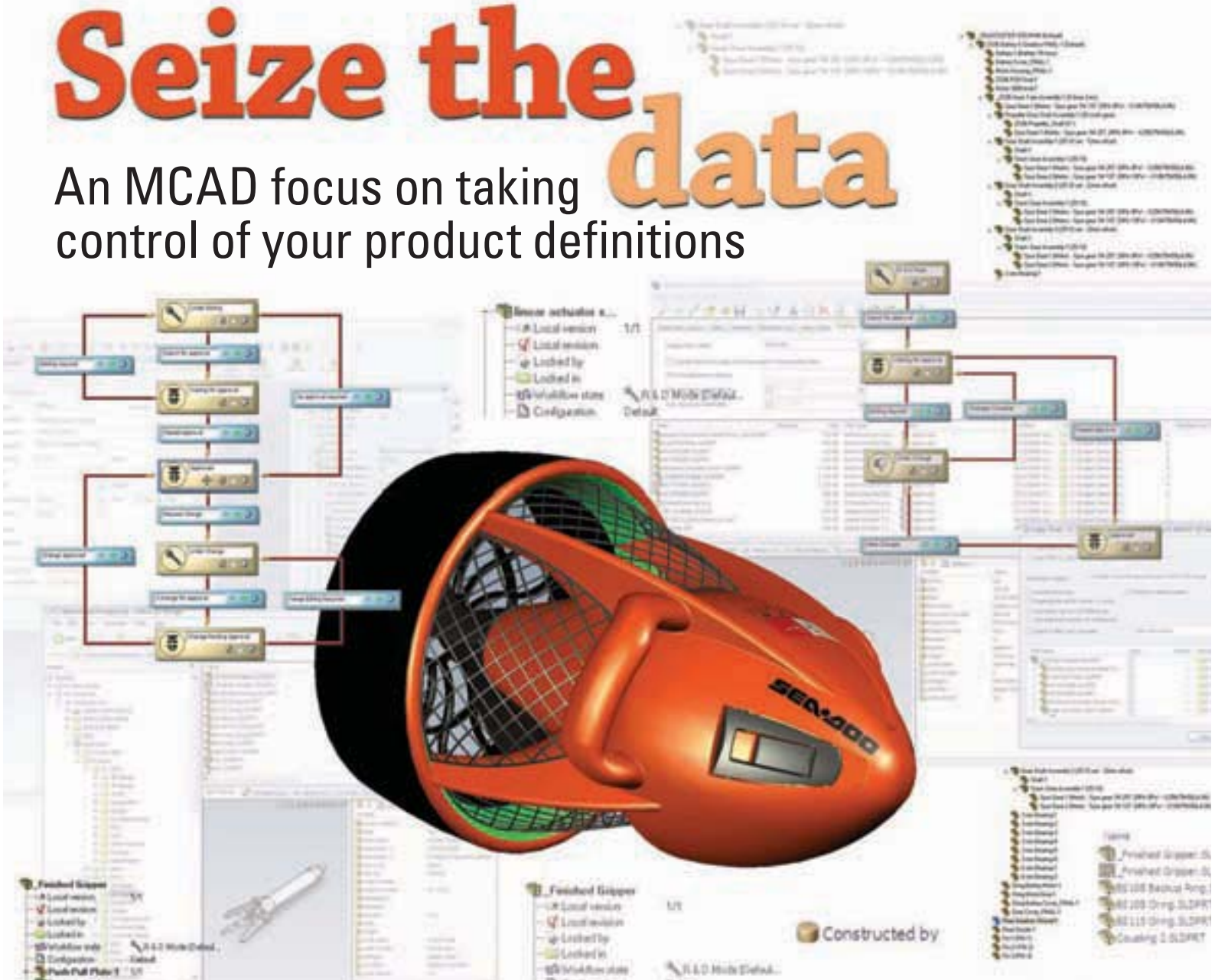


# MCAAD

PRODUCT DEVELOPMENT AND MANUFACTURING SOLUTIONS

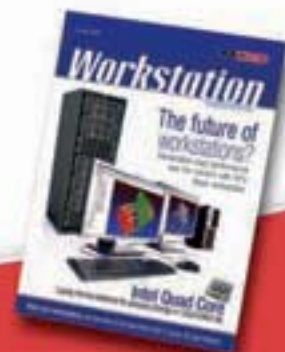
## Seize the data

An MCAD focus on taking control of your product definitions



## ECF 2006 report

IBM and Dassault Systemes: a marriage on the rocks?



