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# SP3D Live Online Webinar with Multisoft Virtual Academy!!!

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# Contents

- Introduction
- Task Menu
- Format Menu
- Aspects
- Equipment and Furnishings Workflow
- Piping Workflow
- Structure Workflow
- Supports Workflow
- Electrical Workflow
- HVAC Workflow
- Deliverables

# Introduction

SmartPlant 3D is Intergraph Process, Power & Marine's next generation, data-centric, rule-driven solution for streamlining engineering design process while preserving existing data and making it more usable/re-usable.

A member of Intergraph's SmartPlant family of products, SmartPlant 3D is a complementary, full-suite solution that provides all the capabilities needed to design a plant, and then keep it as-built throughout its lifecycle.



### Task Menu

- The software uses tasks to separate its user interface into discipline-specific user environments.
- Tasks are sets of commands focused on a particular engineering discipline, such as routing pipe or placing equipment.
- You usually need only a few of these tasks to accomplish your particular job. For example, if you are a piping designer, you probably only need to use the tasks that allow you to route pipe or create isometric drawings.

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Catalog

Common

**Drawings and Reports** 

Electrical

Equipment and Furnishings

<u>Grids</u>

Hangers and Supports

<u>HVAC</u>

**Piping** 

Space Management

Structural Analysis

Structure

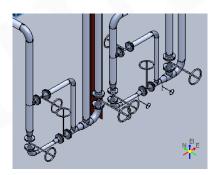
Systems and Specifications

Configure Task List

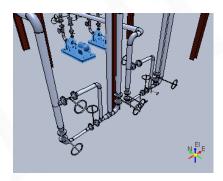
# **Format Menu**

You can override any aspect of a view style for the active window without actually modifying the underlying view style definition.

**Orthographic** - Select this option if you want the display to use a parallel projection.

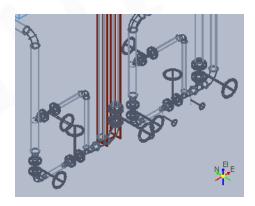


 Perspective - Select this option if you want the display to include a vanishing point.

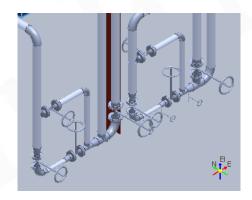


# **Format Menu**

Outline - Displays objects with edges as a single line and the surfaces solid. Edge lines and faces not within the normal view are hidden. This setting provides a fast and simple way to review spacing relationships between objects. Because this view involves hidden lines, the display is less cluttered

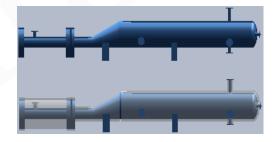


**Smooth Shaded** - Displays objects in a solid format with smooth shaded surfaces.

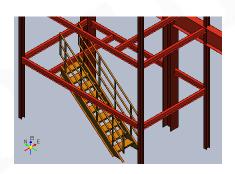


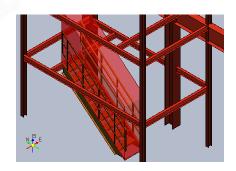
# **Aspects**

 Insulation - Shows an area around a piece of equipment indicating the presence of insulation. This aspect is also used to display structural fireproofing insulation. For example, a 4-inch pipe with insulation might look like an 8-inch pipe when this aspect is used.



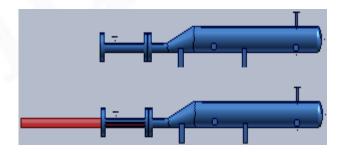
 Operation - Includes the area or space around the object required for operation of the object. This space shows in the model but not in drawings. For example, this aspect leaves enough space around a motor for a person to operate the motor or the overhead space needed for someone to walk up a stairway.





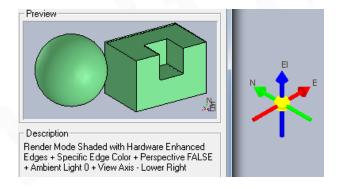
# **Aspects**

 Maintenance - Includes the area or space around the object required to perform maintenance on the object. This space may appear in the model but not in drawings. For example, this aspect leaves enough space around a motor to perform maintenance on a motor, including space to remove the motor.



#### **View Axis**

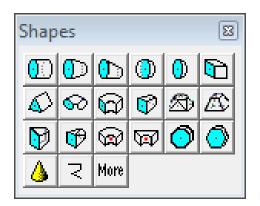
Indicates the orientation of active view.



