I-DEAS® Master Notation™

I-DEAS® Master Notation™ is a production 3D annotation system for documenting I-DEAS solid model designs created in I-DEAS Master Modeler™ or I-DEAS Master Assembly™. I-DEAS Master Notation can be used as a documentation tool in two basic ways:

• As a tool for creating fully documented solid models for design review or release, without the need to create drawings.
• As a tool for documenting solid models created in I-DEAS, in preparation for quickly creating drawings.

Annotation Tools

I-DEAS Master Notation provides a palette of annotation tools that can be used within I-DEAS Master Modeler for documenting parts, or for use within I-DEAS Master Assembly for documenting assemblies. I-DEAS Master Modeler and I-DEAS Master Assembly provide capabilities for adding Key/driving dimensions, annotation dimensions, and notes to the design. I-DEAS Master Notation provides optional capabilities with additional annotation symbology and organizational tools. These are available for docmenting individual parts, as well as assemblies.

• Geometric Dimensioning and Tolerancing
  •Feature Control Frames
  •Datums Feature Symbol
  •Datum Target
• Surface Finish Marks
  •Surface Attributes
• Welding symbology
  •Spot Welds
  •Line Welds
• Locators
  •Measurement points
• Symbol report
• Point report
• Examine Annotation / Arrange Symbols
• Link annotation to information on the Web
• Annotation in local languages with special character set languages.
• Multiple text fonts and user-definable text sizes are available.
• Conformance to multiple international annotation standards

Association and Attachment of Annotation

A critical aspect of 3D annotation is its ability to attach and track the appropriate geometry. I-DEAS provides many ways to attach annotation, with or without leaders, or stacked upon other symbols or notes. I-DEAS goes beyond simple attachment, and also provides the user an opportunity to select other associated geometry as well. It is a simple task to query annotation and see what geometry it is associated to. For example, a user may associate a Feature Control Frame to the actual surfaces of Datum A and Datum B. When another user queries the FCF, the surfaces of Datum A and B are highlighted, making interpretation very obvious. On the other hand, the user may query the surface of Datum A, and the associated FCF will highlight. This additional characteristic of association may be added to any 3D annotation in I-DEAS, and provides the strong addition of design-intent that standalone annotation cannot convey.

Organization with Model Views

I-DEAS Master Notation also provides the ability to organize annotation into Model Views. Model Views are a unique tool in 3D that provide the ability to store a specific viewing direction and zoom factor for the part or assembly. This is very similar to the views that may typically be created for organizing the information on a 2D drawing. Model Views are also individual repositories for specific annotation. In typical CAD systems,
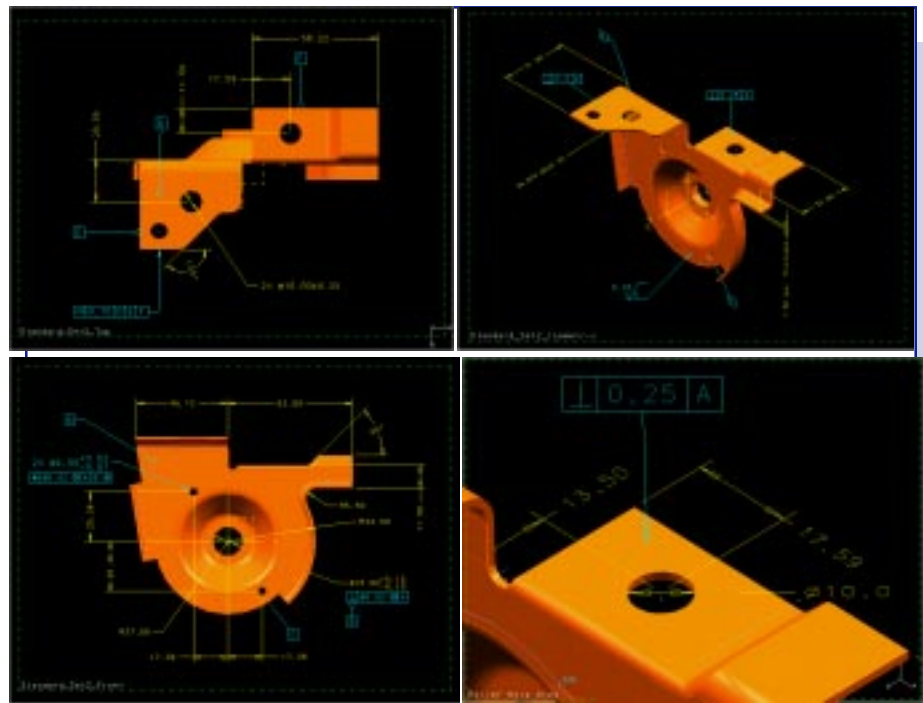
Annotating the solid model. Full annotation of the solid part or assembly is possible with organization provided by Model Views.

