



Cadventure Review of Vectorworks 2017

Vectorworks has made significant changes to its 2017 release, with the main focus on standardising its BIM Workflows, and making project administration a much simpler task, all within the existing workspace.

Outside of BIM, however Vectorworks has also improved its Presentation workflows by including Renderworks as standard and offering image editing functionality previously carried out in Photoshop. Aside from this, other changes are made to 2D Modifier tools, and greater import ability.

The resource manager is one of the most significant changes from the last release of Vectorworks 2016. Noticeably it has had a facelift from the original resource browser previously found in Vectorworks. The new interface aligns similarly with that of “project browser” found in Autodesk REVIT. Resource manager has now simplified the view by reading left to right in three split panes, with the left pane showing the file tree structure and the second a visual display of the object. The third pane is new in the sense that this shows attribute / type information for the chosen object. Again the latter is similar in fashion to the display of a REVIT Family – Type properties display. With the importance of the required industry data i.e Uniclass, CoBIE, IFC, and NBS. A need to preview information prior to placement within the product model is now a key feature, this may be the case when using different variants of a manufacturers product i.e furniture sizes, and material options.

In its previous incarnation “Resource Manager” had been a tool palette with a series of non-related drop down menus which became confusing when working on large projects requiring multiple symbols, hatches, and line styles to be used from other projects. This has now segregated all the drawing standards and styles into their constituent areas in alphabetical orders in simple folders.

At present Autodesk uses its project browser system to index all elements related to the native document i.e. Families, sheets, views etc., in terms of REVIT Families, these are then indexed into alphabetical groups known as categories, which in turn classify the subsequent building sub component i.e. HVAC Ducting, columns, windows, doors. Vectorworks aims to replicate this to a degree by in turn classifying its building components as “object styles”.

In retrospect the traditional Resource browser had not changed for many releases and it was better suited to the basic 2D Workflow of Vectorworks Architect. Moving forward into a BIM future, the resource manager can now index folders by object type, and does not require searching window explorer to access embedded objects with various VW Files. To really make BIM Workflows simple, VW2017 has paired the resource manager with the new BIM Cloud tools within Vectorworks to allow users to access online project files / symbol libraries direct from the cloud. It also acts as a gateway for off the shelf manufacturing object sites i.e. BIM Object / NBS. This simple feature makes working in BIM Collaboration a much simpler prospect, and allows project administrator time saving and efficient workflows from which to manage the project delivery.

Cloud Publishing / Cloud integration

Another major shift within Vectorworks is the integration of the cloud services to the main project interface. Access now within a new “Cloud” top level dropdown. A user can now publish directly from the project model onto the cloud, import / export shared files in Real-time. On first installation a VSS Account is synchronised with Vectorworks software to allow the user direct and secure access to cloud services, if a VW Subscription is not available VW Also supports a Dropbox Virtual server in the same way.

These two features illustrated above, now offer small practices a secure streamlined roadmap to a recognised BIM Level 2 Standard. Simplistic and easy to administrate, the ability to synchronise a cloud server with the desktop software. This reduces the overhead costs of purchasing and Maintaining IT Hardware.

VW 2017 Now competes in a level playing field with Autodesk and it’s recent A360 Cloud offering. Although Autodesk REVIT has a very similar workflow, crucially it has not provided a dedicated Dropbox server link, thus excluding low cost solutions in cloud sharing platforms. In turn VW Has however opted to do this, allowing flexibility to small offices and independents looking to move to an OpenBIM Framework.

Revit Import / Enhanced DWG / DWF Import

Vectorworks 2017 has now the added RVT File import into its recognised formats. Prior to this functionality VW would require IFC Interchange.

IFC4 Capability

Currently previous VW 2016 Releases have been working to the building smart IFC 2x3 format, industry changes and increased sub classification of building components across all disciplines had previously involved service packs and upgrade of industry BIM Software to support both objects and project model information. IFC4 is now currently being supported. VW 2017 has recognised this as the case and provided an IFC4 Certification into its current release.

Web Viewer / VR Tools

In 2017 Vectorworks has now refined its web viewer / VR Tools. Previously Virtual Reality was possible through a series of external plug in modules with Vectorworks. In 2017 this is now a standard export within the menus. Under the main export menu “Web Viewer”, the export tool generates and exports a 3D Model Complete with

chosen render options. A web hyperlink is created simultaneously and available for web viewing on Smart devices, and a web browser. Navigation tools are as standard, allowing walkthrough, magnification, and 360 rotation / flyover. This is an invaluable tool solely down to the fact that it just requires internet explorer. In short, VW has managed to create a vastly simple workflow, that allows for viewing on internet enabled viewers.

Storey Support

Existing Layer organisation and containers known as storeys now have additional features with parametric objects mapped to named layers. This has been a great addition in terms of allowing the BIM Model to retain the entities to fixed positions when any repositioning of the building model. Objects can also be detected on associated layers when looking to schedule the project and export worksheets.

Interior Elevation

Another key feature of VW2017 is the ability to create custom interior Elevations, on any plan. Similar workflows to the create section / viewport commands this keeps the creation of internal elevations simple and easy to edit when looking to publish drawings for production.

Imagery / Renderworks

VW2017 has now increased it's capability in terms of 3D Visualisation and rendering. Previously another a plug in module Renderworks is now as standard in VW2017 Architect release. All the standard tools of renderworks still remain. However, VW has also provided image manipulation tools Transform and Skew to alter the perspective of photopgraph scenery so this can be brought into the Vectorworks model space. Pen Opacity tools for 2D / Section Illustration, 2D Drop shadows, greater rasterisation of Adobe Acrobat 3D PDF Output, and alpha Transparency / control. The render works module has greater texture mapping functionality and thanks to new direct Cinema 4D Export, greater ability to export additional textures and renders.

Drawing tools

Parametric Structural Tools

Vectorworks now has increased its parametric capabilities in terms of its Structural design tools, when creating a Vertical member, any associated attachment can now be interlocked. This function can be locked / unlocked at any time, allowing the user to flex geometry of steel frame designs in a parametric fashion, removing the need for 2D Editing tools.

Point Cloud support

Vectorworks now has greater flexibility in terms of point cloud support, gaining parity with Autodesk REVIT, Vectorworks 2017 is able to import five recognised Point cloud file types through a straightforward file import process. Once in situ, the point cloud can be cropped in all planes by means of the view cube function. Colour scales can be edited and users can change view, and save views as per the traditional Vectorworks workflow, this can become the basis for creating solid elements such as walls, floors etc.

In summary

All in all, VW2017 has brought a lot of workflows in house, and by doing so has provided autonomy to its design and presentation teams. The potential for creating a collaborative project via a non Vectorworks cloud server with all design stages, and High standards of 3D Rendering / Visualisation, means a low cost fully comprehensive solution. The latter combined with the ability to export models directly to an open web page for Virtual Reality viewing makes 2017 a real game changer. In addition to its design tools VW has insured its users receive ongoing support in terms of IFC Certification for its project models and library objects. The attention to detail for the new resource manager display interface and addition of 2D presentations tools such as Interior Elevations, has meant that VW now competes with Industry competitors such as Autodesk's REVIT and Bentley's AECOsim in all aspects. Vectoworks 2017 is undoubtedly ready for BIM Level 2, and we can expect more from it's parent company in terms of industry collaboration with regards to support for model checking products such as Solibri. There is also a recognition for those particularly in the European digital build sector will be moving towards BIM Level 3.

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