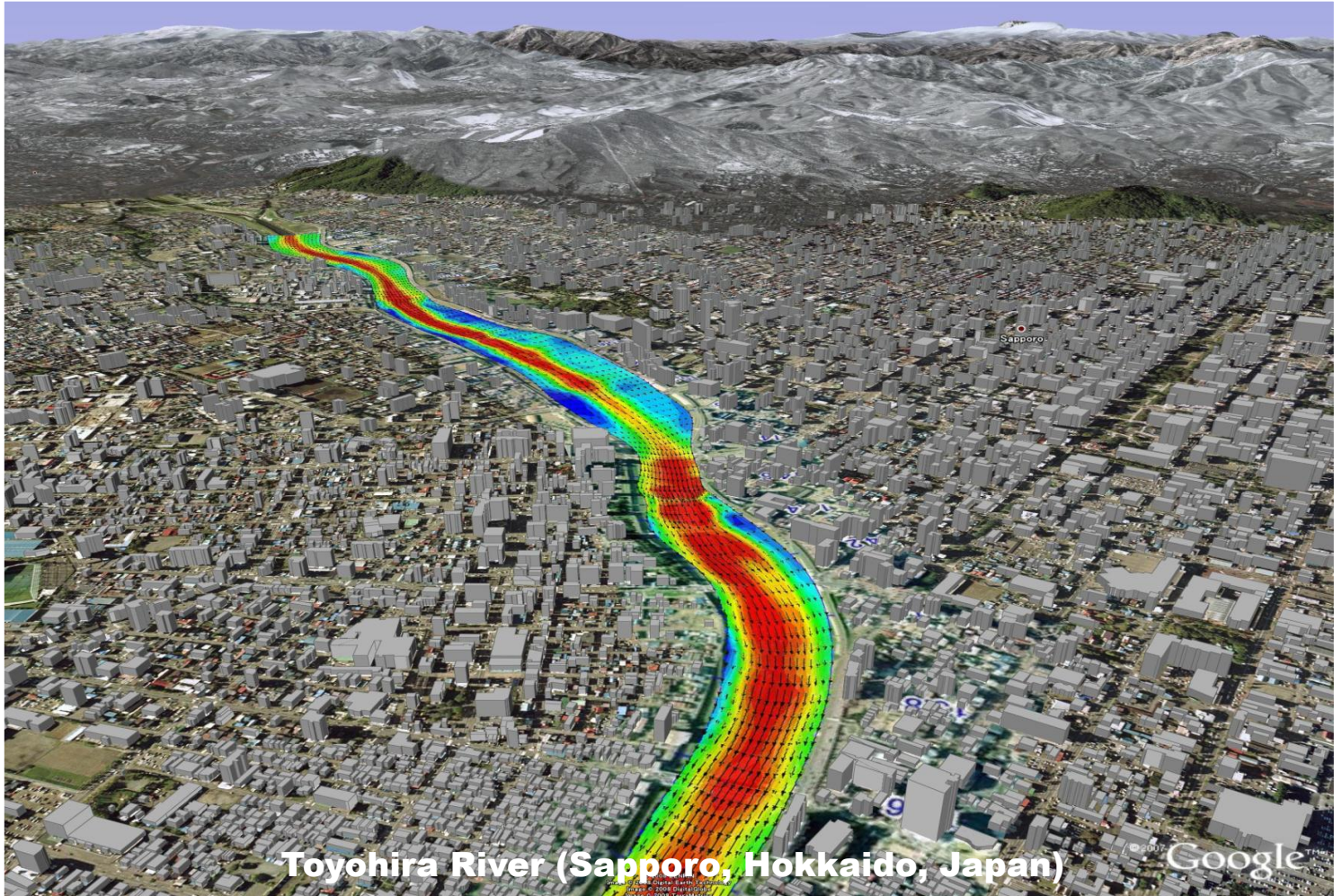


You can analyze rivers around the world!

The iRIC software can simulate rivers from Colorado River to the Nile.

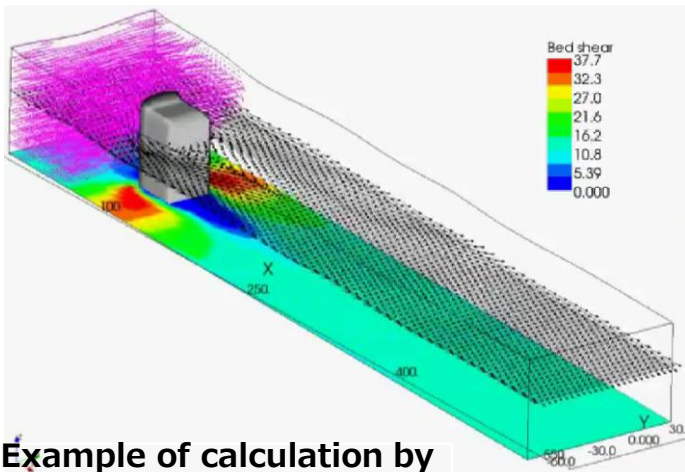
A revolution for river flow, riverbed variation, and flood analysis calculations.

Know! Solve! See!



Version2-β

3-D Model, Now on Available!