# Keytech PLM Suite 2007

For SolidWorks users there are obvious choices for Data Management, but for those looking to take advantage of the benefits of ERP integration and other advanced functionality, there are other options.

I first came across the Keytech PLM Suite last year when I visited the system's developers in Germany. I was impressed by the wealth of functionality that the system offers the SolidWorks user community and with over ten years of experience in its development team, that came as no surprise.

Keytech PLM Suite has been under development for some time, originally under the name of ProfiDB. It has achieved a huge level of success within the German marketplace where data management is at a very high level in terms of both adoption and what organisations are doing with the systems. What's changed in the last year is that the system has reached a level of maturity and sophistication that's taken it above and beyond what it was originally designed for and the system has been rebranded under the KeyTech banner:

For those that didn't catch our original review, KeyTech PLM suite is a vault based data management system that offers all of the usual pre-requisites of any data management system, such as secure data management and access control, check in/out, version/revision and change management, search and retrieval. But what really impresses still is the level of integration with the SolidWorks data files and the specifics of how that system works, so my intention is to look at those differentiators, highlight some of the new features and functions of the 2007 release and look at the business benefits.

The interface to the KeyTech database is provided through an external application. Yes, there is integration within SolidWorks, but to get the most out of a system, it's best to provide a bespoke environment in which to conduct the typical workflows. For this release KeyTech has done a great deal of work on the UI and while it doesn't differ greatly in terms of appearance, under the hood there have been a lot of changes that make aspects of the program, such as working with design data or exploring the relationships and links, much more efficient. For example, the whole system now features context sensitive right click menus, so that users have access to commonly used commands that pertain to the process they're working on or the type of data they're looking at. These allow them to jump between different views of their data in a very short timeframe, making finding that all important data much quicker.

Keytech PLM Suite works with a folder

structure that allows users to create standardised folders for each project or create them on an ad-hoc basis. What's interesting is the manner in which the system organises and maintains the links between the various parts, assemblies, drawings and other documents that are vital to the product development process. It's very easy to jump from a part or assembly to find associated data or explore the impact of design changes by finding other products within the database that reference specific parts and such.

Alongside this, the classification module allows the user to take advantage of industry standard practices which allow users to define a hierarchical list of classification nodes which can not only be defined manually, but also linked to extract, or even drive, specific parameters within the CAD model. Essentially, classification allows users to store very specific information about entries within a data management system, which is then made available to anyone who wants to search for specific entities.

Classifications can relate to almost anything as they are purely text or numeric strings, but when handled intelligently they can improve search accuracy and can re-purpose data for a wide variety of 'consumers'. For example, while a purchaser might want to find information pertaining to all purchased parts, an engineer might

