



SimTech ENKIDOU™

ENKIDOU is a Java-based library of components (API) for the development of interactive, graphic environments for VERTICAL APPLICATIONS.

ENKIDOU applications can use **ENKIDOU GUI** or the customer's GUI.

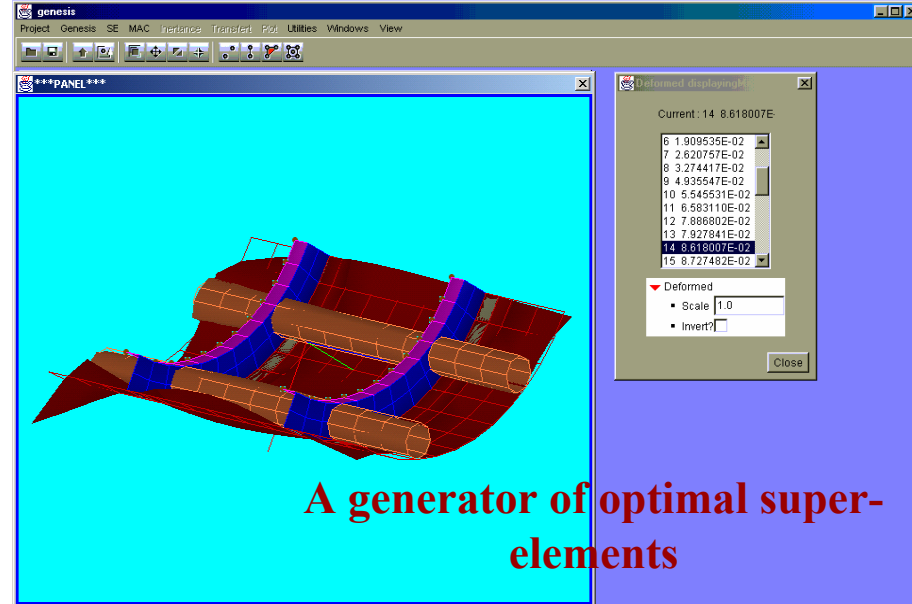
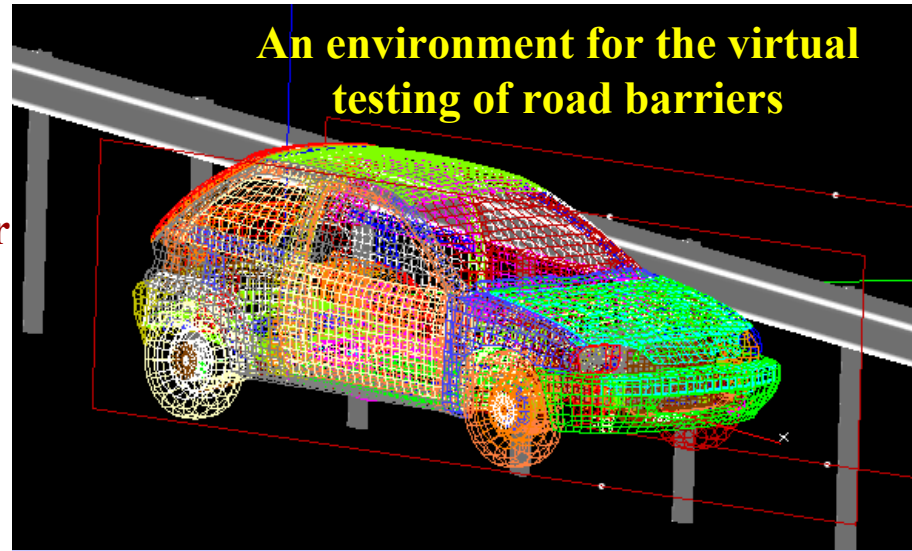
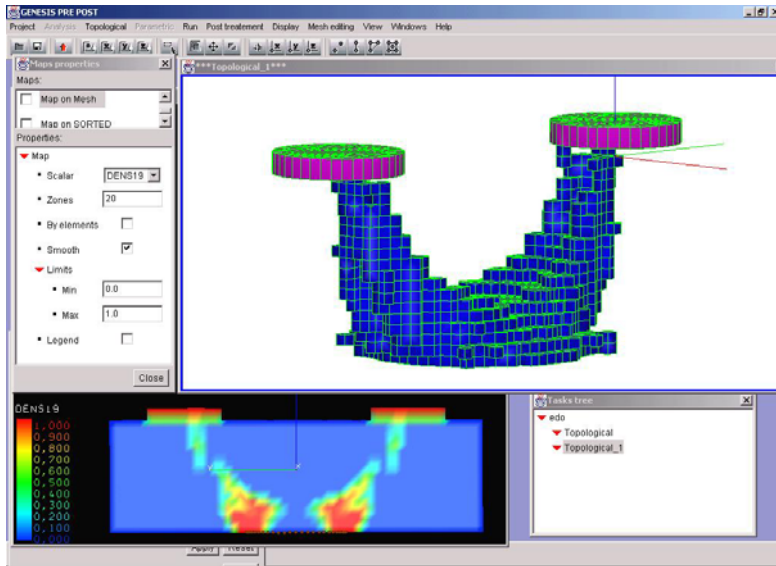
ENKIDOU includes about 1500 classes.

