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By: Tudor Vieru, Science Editor



The new software will allow engineers and architects to be more creative with the work they do livingroom

Engineering Design Made Easy with New Software

The tool lets engineers doodle and improves creativity

A team of scientists managed to invent a new piece of software that will aid engineers and architects to better project their work in a digital environment, with the help of a doodling tablet. The new program will allow for increased creativity among these professionals, as it will not feature the classic drag-and-drop-style menus usually found in this class of applications. SketchCAD is basically a digital pen-based computer system that allows for a greater liberty of expression among those who've had enough of classic similar software.

"The idea is to empower engineers and designers with tools that are already familiar to them and are the most natural for the task," Levent Burak Kara, an assistant professor of mechanical engineering at Carnegie Mellon University, says. Working with Kenji Shimada, Kara was able to set the groundwork for the new system, which can provide 3D applications for a variety of sectors, ranging from architecture to medicine.

"Right now, our technology is being adopted by Honda designers for designing new cars in fast and cost-effective ways," says the Theodore Ahrens Professor of Engineering at CMU, Kenji Shimada. He adds that, by employing the new tool, companies could get rid of large redesign costs, which often occur in projects made using classic designer programs.

"These software have the potential to greatly enhance engineering practice by allowing users to design and analyze complex engineered systems by simply sketching their ideas," the two researchers say. They also mention that their team is working on a new revolutionary system, dubbed SimuSketch, which will be capable of interpreting engineers' hand-drawn diagrams and mechanical systems, for use in other related projects.

Interoperability between the two systems will not be an issue, and the scientists are confident that future projects will be even more grand in scale and features, as new generations of architects and engineers will envision sketches on SketchCad, and the computer will tell them instantly if the structure is feasible or not. In the future, doctors will also be able to plan surgeries using a spin-off program, which will allow them to run simulations beforehand, using data extracted from each particular patient.