# **Equipment and Furnishings Workflow**

- All equipment objects are placed in the model using information defined in the equipment and furnishings task. Using this, you can create custom equipment objects.
- You can interactively customize equipment from the Catalog by adding primitive geometric shapes and nozzles
- You can also use the Equipment and Furnishings task to build customized equipment. Designed equipment objects can be built entirely out of primitive geometric shapes, or an equipment component part can be designed or placed from the catalog to enhance the designed equipment object.
- Equipment components provide a more precise method of building up designed equipment.

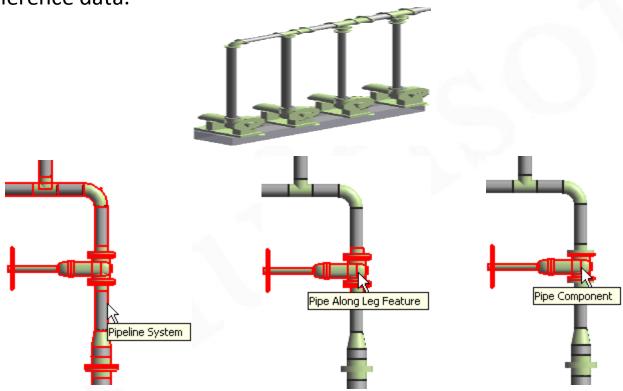
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Placement Type	Description
Radial	Straight nozzle with nozzle centerline on the radial plane.
Tangential	Straight nozzle on the radial plane, but the nozzle centerline does not intersect the vessel axis.
Axial	Straight nozzle normal to radial plane.
Skew	Straight nozzle that is tilted from both the radial plane and the vessel axis.
Axial Elbow	Elbow nozzle with hub centerline normal to the radial plane.
Radial Elbow	Elbow nozzle placed with the hub radial to the vessel axis.
Offset Radial Elbow	Elbow nozzle placed with the hub tangential to the vessel axis.
Offset Skew	Skew nozzle with a parallel offset in the radial plane.
Position by Plane and Axis	Available with all Nozzles including PipePort (No Added Graphic) and HvacPort (No Added Graphic).
Position by Point	Available with all Nozzles including <b>PipePort</b> (No Added Graphic) and <b>HvacPort</b> (No Added Graphic).

# **Piping Workflow**

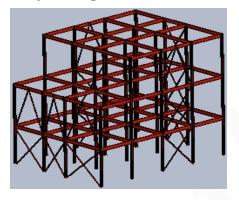
 All piping elements are placed in the model using information defined in the piping reference data.



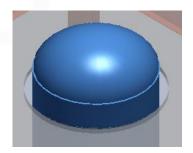
#### Structure Workflow

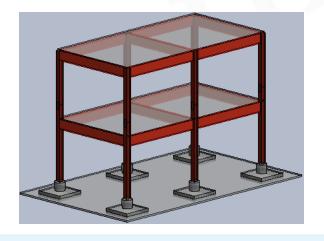
The **Structure** task places and modifies structural objects.

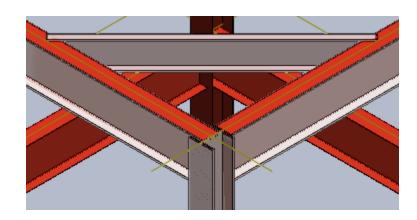
Using this task, you can place beams, columns, braces, equipment foundations, column footings, openings, slabs, walls in your model.









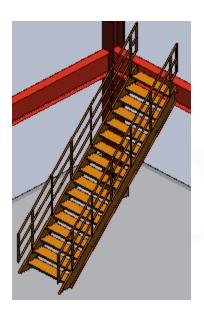


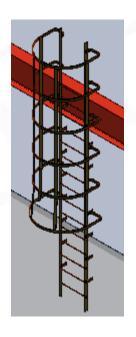
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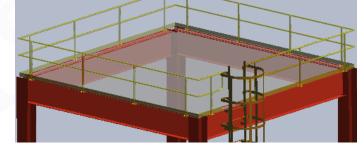
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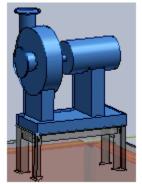
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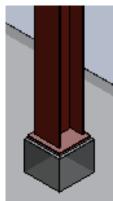
walls in your model.