Main features:

- Task structure (process automation)
- Data structure
- Disk I/O management
- Java/openGL link
- High level components

Some examples of ENKIDOU vertical applications

A specialized (pre-) and post-processor for VR&D GENESIS



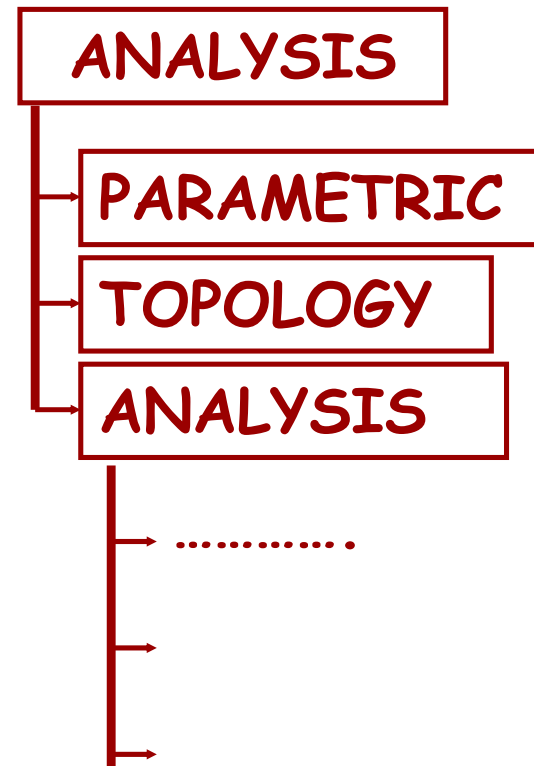
A generator of optimal super-elements

Example of application structure: ENKIDOU environment for VR&D GENESIS

Specifications:

- Start from a validated GENESIS / NASTRAN analysis deck
- Run analysis and post-process analysis results
- Prepare, run and analyze optimization jobs (size, shape, topology)
- Modify the model geometry using domain elements and GENESIS features
- Start a new analysis/optimization loop on previous or modified geometry