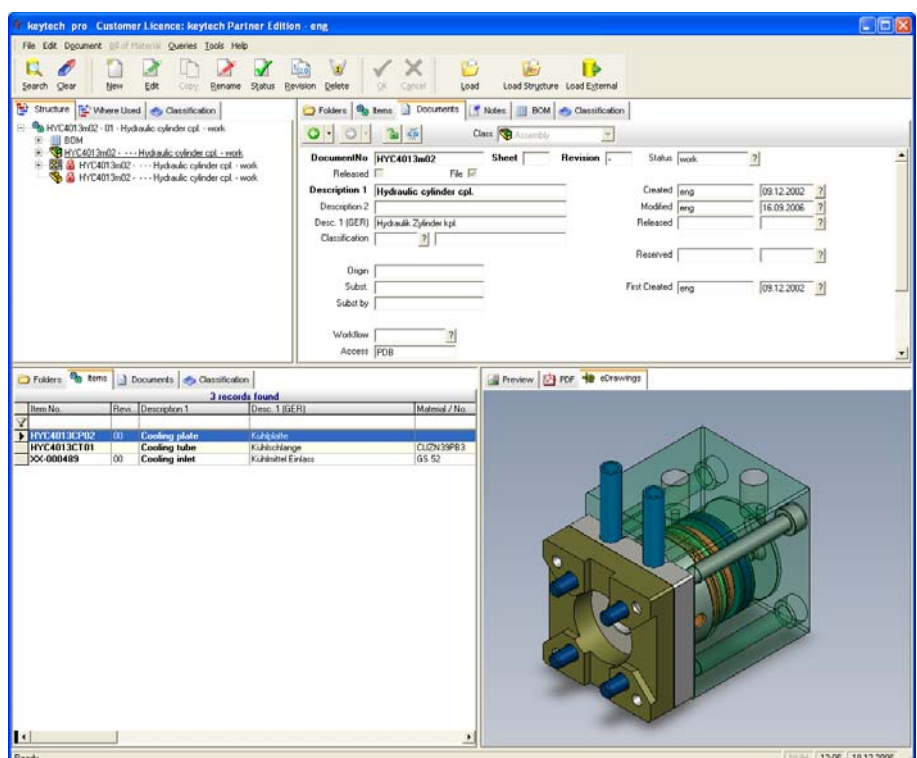
be looking for a specific connector. The use of classification allows users, whatever their role, to find that information easily.

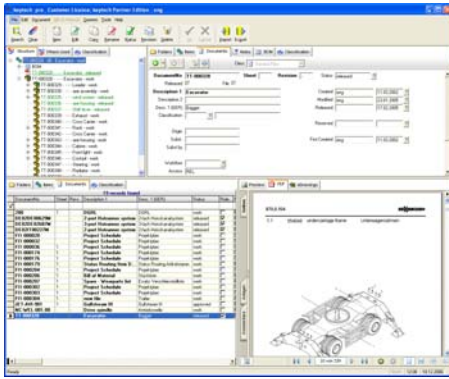
Once the user finds the data, the new release provides improved methods for previewing it. Whereas in previous releases, users were presented with a static bitmap preview of the CAD data or document, this release goes further by providing basic eDrawings functionality to view, rotate, zoom and pan a 3D or 2D data file or, if they're dealing with PDFs, to see a full preview of the document. While it might sound a little gimmicky, this does allow users to carry out a full inspection of the data they're looking at before they load it into the appropriate viewing or authoring tool and will be particularly useful for heavy CAD data.

Keytech PLM Suite 2007 provides more rich preview tools within the main application interface that allow users to inspect their data before loading – 3D and 2D CAD data is shown as eDrawings style dynamic 3D models (shown below) and PDF documents load fully (shown at the top of page 25).

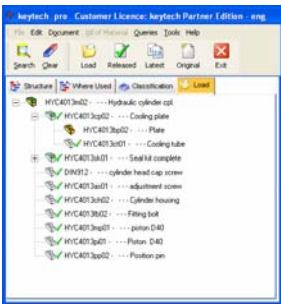
## Change management

One area that Keytech PLM Suite excels in is the handling of complex design changes and by this, I'm referring to the process of updating

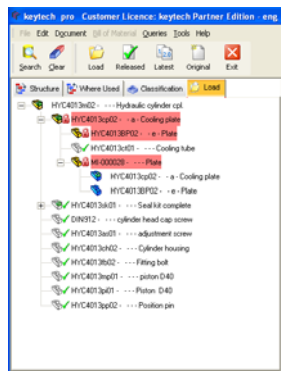




assembly models, rather than the sign-off/approval aspects (which it handles just as well). Keytech uses the concept of structures to store assembly files and there has been a great deal of work done to assist with the very complex design changes, revision management and such that are key parts of many users' workflows. For example, when users are making modifications to a large assembly, there are always going to be complex changes made to the product structure. Some parts will be new or replaced, some will be revised and some will remain the same. Keytech handles this very efficiently and graphically, by presenting the user with the familiar hierarchical product structure, but using a series of graphic icons and colours to represent items which are out of date, which ones are revised, and which are changed.



it's not only it that is being modified, but also parts that are derived from it and the higher-level assembly.



geometry references exist between the components. Many data management systems can't recognise or manage this level of relationship, as they are at a geometry level, but Keytech has the ability to find these types of relationships that are key to working with any 3D modelling

system and manage them effectively.