there is only one large intertwined tangle of 3D annotation, all together on the single CAD model. Model Views in I-DEAS alleviates this problem, and allows for very organized collections of annotation, making the 3D product easier to document and interpret. Model Views provide many capabilities for organizing your 3D documentation.

• Standard orthographic views, with the ability to track geometry.
• Automatically distribute annotation among standard views.
• Explicit Views for creating detail or auxiliary views.
• Full modification capabilities: rename, copy, move, re-track, etc.
• Easily add or remove annotation from Model Views.
• Composite-display allows annotation from multiple Model Views to be displayed at the same time.
• An unlimited number of Model Views may be created.
• Geometry from design groups can be used to show only specific geometry of interest within a Model View.
• Model Views are stored with their parent part or assembly.
• Individual Model Views may be printed or plotted directly from I-DEAS.

Additional Organization with Model View Folders

Model View Folders are an additional organizational tool that allow the Model Views to be organized for a specific purpose. Folders may created that hold Model Views specific to downstream users, to highlight certain aspects of the design, or to isolate different kinds of annotation. For example, a company may have a specific Folder containing all Model Views of Weld Symbols, a Folder containing all Model Views of Surface Finish marks, or a Folder containing all Model Views for the Inspection department. The organizational needs for 3D annotation are unlimited, and therefore I-DEAS provides an unlimited number of Model Views and Model View Folders.

Integration with I-DEAS Master Drafting™

The utility of Model Views does not stop with 3D documentation. Any Model Views that are created for a part or assembly can be accessed directly from within I-DEAS Master Drafting. Here, the user can select Model Views, preview them in a separate window, and select which ones to place on the active drawing. I-DEAS Master Drafting will automatically create the hidden lines for each Model View. The specific annotation for each Model View is also displayed in the view on the drawing. This provides one of the fastest ways to create a drawing that documents the solid design.

• Access to part and assembly Model Views from I-DEAS Master Drafting.
• Associativity to the Model Views allows you to change the 3D annotation on the solid model and automatically update the drawings at the users discretion.
• Different Model Views from different parts and assemblies may be placed on the same drawing.
• Annotation may be added to any view on the drawing to complete the documentation, or add more information.
• Automatic hidden line creation, either removed or dashed.

Documented Design in Different Forms

The capabilities for 3D annotation, together with the organizational strengths of Model Views, makes documenting the solid product a reality. Model Views can be exported from I-DEAS, and used in various other applications for viewing the model and it's associated 3D annotation. In addition, Model Views can be used to create a 2D drawing in I-DEAS Master Drafting. In either case, the same information and annotation is conveyed to the user, only in a different form.

The ability to share the Model Views and 3D annotation in a variety of forms provides companies freedom in their documentation processes. This freedom allows companies to explore new ways to transition from drawing-centric environments, to solids-based environments, with very little impact on the current process. In fact, since 3D annotation and Model Views can be used for *both* 3D viewing applications *and* drawings, providing the documented design in both forms is easily possible at very little cost.

Customization

I-DEAS Master Notation provides capabilities for automating the system to meet company requirements. It lets you customize the icons to better fit your needs, create macros to automate tasks, or build application programs. Whatever your requirements, the customization capabilities are easy enough to be used by the beginner, yet powerful enough to meet the needs of the experienced programmer.

Prerequisites

Core Master Modeler
-or-
I-DEAS Product Design Package
-or-
I-DEAS Artisan™ Package

For More Information

For more information, contact your local SDRC representative or call 1-800-848-7372.