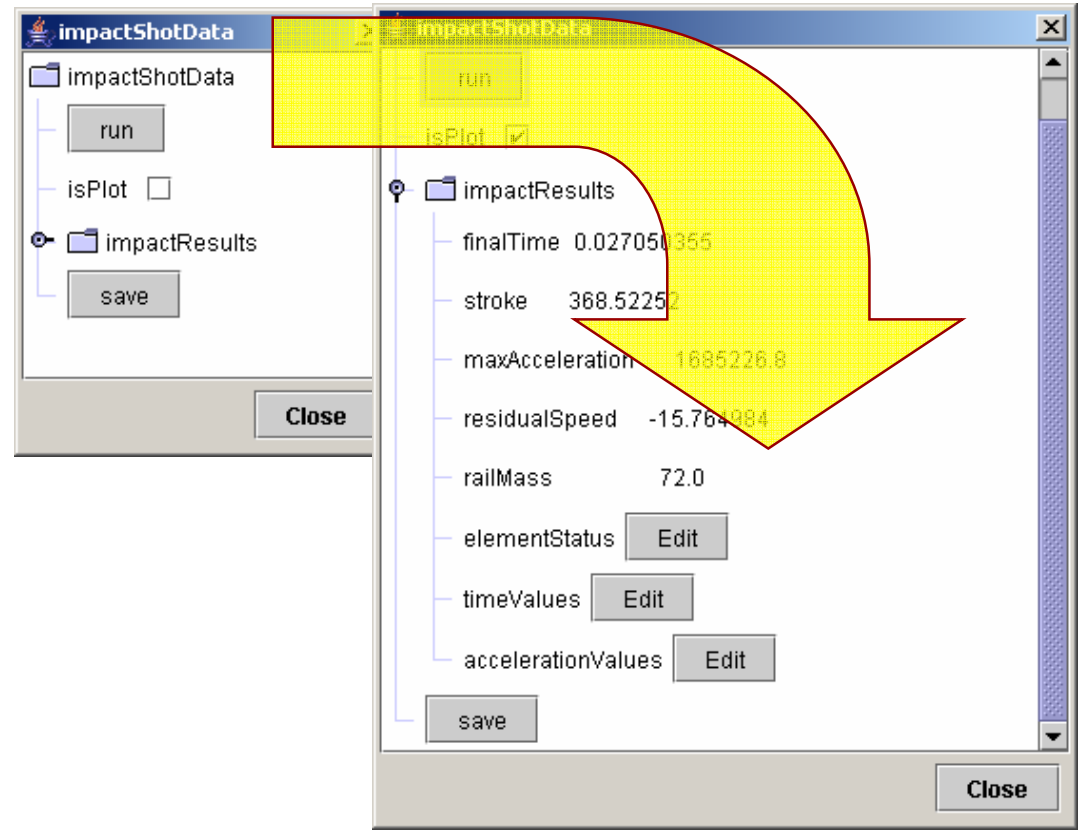
Task tree :



