MCAD ONLINE
PRODUCT DEVELOPMENT AND MANUFACTURING SOLUTIONS

Review: Cimmetry AutoVue 19

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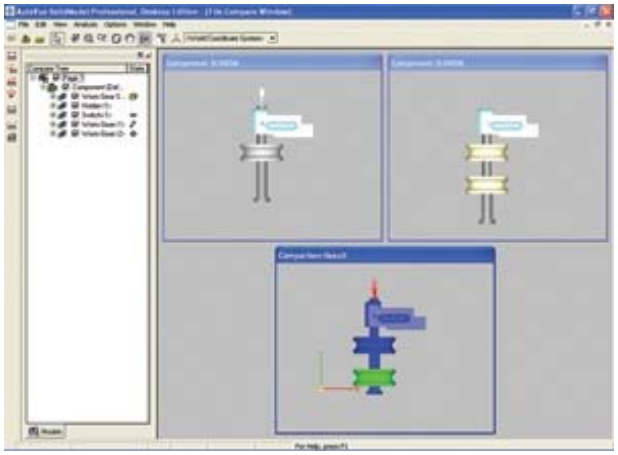
Purchased by Agile this year, with its latest release Cimmetry had to prove it could still work as an independent, third-party, view and mark-up technology developer.

Over the years AutoVue has grown beyond the capabilities that its name would imply. The world of view and mark-up has come a long way since these applications would allow access to proprietary file formats from expensive CAD systems, allowing someone to see a CAD drawing and even plot it without using up a precious CAD seat. AutoVue still performs this basic function but it has also grown to encompass collaboration, design analysis, verification, clash detection, drawing comparison and digital mock-up, to name but a few.

The latest release of AutoVue, release 19, is the first since Cimmetry was acquired by PLM provider, Agile, earlier this year. It's fair to say that the functionality in this release was probably decided and developed before the acquisition; however, Agile appears to be running Cimmetry as an independent subsidiary. This is probably just as well, as many of Agile's competitors license AutoVue to integrate into their PLM solutions as the view and mark-up element.

And so to AutoVue 19. In this release, Cimmetry has gone back to basics with much of the development effort being placed in the 3D MCAD functionality. For a few releases, the company diversified into adding functionality for customers in the EDA segment of the market and while this is still included and has been added to this release, it's obvious that the main development effort has been targeted at MCAD customers. Of course, it's worth mentioning that by supporting EDA and MCAD, assemblies created by mixed design teams can be interrogated in a single environment (e.g. checking capacitors or processors do not clash with any part of their casing).



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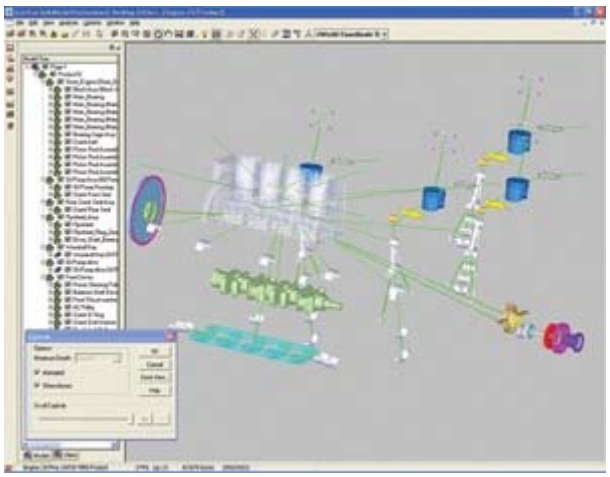

This is probably just as well, as the industry has many players in this market now, and all the CAD giants pushing their many ‘open’ 3D CAD files. Next year there will be even more formats and yet more marketing poured into the data publishing side of the engineering market, but there will still be a place for a solution that opens a broader range of files and offers enriched engineering functionality.

AutoVue Basics

Before jumping into the new features it’s worth going over what AutoVue offers. Running on individual desktops or server with browser client, AutoVue comes in a number of variants, for Engineering-based firms working in 2D, 3D or mixed. File formats supported cover nearly every CAD or business software you can think of, including support from written documents in Word, to 2D drawings in AutoCAD, all the way up to assembly models of cars and planes designed in Catia. Designs are quickly loaded, can be viewed, printed, compared, interrogated for meta data and measured. It’s then possible for individuals of groups, in real-time collaboration, to add and store non-destructive mark-ups, sticky notes, hotspot links etc. to files, in both 2D and 3D. As AutoVue can open files from multiple CAD systems it’s also possible to create Digital mock-ups with parts originated within multiple systems. AutoVue is a lot more than just view and mark-up.

New in 19

Cimmetry has updated its support for all the leading 2D and 3D CAD platforms that have been released in the last year. There are also a number of interface changes and improvements which aid ease of use. The key functional developments however, are for those who develop using 3D CAD tools.

‘3D Explode’ is the first cool feature Cimmetry unveiled. By using a small ‘draggable’ side bar button, AutoVue will now smoothly explode loaded assemblies; The further the slider the wider the distance between the parts in the assembly. When you have found a view you like, simply save this out for re-use in technical documentation or in design review meetings. It really couldn’t be any easier to use.

A new ‘3D Entity Search’ is a very useful utility to assist finding parts within a large assembly model. AutoVue will search through an assembly for tags, colouring parts which are associated with the search data. These parts can be quickly located and inspected, transformed and exported. AutoVue can complete this level of data filtering a lot quicker than using the native CAD system or through a PDM-style product.

AutoVue now has a better understanding of many native file formats, being able to access native camera positions and saved views in SolidWorks, Catia V5, Pro/E and Unigraphics.

Saving the best for last, the most useful 3D feature is ‘3D Compare’, which follows on from AutoVue’s well-established 2D compare feature. 3D Compare can be used to compare two versions of the same part or assembly to immediately see what is different or the same. This could be used to solve a part selection issue, or is even accurate enough to highlight any differences between files which may have been badly translated. You could even load scanned data from a produced part and compare it to the original CAD model. This opens all types of opportunities for AutoVue in an engineering firm.

There are also a large number of other new 3D features: linking the BOM data to the 3D model (sounds small but this is actually very useful), double clicking on a 3D part will now bring up its entity properties and right clicking on a part will highlight all identical parts. 19 also allows the user to select a number of parts and quickly hide those not selected. There are also enhancements to make measurement easier and more accurate. Rendering has been improved and it’s possible to mix the render modes based on each part within a session. AutoVue now supports tolerancing, product manufacturing information (PMI) embedded in files, view 2D views from 3D models and snapping has been greatly improved.

Conclusion

AutoVue 19 has had some major 3D enhancements added to it, making it a much more useful and comprehensive 3D tool to have in a design department. With the increasing adoption of 3D in the Engineering space, Cimmetry has read the market correctly and beefed up the developments initiated in versions 16 and 17. While it still does all the useful 2D and 3D viewing, the move to Digital Mock-up and now 3D model verification expands the products usefulness within firms that heavily use proprietary CAD data to communicate increasingly complex data.

Looking at the market and seeing the likes of Adobe with the U3D and its increased effort into the MCAD market, it was essential for Cimmetry to continue to extend beyond view and mark-up. With AutoVue 19, it's clear that Cimmetry is still on this trajectory and the company continues to build-in links so the AutoVue engine can be incorporated into OEM products. It appears that Agile is looking to maintain Cimmetry as a trusted component provider to the industry players.

Product	AutoVue 19
Supplier	Cimmetry www.cimmetry.com
Price	On Application