

Eye on the Industry

Announcing Drawing Data Management (DDM)

DDM (Drawing Data Management) is a snap-on CATIA V5 application that enables companies to discontinue generation of 2D drawings and utilize 3D models and assemblies as the official product definition. DDM allows engineers to attach non-geometric information to a CATIA V5 CatPart or CatProduct. Unlike PDM systems, the data can be intelligently linked to model or assembly features; thus, enabling engineers to attach assembly instructions to assembly models or parts. The need for drawings is eliminated immediately, which can save up to 40% of most product design budgets and reduce engineering schedules by months. Drawing maintenance is eliminated. With the built in export utility, external transmittal of product definition can be accomplished without ANSI drawings.

DDM is unique in the PLM market with its robust features and capabilities at a very affordable price. Designed to seamlessly integrate with CATIA V5 and easily recognized by product designers as a useful addition to their CAD system. DDM user training requires less than 1 hour of instruction, and DDM can be in production the same day it is installed.

Gain early payback while contemplating or implementing Product Lifecycle Management

Companies have grown to recognize the benefits of 3D solid modeling, but at the same time they have experienced some limitations. Getting away from drawing centric processes has been a challenge. How many times have you seen a 2D drawing that required over 100 hours to produce that was totally unnecessary because the NC machine can't read a 2D layout drawing. Towards that end, DDM was developed to create and incorporate non-geometric information in a CATIA model as the design organization moves to a drawing-less enterprise. While geometric information is effectively defined by using lines, circles and arcs to specify the physical properties of the parts; non-geometric information is added in the form of a 2D drawing to give needed information for downstream processes. This non-geometric information comes in the form of:

- Title block data
- Standard tolerances
- General notes
- Revision block information
- Feature specific notes such as thread callouts, special manufacturing instructions tied to individual geometric elements
- Process specifications

DDM is not a PDM system... it is a front-end to PDM

With the introduction of product data management (PDM) tools, non-geometric information is linked to a model by using the capabilities of a database, where PDM works well for data integrity, configuration management, and assembly structure. Very soon PDM weaknesses show up with the lack of capability to manage information tied directly to a specific part features associated with geometry. This information, non-geometric in nature, is historically noted on the face of the 2-D drawing, i.e. in the form of tolerance call outs, data and call outs or general dimensioning and tolerance in call outs. DDM enables the designer to attach any type of non-graphical information directly to parts or more importantly, a specific feature of that part. This information can be:

- Text
- Tables
- Images- Engineering Change Drawings (Raster data)
- Animations
- Hyperlinks to other text, images, HTML etc
- Documents such as WORD, EXCEL

DDM generates cost savings almost immediately during the implementation of PDM Solutions:

On new programs, The DDM creates an easily implemented drawing-less engineering environment. Providing a means to capture PDM data months (or years) before the PDM system is designed and implemented. DDM provides a utility to transfer data to your PDM system. DDM has proven to reduce the customization of Enovia and SmarTeam (Registered Trademarks of Dassault).

For legacy programs, it allows the retirement of the drawings by enabling a drawing-centric companies to use 3D models in an identical manner as their old 2D drawings. Simply stated, the DDM provides the ability to attach or input any type of information inside a CatPart or CatProduct.

DDM promotes standardization

DDM does not require a computer specialist for installation or customization. DDM comes with a pre-developed set of templates to speed the utilization by your engineers. For those companies, who wish to expand the usage of DDM, user can modify the look of the table with a few keystrokes to look exactly like the table typically found on the face of a drawing, and can also make links within tables or General Notes. For example, a General Note may call out a specification document, and by simply clicking on that specification document link, it will be pulled up real-time in the CATIA window. Similarly, is the ability to view what are typically microfiche images such as engineering change notices. These images can now be linked directly to the parts and pulled up in real-time. DDM even includes a red line capability, where screen grabs of important areas can be highlighted with text and arrows and sent out for user review or embedded directly inside the Part or assembly models.

Standardization of data has been implemented with the concept of lookup tables and standard files in order to create standardization across engineering. Companies can create files of typical Notes, specifications, proprietary notices, etc. which can be directly accessed by the user in order to reduce typing errors and user input.

Data Security

DDM also tracks all data input and data changes by date and user name. History tracking of all information is a built in feature. As a piece of information is edited, a timestamp of the user and date is being recorded within the DDM. The user has the ability to switch the viewing of this revision history on or off.

Downstream capabilities

The needs and requirements of downstream users have been incorporated in the development of DDM, for instance, some Suppliers or Subcontractors may have CAD, but not a PDM tool, and others might have neither. With just a single menu pick, all internal information can be exported for delivery to Suppliers and Subcontractors requiring the information. This can be accomplished in the following ways:

- Normal printing
- Output to PDF file
- Output to DXF file
- Export to neutral XML file

This data, along with a CAD file, constitutes a complete and concise package of information required for any downstream vendor.

Neutral output files allow for the ability to query. For example, if weight was a field being managed by the DDM, then a simple routine can collect the XML data and calculate the total weight of assembly without having to open up every part or product.

Bottom Line

The DDM is an easy to use, powerful tool that enables your CATIA V5 organization to add any type of text, image or link directly to a CATIA part or product. Whether used in conjunction with a PDM tool or by itself, the DDM allows the capture of non-geometric information which enables your organization migrate to a Drawing-less CAD release. At a very affordable price point, and without the need for lengthy and expensive service engagements, the DDM is indispensable. Contact a BADENCORP representative today for additional information or visit our website, www.badencorp.com.