ENKIDOU IoData: integrated features for I/O, editing and control

In the code

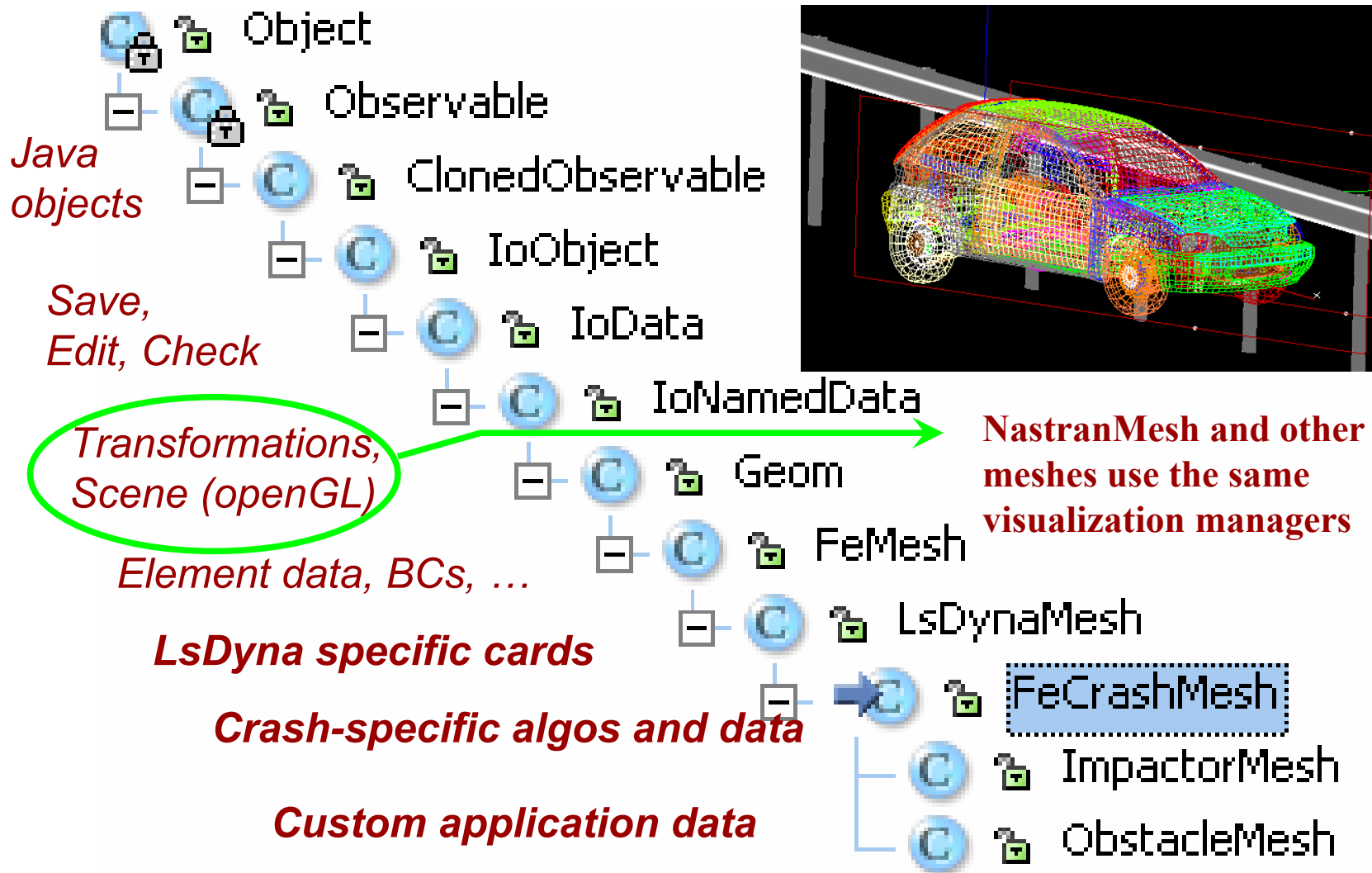
```
IoAction run;  
IoBoolean isPlot;  
ImpactResults results;  
IoAction save;
```



