

Session 1: Drawings and Reports: An Overview

Objective:

By the end of this session, you will be able to:

- Identify the tasks that can be performed in the **Drawings and Reports** environment.

Prerequisite Session:

- SP3D Overview
- SP3D Common Sessions

Overview:

You use the **Drawings and Reports** task in SP3D to create orthographic drawings, isometric drawings, and reports. When your model is registered using the SmartPlant Registration Wizard, you use the **Drawings and Reports** task to publish volume and composed drawings, orthographic drawings, isometric drawings, and reports. To access the **Drawings and Reports** task in SP3D, click the **Tasks > Drawings and Reports** command as shown in Figure 1.

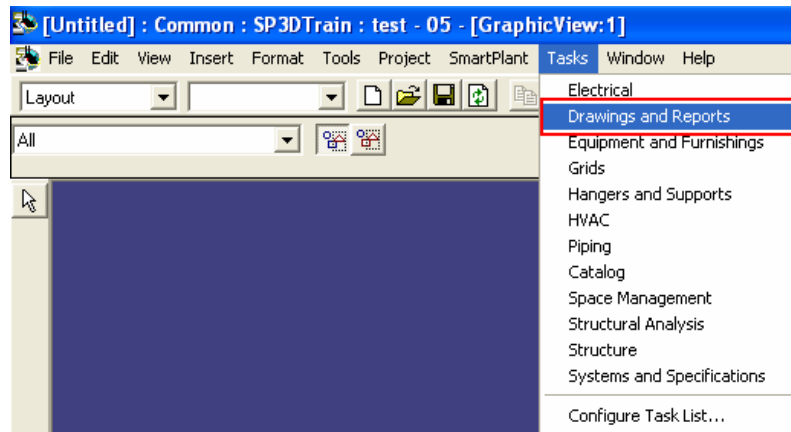


Figure 1: Tasks > Drawings and Reports Command

Before you can create components for drawings and reports, you need to organize the **Management Console** hierarchy with folders for each component type. The **Management Console** organizes the different document types into a customizable hierarchy. After organizing the **Management Console** hierarchy, complete the setup steps that include setting up drawing and report templates, creating view styles and appropriate filters, and specifying isometric drawing options. By using the component functionality of the **Management Console**, you can create, edit, update, print, save, and publish drawings and reports.

The **Drawings and Reports** task provides an update feature that increases productivity by keeping deliverables current in the SP3D software. When the 3D model changes, you can update the drawings and reports. Default templates for reports and view styles for drawings are delivered with SP3D, and you can customize them to suit your needs. It is possible to customize the templates and view styles before any objects exist in the model. However, objects should exist in your model before you create drawings and reports.

Creating Drawings

The different types of drawings that you can create in **Drawings And Reports** task are:

- **Composed Drawings:** Composed drawings are orthographic drawings created in a 3D task. You can use the Composed Drawing component, available in the **Drawing and Reports** task **Management Console**, to manage the composed drawings. Composed drawings are flexible. They allow you to have views that are managed by a drawing region and associate the views to volumes and other views. Composed drawings can also have snapshot views on them. Snapshot views give you the ability to get a WYSIWYG (what you see is what you get) snapshot of your model into a drawing.
- **Volume Drawings:** You can use volume drawings to create general arrangement or construction drawings of areas within the model. Volume drawings use a template that shows a single large view of a small portion of a model, thus many of these drawings are needed to cover the entire model. Since the Volume Drawing component uses a template to create drawings, you can place a view on the template and associate the view with a view style to control the resulting drawing.
- **Drawings by Query:** You can use the Drawing by Query Manager component, in conjunction with the Orthographic Drawings by Query component to create drawings by specifying a filter-based query to collect objects for drawings. This drawing type is appropriate for creating detail drawings of particular objects within the model. They are especially useful when creating drawings that use the same style or format for large numbers of similar objects, such as hangers or supports.
The Drawings by Query Manager can also be used in conjunction with the Piping Isometric Drawings by Query component to produce piping isometric drawings. The output for piping isometric drawings is controlled by the ISOGEN option settings defined in isometric style.

