

## Siemens delivers industry's first Artificial Intelligence-powered CAD sketching technology

- **NX offers unconstrained concept design sketching within the 3D environment to help increase productivity**
- **NX software, part of Siemens' Xcelerator portfolio, is a leading solution for building the most comprehensive digital twin**

Siemens Digital Industries Software is announcing a new solution for capturing concepts in 2D. The new NX™ Sketch software tool revolutionizes sketching in CAD, which is an essential part of the design process. By changing the underlying technology, users are now able to sketch without pre-defining parameters, design intent and relationships. Using Artificial Intelligence (AI) to infer relationships on the fly, users can move away from a paper hand sketch and truly create concept designs within NX™ software. This technology offers significant flexibility in concept design sketching, and makes it easy to work with imported data, allowing rapid design iteration on legacy data, and to work with tens of thousands of curves within a single sketch. With these latest enhancements to NX, Siemens' [Xcelerator portfolio](#) continues to bring together great technology, even within the core of modelling techniques, helping remove the traditional barriers users have experienced to dramatically improve productivity.

"The ability to make intelligent changes to 2D entities that one imports into the new sketcher is astounding," said Steve Samuels, CEO of Design Visionaries Inc.

Analysis has shown that in an average day or workflow, around 10% of a typical user's day is spent sketching. In addition, within current design environments most concept sketching is happening outside of the CAD software due to the level of rules

and relationships that must be decided on and built into the sketch by the user up front. Often designers in concept design stage do not necessarily know what the final product may be, which requires a sketching environment that is flexible and can evolve with the design. NX offers the flexibility of 2D paper concept design within the 3D CAD environment, as the first in the industry to eliminate upfront constraints on the design. Instead of defining and being limited by constraints such as size or relationships, NX can recognize tangents and other design relationships to adjust on the fly.

“Sketching is at the heart of CAD and is critical to capturing the intent of the digital twin,” said Bob Haubrock, Sr Vice President, Product Engineering Software at Siemens Digital Industries Software. “Even though this is an essential part of the process, sketching hasn’t changed much in the last 40 years. Using technology and innovations from multiple past acquisitions, Siemens is able to take a fresh look at this crucial design step and modernize it in a way that will help our customers achieve significant gains in productivity and innovation.”

Siemens Digital Industries Software is driving transformation to enable a digital enterprise where engineering, manufacturing and electronics design meet tomorrow. The [Xcelerator portfolio](#) helps companies of all sizes create and leverage digital twins that provide organizations with new insights, opportunities and levels of automation to drive innovation. For more information on Siemens Digital Industries Software products and services, visit [www.sw.siemens.com](http://www.sw.siemens.com) or follow us on [LinkedIn](#), [Twitter](#), [Facebook](#) and [Instagram](#). Siemens Digital Industries Software – Where today meets tomorrow.

For further information on NX Sketch, please see [here](#).

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supports customers to achieve greater productivity and flexibility. DI is constantly adding innovations to its portfolio to integrate cutting-edge future technologies. Siemens Digital Industries has its global headquarters in Nuremberg, Germany, and has around 76,000 employees internationally.

**Siemens AG** (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. The company is active around the globe, focusing on the areas of power generation and distribution, intelligent infrastructure for buildings and distributed energy systems, and automation and digitalization in the process and manufacturing industries. Through the separately managed company Siemens Mobility, a leading supplier of smart mobility solutions for rail and road transport, Siemens is shaping the world market for passenger and freight services. Due to its majority stakes in the publicly listed companies Siemens Healthineers AG and Siemens Gamesa Renewable Energy, Siemens is also a world-leading supplier of medical technology and digital healthcare services as well as environmentally friendly solutions for onshore and offshore wind power generation. In fiscal 2019, which ended on September 30, 2019, Siemens generated revenue of €86.8 billion and net income of €5.6 billion. At the end of September 2019, the company had around 385,000 employees worldwide. Further information is available on the Internet at [www.siemens.com](http://www.siemens.com).

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