... on the screen

ENKIDOU IoData: specialized database for scientific computing - I

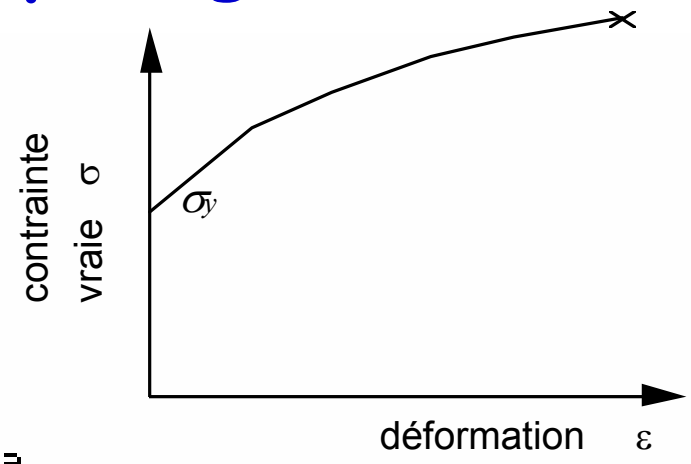
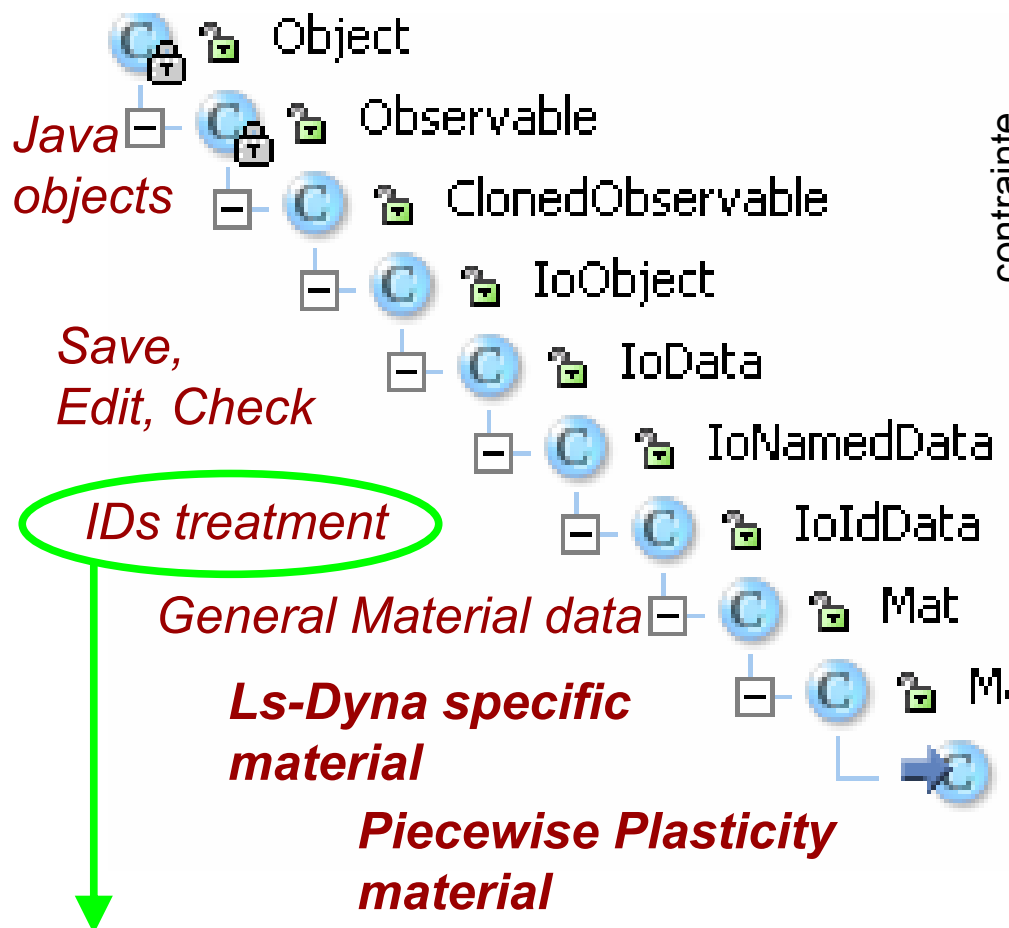
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NastranMesh and other meshes use the same visualization managers



ENKIDOU IoData: specialized database for scientific computing - II



Ids vs. index processing is the same for a wide variety of objects !



ENKIDOU Format management

Proprietary XML format ...

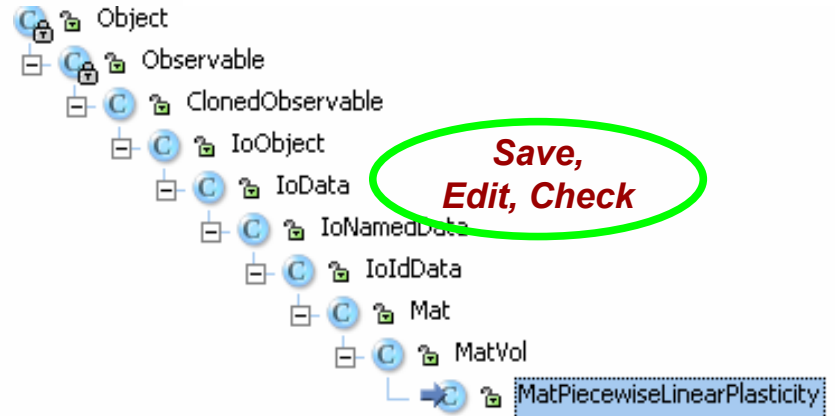
Card reader / writer for external formats