Creating Reports

You use the **Drawings and Reports** task to create report templates that control the content and format of reports. The default file format of reports in the software is Microsoft Excel format. You can use the **Report Editor** command of the **Drawings and Reports** task to configure your reports to use queries and special formatting.

You can publish Spreadsheet Reports just like drawings. However, the Spreadsheet Reports are published as Excel spreadsheets with no physical data.

Creating 2D Drawings

An application that you can use while working in **Drawings and Reports** task is the 2D Drawing Editor. This application appears as a separate application window from where you edit border templates, drawing templates, and backing sheets for all types of drawings.

You can use 2D Drawing Editor to create sketches, production drawings, and other 2D shapes. 2D Drawing Editor supports major existing CAD environments such as AutoCAD and MicroStation. You have full import and export capabilities for traditional CAD data. You can also work with .dgn and .dwg data in native formats—as if these formats were OLE-enabled.

OLE servers act as wrappers around foreign data and allow you to simply drag AutoCAD or MicroStation data into 2D Drawing Editor. You can also locate points in the CAD geometry and work directly off those points in your 2D Drawing Editor document.

You can use the user interface of 2D Drawing Editor shown in Figure 2 to create drawings according to your requirements.

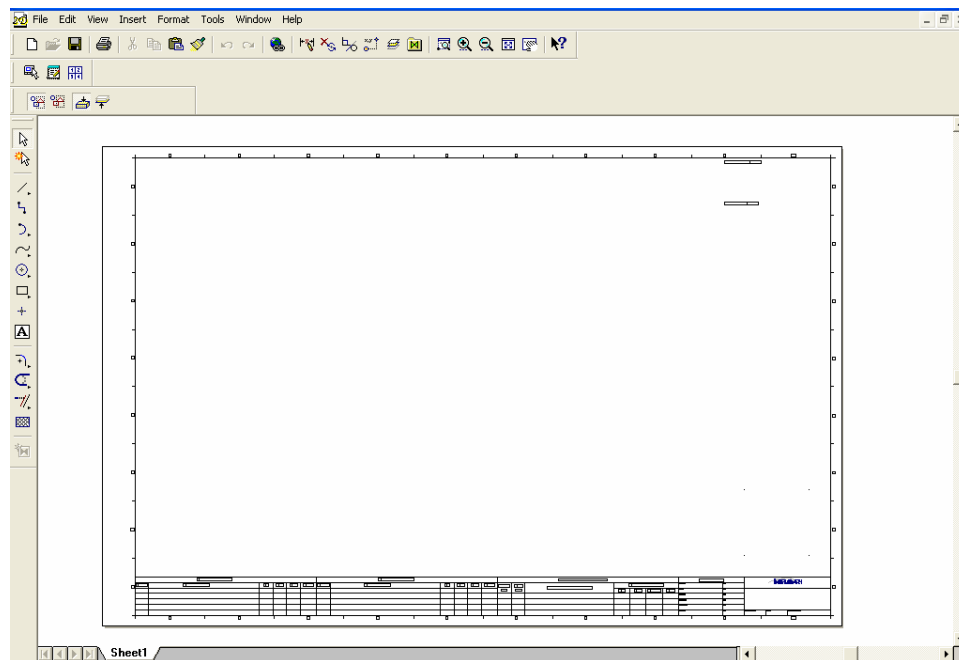


Figure 2: 2D Drawing Editor Window

For more information related to the **Drawings and Reports** task, refer to the *Drawings and Reports: An Overview* topic in the user guide *DrawingsandReportsUsersGuide.pdf*.

You can access *DrawingsandReportsUsersGuide.pdf* from *DrawingsandReportsPrintGuide.htm*.

Quiz:

1. What are the different types of drawings that you can create under the Drawings and Reports task?
2. What is the default file format of reports in SP3D?
3. Which feature of the Drawings and Reports task can you use to organize the different document types into a customizable hierarchy?