

GID CHARACTERISTICS

USEFUL CAD SYSTEM

- Creation of geometry.
- NURBS handling (freeform, edition, simplification...)
- Import and export CAD data in several formats.
- Several options for repairing and cleaning CAD data.
- Simple assignment of boundary conditions and material properties.
- Definition of analysis parameters.
- Versatile visualization and quality control tools.
- NURBS reconstruction from mesh.

MESH GENERATION OPTIONS

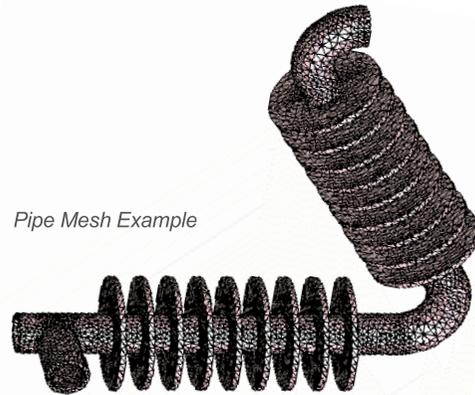
- Structured meshes for linear and quadratic elements including: triangular, quadrilateral, hexahedral, prism and tetrahedral meshes.
- Unstructured meshes are automatically generated based on quality and spacing criteria defined by the user (or using a background mesh). This includes:
 - Triangular, quadrilateral circles, spheres, and tetrahedral meshes (either linear or quadratic elements).
 - Mesh generation is carried out after all data have been assigned to geometrical entities.
- Semi-structured volume meshes (structured in one direction) of hexahedra, prisms or tetrahedra.
- Cartesian meshes.
- Three surface meshers available:
 - RFAST: mesh in the parametrical space (2D).
 - RSURF: mesh in space (3D).
 - RJUMP: mesh in space a group of surfaces skipping their contact lines as specified by the user.
- Boundary Layer Mesh in 2D and 3D.
- GiD allows to generate large meshes in a fast and efficient manner.
- Mesh edition utilities: mesh refinement, edge collapse, smoothing, etc.

VISUALIZATION OF NUMERICAL RESULTS

- Contour and vector plots, deformed shapes, isosurfaces, surface extrusion using a result and beam diagrams from static and dynamic analysis.
- Visualizable on original and deformed meshes.
- Visualization on several meshes for adaptive solutions.
- Several rendering modes (reflection, transparencies...)
- Animated sequences.
- 3D cuts over all kind of meshes.
- Several graphs types: point, line, boundary.
- Coloured stream lines and ribbons according to any result.
- Import of neutral FEMAP® and Tecplot® results, NASTRAN® and 3dStudio meshes.

MAIN ADVANTAGES

- **A single environment (completely graphical) for both pre and postprocessing**
- **Sets and materials applied over geometry or mesh entities.**
- **Intuitive interface (conditions are easy to create and edit).**
- **All the GiD pre and postprocessing tools are available.**



Pipe Mesh Example

Free Full Version for a month can be downloaded at: www.gidhome.com/gidplus

Best Quality/ Price Ratio: Interface Price 550 € (+16% IVA if applicable) plus GiD's competitive price makes it affordable for individuals and organizations, check it at: www.gidhome.com/order

How to Buy It? For details and orders contact (gid@cimne.upc.edu) or go to the online shopping center through www.cimne.com/tiendaCIMNE Resellers, please contact Compass S.A. (info@compassis.com)