Formatting facilities not available in standard Java

```

<?xml version="1.0" ?>
<!-- ENKIDOU (C) 1998-2005 SimTech -->
<SimML>
<Data name="simulacroLongheroneEditData">
<Array name="elementCascade" size="2" of="Data">
<Data name="LinearSpring" typeId="LinearSpring">
<Value name="elemName" of="String">
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</Value>
<Value name="length" of="real">
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</Value>
<Data name="sectionData">
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</Value>
<Value name="unitMass" of="real">
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</Value>
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</Data>
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  LinearSpring
</Value>
<Value name="length" of="real">

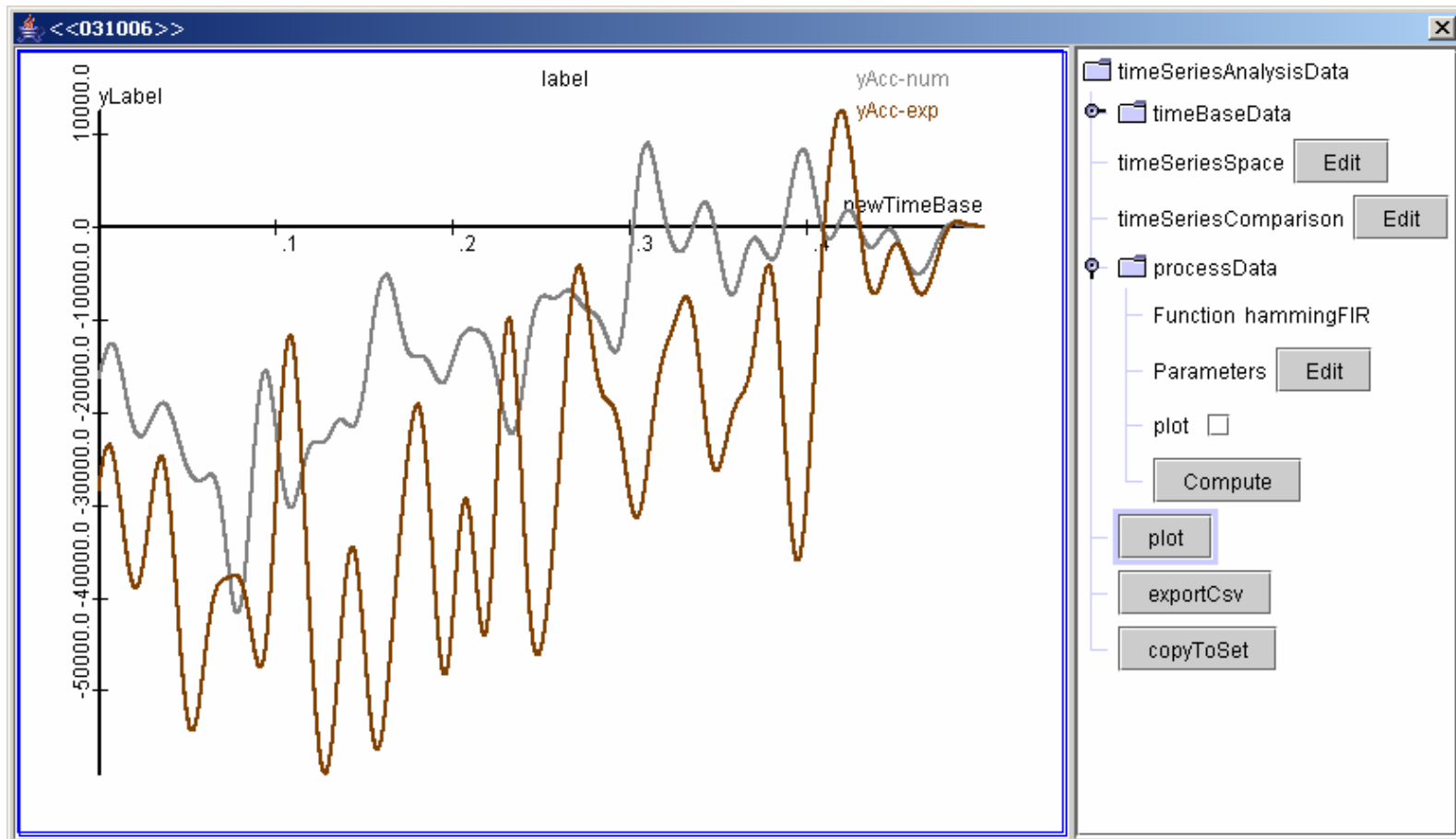
```



