

What's New in SmartPlant® 3D 2009



INCREASE PRODUCTIVITY, ACCELERATE PROJECTS, AND GAIN A COMPETITIVE EDGE

SmartPlant® 3D 2009 continues the position of SmartPlant 3D as the most advanced plant design software offered in more than 20 years. SmartPlant 3D is the first and only next-generation 3D plant design solution for the process and power industries. Not held back by old, limited technology, Intergraph® continues its culture of success in offering new and superior software.

The product offers several key productivity and performance enhancements, including faster display performance, design reuse, external data referencing, extended modeling capabilities, expanded content, and Citrix support. For example, the new fireproofing capabilities now available in SmartPlant 3D are the most sophisticated available in any plant design solution.

More than 200 customers worldwide use Intergraph's Smart 3D technology in production. SmartPlant 3D 2009 SP1 supports upgrading existing SmartPlant 3D 2007 SP3, SP4, and SP5 plant configurations. SmartPlant 3D is part of the SmartPlant Enterprise, giving you a complete solution for your entire life cycle.

- **Increase productivity** – Realize significant savings on design time and costs
- **Accelerate projects** – Enjoy higher quality data which leads to less rework during design and in the field
- **Gain a competitive edge** – SmartPlant 3D delivers 20 to 30 percent overall productivity improvement out-of-the-box

NEW FEATURES

FASTER 3D DISPLAY PERFORMANCE

Designers can perform 3D navigation (pan, rotate, zoom in/out, fit, view update, etc.) on even the largest models with response times previously only expected from 3D games and simulations. The 3D display performance is now as much as 10 times faster.

For example, in testing, instead of waiting almost two seconds for the view to update in the last release, the model updated in less than 2/10ths of a second – particularly important when you are trying to dynamically rotate the model.

DESIGN REUSE

A new Model Data Reuse Wizard enables you to copy systems and the objects nested under those systems to a new destination within the same site database. This is a significant market differentiator that allows the systematic reuse of 3D model data. Reusing data offers a number of benefits, including:

- Significant savings on design time and costs
- Ability to respond more quickly and accurately to requests for proposals (RFPs)
- Knowledge retention
- Less rework during design and in the field
- More accurate material take-offs, as well as cost savings associated with long-term visibility on material requirements
- Tagging accuracy
- Freeing designers for more value-added activities than repetitive design work

EXTERNAL DATA REFERENCE

In addition to SAT files from equipment manufacturers, PDS® models, and PDMS models, now you can reference laser scan point clouds. SmartPlant 3D 2009 enables direct access of as-built laser survey points for display, measurement, and modeling, providing clash-free, in-context design capabilities. Additional software from laser point cloud vendors is required to enable this functionality.

Laser data for in-context design offers three key improvements: integrate visual reference for engineering; eliminate manual measurement; and continuously validate against accurate data.

Reduce the schedule time for data gathering by 80 percent; cut field re-work related to design error to less than one percent; and promote worksharing between offices. Enjoy accurate as-built reference, interference detection in the 3D model, and reliable documents for fabrication and construction. Improve safety and reduce field exposure by spending less time on-site and reduce the required travel.

The overall value and savings realized through referencing external data into SmartPlant 3D can result in savings of more than US\$2 million and 10 percent shortened project duration on an average \$100 million revamp.

EXTENDED MODELING CAPABILITIES

SmartPlant 3D 2009 offers extended modeling capabilities, two of which are of particular interest – fireproofing and solids modeling.

SmartPlant 3D now offers the most advanced, sophisticated fireproofing capabilities available in any plant design solution.

As for solids modeling, SmartPlant 3D will support sophisticated modeling of concrete structures. This is particularly helpful in industries with many unique geometries, such as nuclear or offshore, but will also solve more common problems as well.

EXPANDED CONTENT

A large amount of content has been added to SmartPlant 3D 2009, including symbols for flanges, valves, valve operators, fittings and specialty items, instruments, jacketed pipe, cable trays, duct bank, lighting, conduit, HVAC, and many more. SmartPlant 3D has extended sample catalog data in a variety of ways, such as:

- Enhancements to various delivered specialty symbols (silencer, flame arrestors, etc.) to provide more precise dimensioning
- Addition of various drawing labels
- Delivery of various production reports
- Addition of concrete and fireproofing materials and more than 20 steel and concrete section tables
- Production-ready hazardous fluid service rule
- Improvements to delivered conduit specifications and part data
- Equipment symbols for wastewater collection and treatment and drain-waste vents

CITRIX SUPPORT

SmartPlant 3D 2009 is fully supported and tested on Citrix Presentation Server 4.5 (XenApp 4.5). This new capability delivers value for companies using Citrix for virtual deployment and cost management.

Benefits of SmartPlant 3D 2009 Fireproofing	Time Saved	Total Savings
Save initial design and modeling time by providing rules-based automation of fireproofing material	20 man days x 8 hours/day	160 hours
Enable accurate cost estimates of fireproofing materials to improve subcontractor agreements	5 man days x 8 hours/day	40 hours
Improve reliability of modular designs by providing correct weight and COG reporting	10 man days x 8 hours/day	80 hours
Create accurate fireproofing area volumes to enable other disciplines to route clash-free during early design, helping reduce or eliminate field rework	10 man days x 8 hours/day	80 hours
Enhance communications with hangers and supports which improves design quality	15 man days x 8 hours/day	120 hours
Provide all disciplines a reliable view of the structure for planning field installation	10 man days x 8 hours/day	80 hours
Reduce design and calculation errors caused by design changes that occur after the initial design is complete	5 man days x 8 hours/day	40 hours
	Total time saved per project	600 hours

ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph

PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

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