More Information available at: www.gidhome.com

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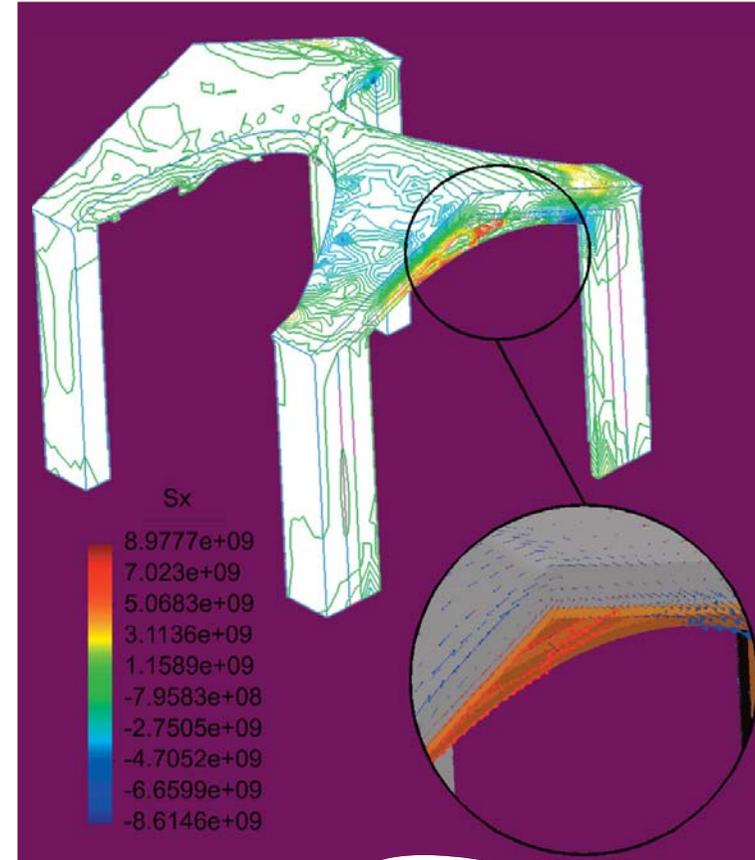
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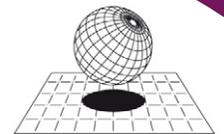
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Pre and Postprocess your **ABAQUS** simulations with **GiD**

- **The personal pre and post processor -**



www.compassis.com



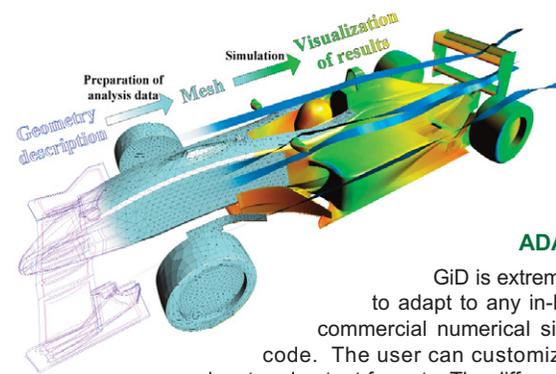
CIMNE⁹
www.cimne.com

WHAT'S GiD?

GiD is a pre and postprocessor developed by CIMNE, International Center for Numerical Methods in Engineering, located in Barcelona (Spain). GiD has been designed as a universal, adaptive and user-friendly graphical user interface for geometrical modeling, data input and visualization of results for all types of numerical simulation programs. Typical problems that can be successfully tackled with GiD include most simulations in solid and structural mechanics, fluid dynamics, electromagnetics, heat transfer, geomechanics, etc. using finite element, finite volume, boundary element, finite difference or point based (meshless) numerical procedures.

GiD is ideal to be used in a multi-user environment such as universities, research centers and enterprises for development and applications of different numerical simulation programs.

UNIVERSAL: GiD can generate all the information (structured and unstructured meshes, boundary and loading conditions, material types, visualization of results, etc.) required for the analysis of any problem in science and engineering using numerical methods.



ADAPTIVE:

GiD is extremely easy to adapt to any in-house or commercial numerical simulation code. The user can customize GiD's input and output formats. The different menus can be tailored to fit any specific need. A deep integration of any code with GiD is possible. The analysis process can be also be started monitored and stepped from within GiD.

USER-FRIENDLY: The development of GiD has been focused on the user needs and on the simplicity, speed, effectiveness and accuracy required at input data preparation and results visualization levels.

GiD the universal, adaptative and user friendly pre and post processing system for computer analysis in science and engineering

ABAQUS SOLVER

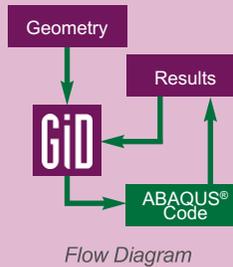
- Abaqus® is a commercial software package for finite element analysis developed by SIMULIA®, a brand of Dassault Systemes S.A.
- Abaqus® commercial distributions include two main solvers:
 - A general-purpose solver using a traditional implicit integration scheme to solve finite element analysis (Abaqus®/Standard).
 - An explicit integration scheme to solve highly nonlinear transient dynamic and quasi-static analysis (Abaqus®/Explicit).
- Abaqus offers:
 - Wide material modeling capability and range of applications (industrial product, automotive and aerospace industries...).
 - Good collection of multiphysics capabilities, such as coupled acoustic-structural, piezoelectric, and structural-pore capabilities.
 - Parallel computing environment.