All the IoData are I/Oed with the same methods

ENKIDOU High level component -I

Time series analysis module



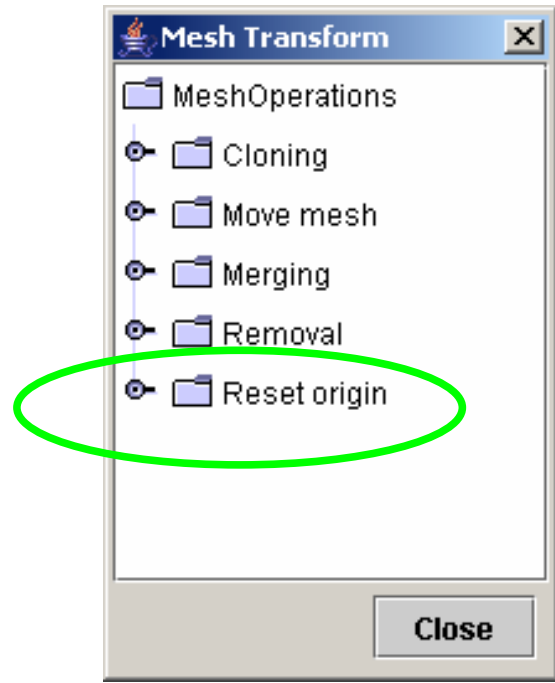
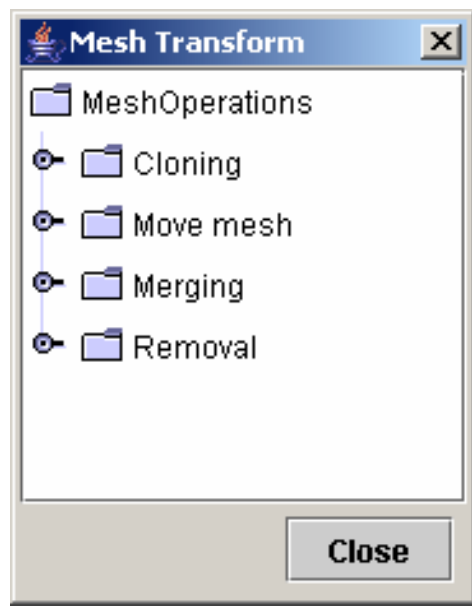


ENKIDOU High level component -II

Mesh transformations ...