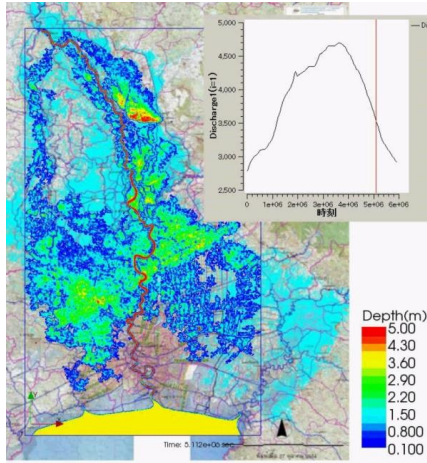
Example of calculation by NaysCUBE (3-D Flow Model)

iRIC Software

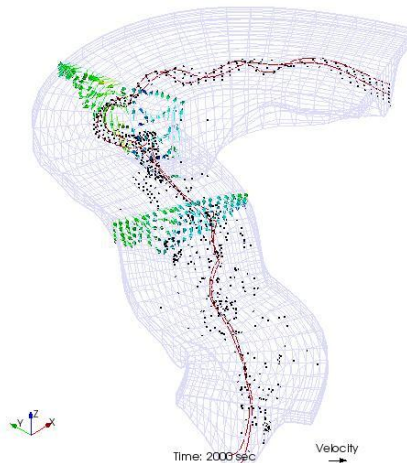
- River 2-D,3-D flow with sediment transport solvers available in a public-domain interface
- Show calculation results on display in vector, contour and play them on movie
- Export results for jpg, png files, text data, standard graphics or "KML" files for Google Earth
- Available river survey and DEM data for simulations

- iRIC can be downloaded freely. You can get latest information about iRIC Software after user registration(<http://i-ric.org>).
- iRIC(International River Interface Cooperative) is a river flow and riverbed variation analysis software package which combines the functionality of MD_SWMS, developed by the USGS (U.S. Geological Survey)and RIC-Nays, developed by the Foundation of Hokkaido River Disaster Prevention Research Center, Japan.

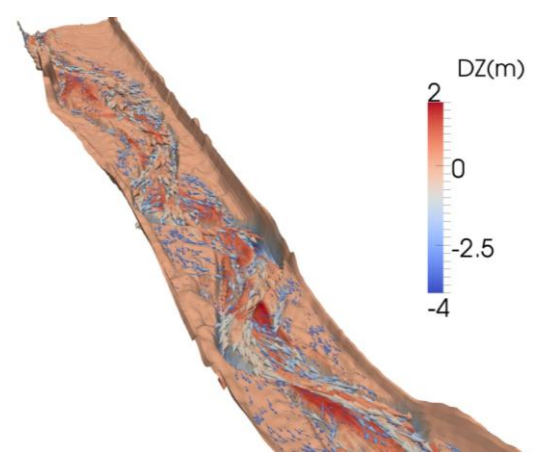
Example of calculation result using iRIC solvers



2011 Thailand flood simulation
(Calculated by Nays2DFlood)



3D simulation for river bend
(Calculated by NaysCUBE)



Calculation for river bend erosion
(Calculate by Nays2D, drawn by ParaView)

GUI Function

< Grid generation >



- River survey and DEM data can be edit on GUI
- Generate grid from river survey data and DEM data
- Aerial photo and Map image etc. can be back ground
- Grid attributes can be checked with contour and bird-view

<Analysis/Visualization>



- Calculation results can be visualized using contours, vectors, streamlines and particle tracks
- Save visualized image as jpg and png files
- Export data as csv and vtk format
- Create kml file for Google Earth

<Other>

- XML Scheme:

XML scheme is used for constructing menus and specifying model parameters. This makes it simple to add new models or change existing ones in the iRIC system.

- CGNS file format

The CGNS data file format is used in the iRIC system. It makes possible to analysis results using software corresponding to the cgns such as MATLAB, TECPLOT etc.

Solver Correction

■ Nays2D

Nays2D is a two-dimensional model developed by Dr. Yasuyuki Shimizu, Hokkaido University, Japan. It can simulate complex unsteady flow fields and bed evolution with bank erosion including bed and suspended load transport.

■ FaSTMECH

FaSTMECH is a quasi-three dimensional model developed by Dr. Jonathan Nelson, U.S. Geological Survey. It uses a quasi-steady assumption to calculate the flow field for simulating long-term morphological evolution in rivers. FaSTMECH also has the habitat calculator for evaluating the ecosystem in rivers.

■ Morpho2D

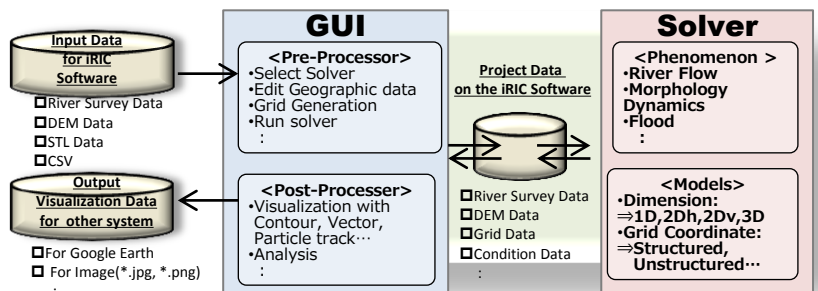
Morpho2D is a two-dimensional morphodynamic model developed by Dr. Hiroshi Takebayashi, Kyoto University, Japan. It can treat the bed material as a non-uniform sediment for reproduce the sorting phenomena of river bed, and also calculate sediment transport over an inerodible bed such as rock.

■ Nays2D Flood (Added in Version2.0)

Nays2DFlood is for flooding calculation, was developed from Nays2D solver. You set the overflow point of river, and give flooding discharge, elevations of land. It allows you to simulate running or diffusing flow on land.

■ Nays CUBE (Added in Version2.0)

NaysCUBE is a three-dimensional model developed by Dr. Ichiro Kimura, Hokkaido University, Japan. It allows you to perform local scouring flow at river bend, around pier or groin.



iRIC Software *version2* Coming soon !!

Click! <http://i-ric.org/>