INTERFACE FLOW

To define an ABAQUS® problem, user can create the geometry with the GiD CAD tools or import it from another common format.

Conditions can be applied over geometry or mesh entities (i.e. before or after meshing the model).

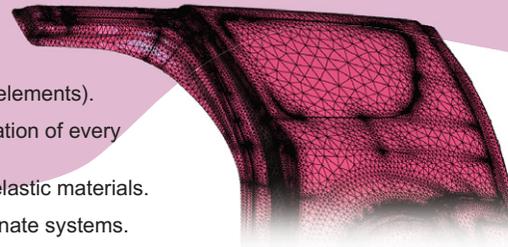
Afterwards, the data can be sent to the solver directly from the interface and, when calculation is finished, the results can be loaded and post processed within GiD.



PREPROCESSING CAPABILITIES

The preprocessing module of the interface allows the user to perform the following tasks:

- Define sets of nodes, elements and/or surfaces (by nodes or face elements).
- Specify the formulation of every element type.
- Create and apply elastic materials.
- Define local coordinate systems.
- Assign conditions and materials graphically



Sheet Stamping Example



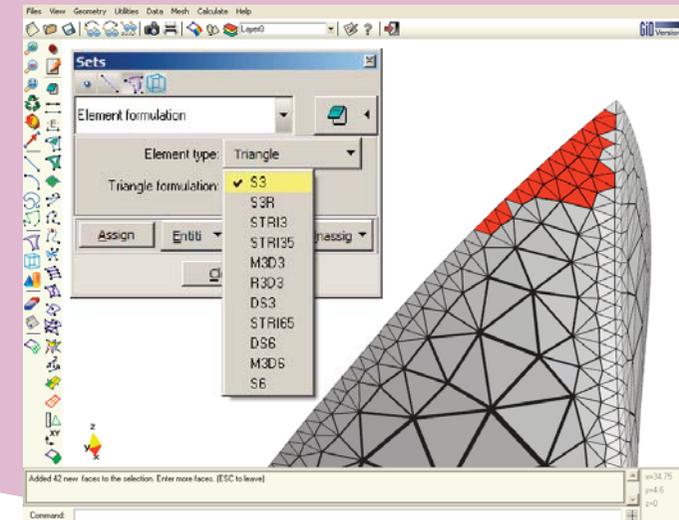
Example Of Materials Window

GiD-Abaqus interface supports the following element types:

- Linear (2 or 3 nodes)
- Triangle (3 or 6 nodes)
- Quadrilateral (4,8 or 9 nodes)
- Tetrahedra (4 or 10 nodes)
- Hexahedra (8,20 or 27 nodes)
- Prism (6 or 15 nodes)

GiD ABAQUS GRAPHICAL INTERFACE

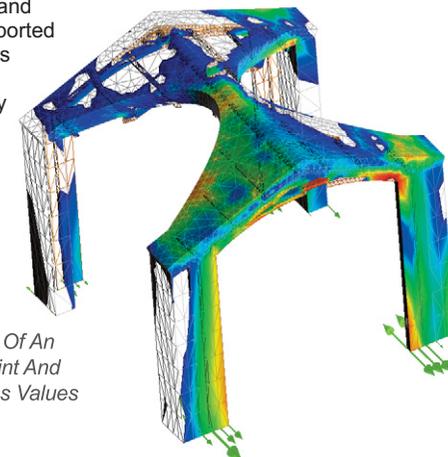
- GiD-Abaqus interface allows the user to preprocess, calculate and postprocess Abaqus® problems within a single environment.
- All the powerful GiD meshing and visualization tools are available.
- The sets can be assigned either over geometry or mesh entities.
- Generates Abaqus® input files with the correct set definition.
- All the Abaqus® results can be postprocessed in GiD by reading the Abaqus® results Database (ODB).
- Available for Windows®, Linux® and UNIX® on 32 and 64 bits, and Mac OS X® on 32 bits.



Assigning Element Formulation To A Selection

POSTPROCESSING CAPABILITIES

- Results over nodes and elements can be imported from the GiD-Abaqus interface in order to postprocess them by taking profit of all the GiD capabilities.
- The results are loaded directly from the Abaqus Database format (*.ODB).



Deformation Of An Adhesive Joint And Its Syy Stress Values