... in the final application

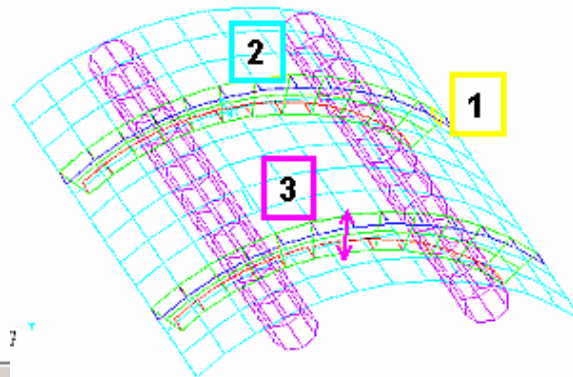
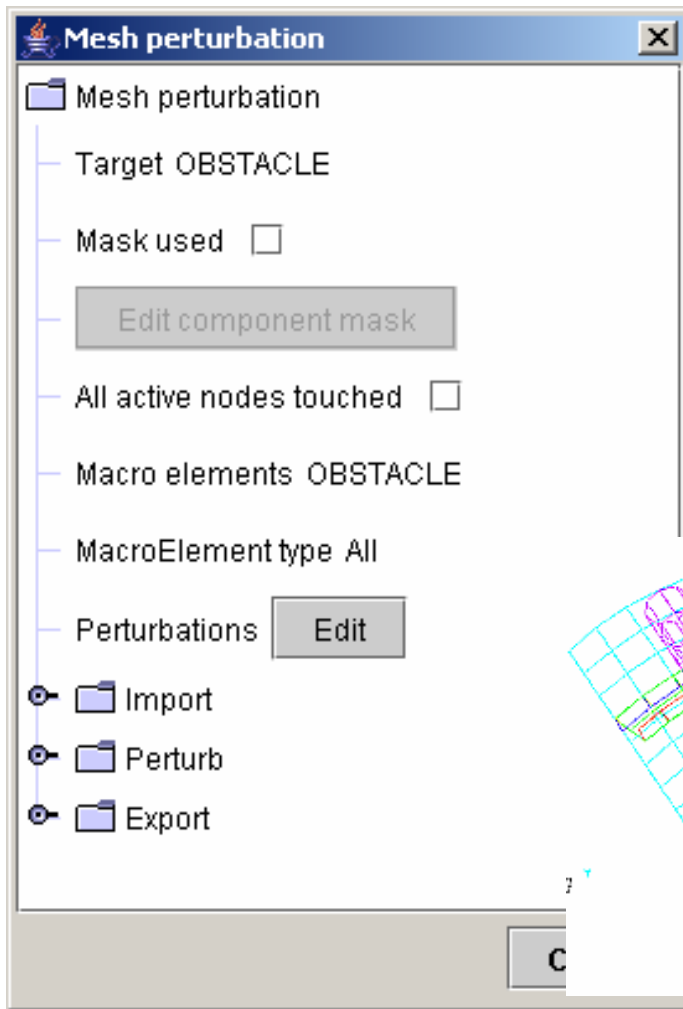
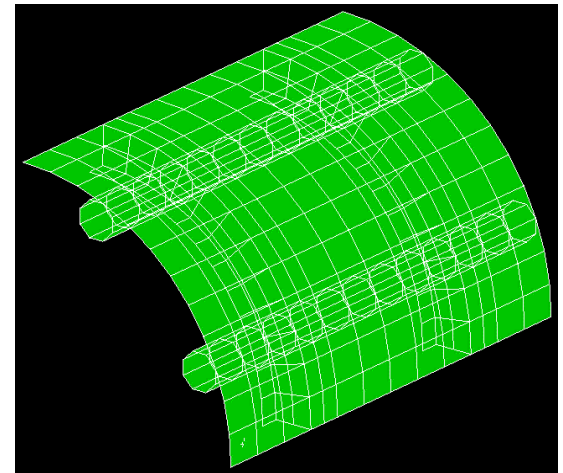
... in ENKIDOU ...



All ENKIDOU components can be extended to add new, application oriented features

ENKIDOU High level component -III

Morphing using domain elements ...



↗ width of the upper truss of the reinforcement

✂ width of the lower truss of the reinforcement

✂ height of the reinforcement

ENKIDOU Java to OpenGL

ENKIDOU applications support fully all OpenGL functions.