## Multi-CAD environment

Another area that Keytech has found success in is the management of multi-CAD environments. It's common for many organisations to run multiple CAD systems, whether that's for mechanical design, a mix of 2D/3D (either for current work or integration of legacy data) or mechanical and electrical/electronic design tools.

On the mechanical design front, the system supports SolidWorks, AutoCAD and ME10 intelligently. By this I mean that it not only supports the data files and their structure, but can also extract a great deal of information from those data files, which saves time when users are creating the essential metadata that are key to any data management system. Also on the 2D/3D front, the system allows users to work in a mixed 2D/3D manner, by allowing them to create product structures that feature a controlled and managed mix of 3D data alongside 2D information. What this means is that if users have standard 2D components that feature alongside those developed in 3D they can integrate the documents associated with their design and manufacture. This ensures that the BOMs available from Keytech (and subsequently passed across to ERP/MRP systems, with over eighteen different system integrations in production) are accurate and contain links to all of the data without having to rework or remodel parts or assemblies.

Also worth noting is that there is a tool to allow the integration of electronic/electrical design data with integrations with the likes of EPLAN. This allows BOMs to be fully descriptive and allows users to ensure that whatever particular task their development team is working on, that process is conducted in a secure and managed environment, through which everyone accesses the most up to date and current data.

## In conclusion

It's a strange coincidence that we're looking at two very SolidWorks-focussed Data management products this month – I certainly didn't plan it that way. But as we are, perhaps it's best to look at each individually and point out the strong points of each system and also explore some of the pitfalls.

I'm not a great fan of making direct comparisons between software systems; believing it much better to inform the reader about the strengths and weaknesses of each and allow them to evaluate them based on their own situation, requirements and industry needs. MCAD's role is to provide a spark of interest and inform you guys about what's available and let you take it from there.

That said, in this instance, there are comparisons that can be drawn and should be, par-

ticularly as the PDMWorks Enterprise system is naturally the most obvious choice for those SolidWorks users looking to upgrade their data management environment – after all, it's the system most closely associated with SolidWorks.

Compared to PDMWorks Enterprise, Keytech PLM suite is a more traditional PDM system. It's a standalone application, and while there's integration into the SolidWorks interface, the majority of work viewing, filtering and finding data, managing the change process and the majority of everyday tasks are carried out in a separate application. However, it doesn't have the slickness of PDMWorks Enterprise and its integration into the Windows environment – which on initial investigation is a huge benefit for those looking for an easy to adopt system.

Where Keytech PLM Suite differentiates itself is in the details. Here, I'm talking about the level of integration with the way in which SolidWorks operates – and this flies in the face of logical thought on such matters. You would imagine that the SolidWorks own brand data management system would provide the epitome of integration with the complex interactions, relationships and functionality that make SolidWorks the powerful system that it is today – unfortunately, and as I've said in our other feature on page 18, this isn't really the case.

Yes, PDMWorks Enterprise offers a solid level of support for how SolidWorks operates, but compared with Keytech PLM Suite, it's lacking somewhat in very specific areas. If you look at how Keytech supports SolidWorks functionality such as configurations, multi-body parts, welded assemblies and such, it's clear that the team behind the product is driven by a very advanced set of users, who are squeezing all they can from the system and really making use of this functionality. I've been lucky enough to speak to some of these users recently and what I've found is that the organisations that have adopted Keytech PLM Suite are pushing the limits of what can be achieved with SolidWorks - in terms of assembly size, complexity, variance and data reuse. As a result, they require a high level of support for the functionality they're using to achieve it.

Keytech PLM Suite isn't for every SolidWorks user, and the in-house tools are going to be ideal for the majority. Where Keytech PLM Suite comes into its own is for those organisations with complex products that are pushing their product development processes to the very limit and need a management system that can match that quest for efficiency. ●

PRODUCT	Keytech PLM Suite 2007
SUPPLIER	Keytech GmbH/Keytech UK <a href="http://www.keyneticcapplications.co.uk">www.keyneticcapplications.co.uk</a>
PRICE	On application