Drawing Creation Tutorial

Series Overview

Version 2014

PART OF HEXAGON

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Note to Student: Online Training Workflow

Each Intergraph Smart™3D Online Training session is comprised of a series of informative video clips, a short quiz, and one PDF-based tutorial viewable on any Windows or Android-OS computer/tablet. These videos are presented through a structured, learning management system, or LMS, which logs your time and monitors all videos you have watched. In our live classroom courses, you listen to an instructor's lecture and are given the chance to practice what has been relayed using your text book and the software. The recommended student workflow for our online training course is much the same.

After logging in to the LMS, you watch a video demonstration of specific topics/techniques, complete a practice tutorial and then sit a short quiz about the session to obtain credit in the system.

Please read the following information about the Intergraph Smart™3D Online Training Series.

Videos

Videos are meant to provide visual demonstrations of specific designer tasks performable in the software. They may be viewed for note-taking purposes or followed step-by-step as you explore Smart3D. You can play/pause a video by pressing the button or Space bar on your keyboard. Pressing the button or R on your keyboard will rewind the video to the beginning. Videos can only be viewed using the latest Flash-compliant browsers such as Internet Explorer, Firefox, Opera, or Google Chrome.

Quizzes

A Quiz will be given at the end of each session to test what you have just learned. Once you answer the question, you will be given your score.

Tutorials

Tutorials are meant to provide information and step-by-step practice for performing specific designer tasks. Although tutorials and videos are related by subject, video and tutorial content may differ in certain areas. As a guideline, try to follow the steps noted in each tutorial while using previously viewed video content as reference to your learning experience.

If you choose to follow a video task step-by-step and the same task is listed in its tutorial, note that section as followed and proceed to the next task until you finish the tutorial.

Credit for Viewing

To obtain credit for viewing a series, watch every video session from begin to end, complete its tutorial, and answer the quiz question at the end of the video. Then close the video window using the EXIT button at the top- right-hand side. You should see a check mark appear for that session in the LMS.

SESSION 1

Welcome to Drawings & Reports!

Drawings and Reports tasks are performed so designers can provide their organization with detailed drawings of a plant design quickly and accurately. Drawings can be of the entire plant or zoomed to a specific area. These documents are referred to as composed drawings.

A composed drawing is an orthographic drawing that you create by defining one or more drawing views of selected volumes in a 3D task. A drawing view processes all objects in the model that are in its associated volume, and not just the objects displayed in the current workspace. You can then use filters to specify which objects you want to show in the drawing view. You can use any method in the Space Management task to create the volumes.

You access the Drawings and Reports task by going to Tasks, and then choose the Drawings and Reports option. This series will cover the procedures pertaining to the Drawings & Reports task in Smart3D.

The first topic demonstrates the steps for creating a new composed drawing. The look of a drawing is configured by view layout templates and border templates. Your administrator primarily defines these aspects of the workflow, but they are important for you as a designer to understand.

Layout templates define standard single and multiple view drawing layouts, and default values for all view properties such as view direction, view style, and scale. Border templates define standard drawing sizes and standard title block properties. When you create a new drawing, the view layout you select is scaled to fit your selected border and added to the drawing so that you don't have to place all your views manually. You can add more views or edit the existing views as needed.

Each individual composed drawing must be placed within a composed drawing folder in the drawings hierarchy. It is possible to create any number of composed drawing folders under a generic drawing folder. You can also create a composed drawing folder when you create a composed drawing. It is likely your administrator will have already predefined your drawing folder hierarchy to facilitate efficient browsing to the specific drawings of interest. But you should be aware of how the system is configured, in any case.

Individual designers create volumes as needed for their composed drawing views. These drawing volumes should be organized in the Space Management hierarchy according to the management plan of your administrator. For example, the administrator will have created a space folder for each design application area. You can then locate volumes saved within by selecting a drawing view. This task will be demonstrated later.

Create the volumes for your drawing views in the Space Management environment is performed using several unique methods. You can place a volume by two points, place a volume by selection, along a path, or place volumes by plane and offset. Whichever you choose, you will assign the created volumes to a Space Management folder so they remain organized.

A single volume can be referenced by multiple drawing views in multiple drawings. Editing the volume impacts all drawing views that reference the volume. You can create volumes for the drawing views at any time before the step of associating a drawing view to a volume.

The workflow for creating a new drawing generally regards the following steps:

- Define your workspace to display a segment of your plant.
- Select "**New Composed Drawing**" from the Drawing Console.
- Configure the save location and titles for your new drawing.
- Create new or edit an existing drawing view. It is now possible to copy/paste views and edit view properties such as view style, scale, look direction, view direction, and annotation coordinate systems.
- Associate the drawing view to a volume by selecting "**Associate Objects to a View**". Upon selecting this command, a ribbon is displayed, allowing to you define a filter to specify which items in the volume display in the drawing views. If a drawing view is already associated to a volume, the associated volume is highlighted. You can select a different volume or pick a different drawing view to associate from the select list. If you do not select a filter, then all objects in the model database in the associated volume and are included by the view style associated with the view are displayed in the drawing view.
- Update the View
- Update the Drawing *interactively* or, if you administrator has set up a batch server, *by batch*.

You can update multiple composed drawings at once, and you can update folders that contain composed drawings. To update drawings on a batch server, select one or more drawings or folders and select the Batch… menu. You can then select actions such as update and print to queue and schedule the batch job.