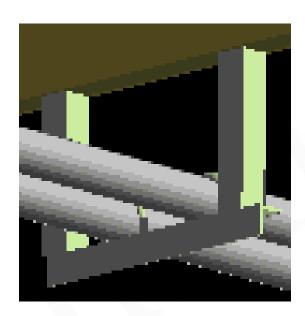


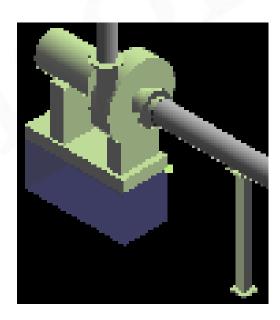
## **Supports Workflow**

The primary purpose of hangers and supports is to support various types of distributive systems such as pipes, HVAC ducts, and cable trays. Usually, supports are connected to the supported object, such as a pipe, and to a supporting object, such as a beam. However, you can also place supports between two or more supported objects such as placing a support between two pipes.

The Hangers and Supports task treats supports as first class modeling components. The supports are actually connected to piping and structural systems instead of simple graphical references. Connections enable the supports to automatically react to design changes. For example, if the size of a pipe changes, the pipe supports automatically react. Additionally, popular support catalogs are included with the software. You can also model designed supports.

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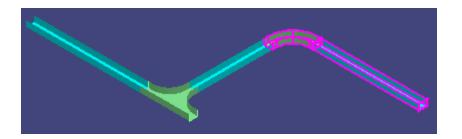


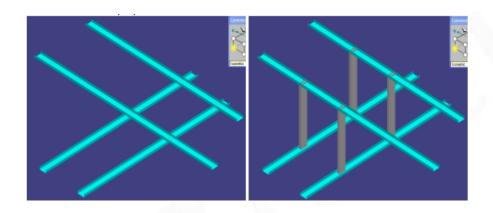


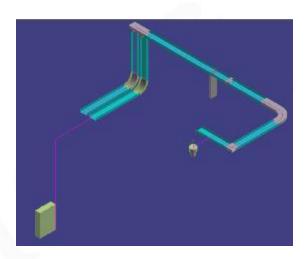
#### **Electrical Workflow**

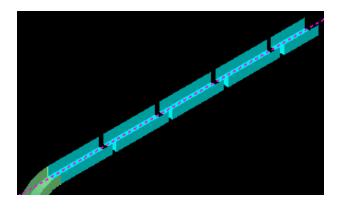
The Electrical task uses point-by-point route design to insert cableway, cable tray, and conduit components into a 3-D model. After routing the cableway, cable tray, and conduit components, you can place cables to route through them.

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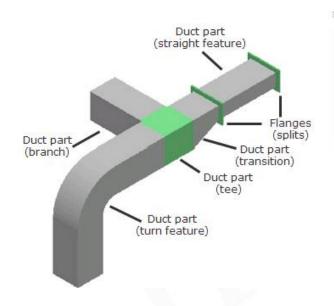


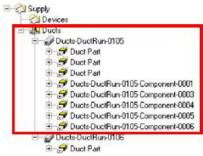


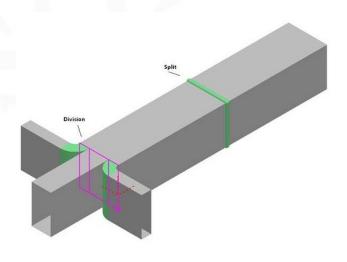
### **HVAC Workflow**

The HVAC task creates a three-dimensional representation, or model, of a distributed system so that you can create a fully rendered 3-D model of various duct systems. You use a combination of parts and features, objects that define the geometry and design intent of a run, to model the duct runs that comprise the duct system. In the software hierarchy, a feature is a child to a run and a parent to a part.

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#### **Deliverables**

The Drawings and Reports task creates orthographic drawings (by a variety of methods), isometric drawings, and reports from the model. When the 3D model changes, you can update your drawings and reports.

#### **Drawings by Query Manager**

Creates a Drawings by Query Manager in the Console. The Drawings by Query Manager provides the filter that specifies the "where" side of the query. It tells the query "where" to look for the objects specified by the component "what" filter.

#### **Composed Drawings**

Composed drawings are orthographic drawings created in a 3D task such as Common. The composed drawing component, available in the Drawing and Reports task Management Console, manages the composed drawings you create. Composed drawings are flexible, allowing you to have views that are managed by a drawing region and associate the views to volumes and other views.

