INTERGRAPH®

INTERGRAPH SMART™ 3D

CHANGING THE WAY PLANT, MARINE, AND MATERIALS HANDLING FACILITIES ARE ENGINEERED AND DESIGNED

Today's global, fast-track projects require engineering, procurement, and construction (EPC) companies to effectively manage cost and schedule on complex initiatives involving multiple design centers worldwide. It is a paramount business concern that intellectual property remain secure and that "best practice" design information be preserved for reuse on future projects.

Likewise, owner operators (O/Os) must employ both in-house and off-site resources for greenfield, revamp, and maintenance projects. They also require the ability to establish and reuse "corporate standard modules" to streamline projects moving forward, while also continuing to preserve the as-built plant models for ongoing support of plant operation and maintenance.

Intergraph Smart™ 3D – a next generation, data-centric, and rule-driven solution – is specifically designed to deliver these mission-critical requirements. Breaking through barriers imposed by traditional technologies to enable a truly iterative design environment, Smart 3D provides a competitive edge to EPCs and O/Os alike. The solution:

- Integrates engineering data across the enterprise. Smart 3D supports data interchange with complementary tools including other SmartPlant® Enterprise products such as SmartPlant Instrumentation, SmartPlant P&ID, SmartPlant Electrical, and SmartPlant Materials.

- Provides unparalleled ease of use, minimizing the learning curve for increased user productivity.

- Shortens project schedules by enabling streamlined design processes for a wide scope of disciplines and workflows.

- Facilitates global, concurrent engineering, allowing contractors to manage and execute projects worldwide.

- Captures new and existing engineering knowledge so that it can be saved and reused, a key to success in today's competitive global economy.

A fundamental component of Intergraph's SmartPlant Enterprise, Intergraph Smart 3D provides all of the capabilities needed to design plant, marine, and materials handling facilities, and then maintain their 3D "as-built" representations. Take advantage of data-centric technology, a strong rules- and relationship-based architecture, customized automation capabilities, and an integrated reuse approach to execute even the largest and most complex projects with centralized visibility and control.

Enforced Design Rules Increase Data Quality and Ensure Design Integrity

Intergraph® Smart 3D ensures design accuracy and consistency through the enforcement of design rules. Smart 3D reduces design errors, minimizes engineering changes, and cuts down on rework. Design rule enforcement increases project quality and reliability by enabling faster and more efficient creation, transfer, and review of design iterations. All project participants can make informed and timely decisions throughout the project.

Smart 3D provides tools for the continuous monitoring of design rules and notification of the impacts of change throughout a project's design phase. Downstream impacts to drawings resulting from engineering changes are also trapped and notification provided in real-time. This further ensures that packages transmitted to procurement and the field always represent the latest and most accurate information.

Design Reuse for a Competitive Edge

Capturing new and existing design knowledge so it can be saved and reused on future projects represents a key competitive edge in today's fast-moving global economy. Smart 3D preserves the integrity of design data and enables reuse for future projects based on existing designs. This preservation of your corporate knowledge provides the ideal mix of continuity and innovation in engineering design for current as well as successive projects.

This not only reduces future project costs, but it also compresses project timelines through better management of engineering data. The opportunity to "learn" from other projects and apply this knowledge in the future is a marked improvement over existing design systems.

Ease of Use Increases Productivity

Smart 3D helps boost productivity because it is simple to learn. Your designers are not required to be CAD specialists to use Smart 3D at the highest level of proficiency. The product's familiar Microsoft® Windows® interface encourages users to "test and explore" the software, shortening the learning curve. Smart 3D speeds up the design process by reducing the number of keystrokes and mouse-clicks required to perform a multitude of design workflows. This is achieved through the application's unique "Smart-Step Commands" which guide designers step-by-step through even the most complex tasks.

Global, Concurrent Engineering Capability Enhances Project Execution

Smart 3D's global engineering and data reuse capabilities substantially reduce engineering costs and shorten project schedules. Project databases may be replicated anywhere in the world to facilitate sharing of work or to transfer work to remote locations. All sites are automatically updated with the latest design changes in real-time.

Smart 3D enables designers, subcontractors/suppliers, authorities, and others to easily and effectively monitor, manage, or execute projects across companies and around the world. Its global engineering and data reuse capabilities provide the widest range of users with valuable product model information that is always up-to-date to reduce project cost and schedule delays.

Project Transparency Maximizes Communication to Minimize Delays

With Smart 3D, you can execute more effective design reviews using 3D technology with comments and feedback beginning at the earliest stage of a project. You can consult all involved parties from the owners during initial design. This is when you can implement changes at a lower cost and with limited schedule impact compared to traditional 2D design systems.

Multi-discipline Design for Better Decisions

Smart 3D provides a true multi-discipline design environment where all designs are fully visible to all parties at any point in time. You can make early and informed decisions about system design by reviewing the model with the owner and other key stakeholders at various design stages. Quickly and easily change the model and BOM based on a variety of scenarios across multiple disciplines. This ensures both the design company and the owner can make the best decisions for both businesses.

Better Training and Operations for Increased Safety

Having an accurate and representative 3D model early in design facilitates safety and operator training at an early stage. You can minimize change requests late in the project when costs tend to be much higher. Equally important is the ability to review constructability and modularization options in design. This helps you better plan downstream activities ranging from fabrication to transportation to constructability. Such forward visibility not only promotes better cost control and schedule adherence, but also enables construction safety reviews executed well in advance of that phase of the project, ultimately resulting in a safer, more secure project site.

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 to make processes and infrastructure better, safer and smarter. The company'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, operation and data management of plants, ships and offshore facilities. Intergraph SG&I provides geospatially powered solutions, including ERDAS technologies, to the public safety and security, defense and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is a wholly owned subsidiary of Intergraph Corporation responsible for the SG&I U.S. federal business.

Intergraph is part of Hexagon (Nordic exchange: HEXA B; www.hexagon.com), a leading global provider of design, measurement, and visualization technologies that enable customers to design, measure and position objects, and process and present data.

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