

Vertex Software Breaks Collaboration Barriers

CIMdata Commentary

Key takeaways:

- *Vertex Software enters the Collaboration market to share product data across the extended enterprise.*
- *The Vertex solution exploits cloud technology to deliver high speed rendering and BOM structure breaking free of device and scaling dependence.*

Vertex Software LLC, located in Ames, Iowa, was founded in 2017 with a goal “to transform how people and companies share and collaborate with 3D product data across the extended enterprise.” The founders have already distinguished themselves as innovators in manufacturing visualization in their prior years with EAI (Engineering Animation Inc.), the root visualization technology acquired by what is now Siemens PLM Software, supporting the well-established JT format. In the years that followed, the principles of EAI were drawn to applications in cloud technology. They now bring together both capabilities in a cloud-based visualization solution for an elevated user experience and improved performance collaborating outside of engineering. CIMdata has long been a proponent of the original EAI implementation and even today is a strong advocate of the JT format.

Vertex Software targets discrete manufacturing companies, not to displace their existing collaboration tools, but rather to “extend the value of their investment” and break down communication barriers as companies share engineering data with non-engineering product stakeholders. Two of the biggest barriers faced by product manufacturing companies as they share their product data outside of engineering are the typically slow performance of displaying very large CAD data files and the exposure of their intellectual property (IP). Vertex Software leverages the compute power of the cloud to bust through performance issues and they do so without the need to make use of graphic processing units (GPUs) which would otherwise drive up the cost. Data is streamed from the cloud to the user’s device so no actual CAD database data is exposed, protecting the company’s IP. CIMdata recognizes the difficulty in having product stakeholders outside of engineering wait patiently for the slow display of very large product models. The Vertex cloud implementation is a welcome respite.

By being cloud enabled, the Vertex software is device agnostic providing access through a web browser without the need to download and install client software.

Collaboration Capabilities

While a relatively new software tool, Vertex Software supports the majority of expected capabilities from a more mature collaboration application. The Vertex solution supports numerous data formats for input including JT and STEP. In addition to providing the standard actions of pan, zoom, and rotate, the 3D viewer displays the bill of material (BOM) structure of the product model, and users can select data items in either the BOM structure or the graphics display window and see the selection highlighted in the other. The display of individual components can be toggled on and off within the product assembly.

Users can take “snapshots” of the model in a specified view along with annotations. The comments can be pinned to the surface of the model allowing others to respond with clarity.

¹ See <https://www.vertexvis.com/>



Figure 1—Vertex Snapshot with Pin and Comment
(Courtesy of Vertex Software)

Further, the Vertex Software provides a capability for the user to create a “story,” which is a packaged sequence of snapshots that can be used to illustrate an issue or area of interest between collaboration partners. Users can see the story in static 2D form even without a Vertex license. With a license, the story snapshots are full 3D.

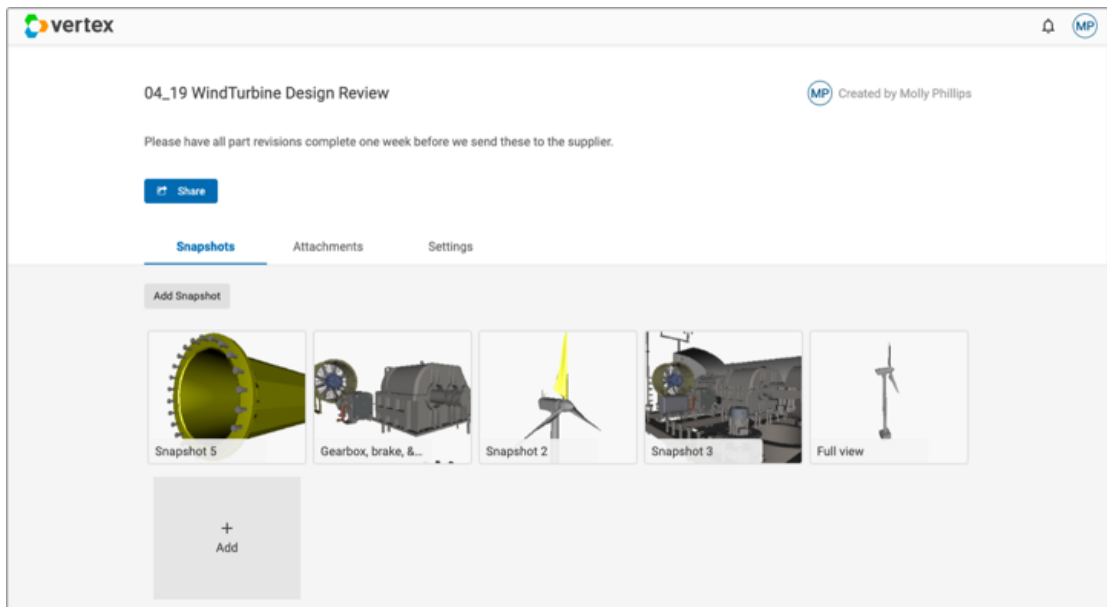


Figure 2—Vertex Story
(Courtesy of Vertex Software)

Users can securely share stories with collaborators through the Vertex platform. Vertex allows the user to control their exports through quick reductions in BOM visibility and confidently share stories on their highly-secure cloud environment (hosted by Amazon Web Services). Collaborators can export models from the story’s snapshots and use the exported data as reference geometry to review and propose updates back to their collaborator through the Vertex story. This provides a secure, controllable method to close the loop on collaboration.

CIMdata believes that for any discrete manufacturing company who has the need to collaborate outside of engineering, the Vertex solution offers an appealing choice. It is especially true if the company deals with very large 3D models that can take an inordinate amount of time to display using standard PLM collaboration tools. The Vertex Software solution breaks through those barriers.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at <http://www.CIMdata.com> or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.