#### **Volume Drawings**

Volume drawings are useful for creating general arrangement or construction drawings of areas within the model

#### **Reports**

In the Spreadsheet Reports workflow, you create report templates, which control the content and format of reports. The default file format of reports in the software is Microsoft Excel format.

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# Powerful Combination of PRINCE2 and ITIL

#### **PRINCE2** and ITIL

- According to AXELOS, PRINCE2 (Projects IN Controlled Environments) is a flexible method that guides organizations through the essentials for running a successful project regardless of project type or scale. PRINCE2 can be tailored to meet your organization or industry specific requirement.
- ITIL (Information Technology Infrastructure Library) is a widely-accepted <a href="IT service management">IT service management</a> approach in organizations across the globe. The ITIL framework is drawn from best practices followed by both public and private sectors all over the world. The best practices in ITIL are based on expert advice and inputs from ITIL users, and combine the latest thinking with sound, common sense guidance. ITIL has, hence, gained in importance as a methodology that delivers positive business outcomes for enterprises.

#### What is?

- What is ISO and ISO 20K, 27K etc.,?
- What is IT Service, ITSM?
- What is Project, IT Service Management?
- What is the relation between ISO and ITIL?

What is the relation between ITIL and PRINCE2?

#### **Roles**

ITIL	PRINCE2
Service Owner	Senior User
Customer	Customer
Service Portfolio Manager	Project Executive
Business Case	Business Case
Service Design Package	Product Initiation Document
Change Evaluation	Managing Stage Boundaries
CSI Register	FOAR
CAB and Change Authority	Project Board
Technical/Application and/or Operational Management	Team Managers
Configuration Librarian	Configuration Librarian

## **How ITIL and PRINCE2 Complement Each Other**

The ITIL framework addresses many of the limitations of IT by providing a service-oriented framework which meets the business needs of the customer.

But, for the ITIL framework to be implemented, which is a project in itself, a rigorous project management methodology in PRINCE2 must be implemented as well to ensure a greater degree of success.

PRINCE2 and ITIL combination complement each other in several ways:

- Consistent Business Justification
- Management of Stages
- Careful Risk Management
- During the start of the Project
- Quality and cost

#### **Consistent Business Justification:**

The best benefit that PRINCE2 brings to the table is the principle of continued business justification and consistent focus on the business case throughout the project. This ensures the project does not change course from its main objective at any point of time.

#### Management by Stages:

Breaking large chunks of work to sizeable chunks will help in handling a project more efficiently. Each requirement will be analyzed and signed off from the right stakeholders. With PRINCE2 methodology, it gives one an honest view of what can be done and when it can be done.

#### **Careful Risk Management:**

Because ITIL demands changing not only the IT department, but also the rest of the organization, ITIL implementations require an impeccable project management structure.

Anything less and the implementation is at severe risk. With its careful risk management processes described in the risk theme, PRINCE2 helps to address all possible threats in the project. As risk management is also part of the ITIL framework, hence they complement each other really well. The emphasis on identifying and assessing risks helps the stakeholders to take informed decisions as part of ITIL change management.

#### **During the Start of a Project:**

The ITIL best practices in Service Design and Service Strategy have a clear project mandate which form a basis for building PRINCE2's project management structure.

Everything from scope, success and different criteria, are clearly identified and approved by senior management. This saves a lot of time in starting up a project.

#### **Quality and Cost:**

The ITIL framework helps PRINCE2 to focus on the bigger picture. It is extremely important to balance both cost and quality in ITIL which helps in taking correct decisions for quality improvement which adheres towards the bigger picture.

The emphasis on quality also fits in with the PRINCE2 framework, where the quality theme elaborates on aspects such as Project Product Description, Product Description, Quality Register, Quality Management Strategy, among others.

#### Plugging the PRINCE2 Gap:

The ITIL framework implementation helps in 'benefit realization' which happens only after the project is completed. PRINCE2 has no part in this, as the project management structure mandates the completion of the project successfully.

But, the ITIL framework helps to realize the benefits when the implementation is done and it can fine tune it when there is change after the project is completed.

### Conclusion

- Managing various constraints such as time, price and the scope of business are all superimposed on a framework of meeting quality requirements, and this forms the foundation of project management.
- Meeting customer-defined needs, availability, reliability, capability and cost-effectiveness of business services offered along with improving responsiveness in managing change form the basis of ITIL.
- PRINCE2 with its project management structure and the ITIL framework with its best practices together deliver a competitive advantage for an organization.



## Thank You

FOR MORE DETAILS, CONTACT UNDERSIGNED

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