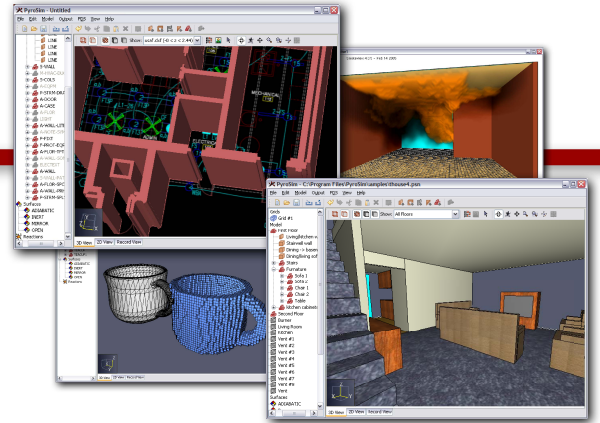


PyroSim



PyroSim is a complete fire modeling system that lets you create, run, and evaluate fire simulations quickly and easily. PyroSim combines graphical 3D modeling with the proven Fire Dynamics Simulator (FDS) from the National Institute of Standards and Technology.

Using the physics of FDS, PyroSim can model smoke movement, heat transfer, and flame spread for use in determining tenability and available safe egress time. PyroSim can also be used to reconstruct arson and other fire incidents.

Model Creation

Specifying the geometry is often the most time consuming task required when creating an FDS model. When using FDS alone, you must use creative techniques to define the coordinates required for the input file. With PyroSim, you simply draw geometry with the mouse just as you would with a drafting program. PyroSim provides a number of drawing tools that let you sketch obstructions, vents, and openings that define your problem domain. You can even import an image as a guide layer and trace geometry directly on top of a blueprint. Existing geometry can be imported using 2D or 3D AutoCAD DXF files. Building complicated shapes is simplified through the use of transformation commands that scale, rotate, and replicate objects.

Experienced FDS users can get started quickly by importing existing FDS data files. Once imported, all simulation data can be modified graphically within the PyroSim user interface. After an object is selected, you can drag any corner or edge using the mouse to change its size or location. You can even copy and paste individual FDS records to selectively import portions of a previous model.

Powerful 3D User Interface

PyroSim uses hardware-accelerated 3D and 2D graphics to render high-quality images of all simulation data. Geometry and other FDS data can be displayed in solid or wireframe modes with support for realistic shading and textures. Intuitive navigation tools help you quickly move around in three dimensions to select and edit portions of the fire model. Geometry can be displayed or hidden based on group, floor, or individually to simplify working with objects. For example, you can hide the entire roof of a building in a couple of clicks, allowing you to easily select or modify objects inside the structure.

The navigation view helps you organize your model. This tree of simulation data collects grid, geometry, surface, and reaction information into one location, letting you review the hierarchy of your model and quickly find and edit individual objects. Reordering and grouping objects is accomplished by simply dragging and dropping items into other areas of the tree.

Fire Modeling in Less Time

Organized data entry forms guide you through all of the properties and options that are required for an FDS run. The grid manager helps you create and edit simulation grids, with support for the multiple grids required for parallel simulations. PyroSim provides a convenient way to enter all FDS inputs, including specification of results and visualization options. Input validation prevents time-consuming input file troubleshooting. You can import materials from the library for use in you models, as well as create and maintain your own custom libraries of the properties you use most often.

Built-in support for running FDS in parallel on your multicore or multiprocessor computer will help meet deadlines and solve larger problems quickly.

Integrated Workflow

PyroSim provides a complete fire modeling system by combining input, simulation, and results into one integrated program. After your model is prepared, PyroSim handles the details of converting complex geometry into the grid-aligned blocks required by the FDS solver and formatting all data for the FDS input file. You can preview the simplified geometry and every line of the input file directly within PyroSim, so you know exactly how the model will be generated. FDS can be started from the PyroSim interface, with a detailed display of progress and support for stopping and restarting the simulation. Exporting an FDS data file from PyroSim allows you to run a simulation on any computer with FDS, including advanced parallel computing clusters.

Visualization

Effective communication is essential to understanding complex computer simulations. PyroSim uses high quality visualizations to display model geometry, including support for background images and textures for enhanced realism. PyroSim automatically generates enhanced geometry files to help Smokeview display accurate geometry. Simulation results can be viewed quickly by launching Smokeview directly from the user interface. PyroSim supports high-resolution image capture for presentation graphics.

Try PyroSim Today

PyroSim is available under multiple licensing options, beginning at \$650. All licenses include technical support and software maintenance options. Download a fully-functional 30-day trial today.

www.pyrosim.com