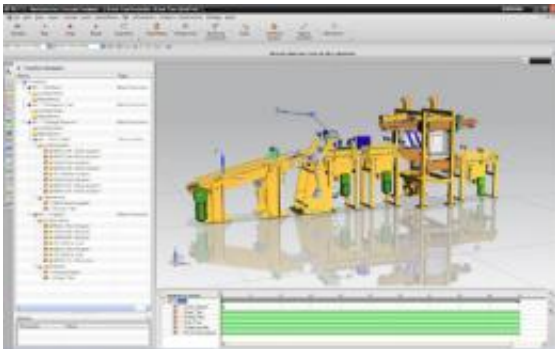


Developers of machines receive help from PC game technology

November 11 2010



Siemens has used computer games technology in a development software that makes it quicker and easier to design new machines and to simulate their complex functions at an early stage.

Depending on the task involved, the new Mechatronics Concept Designer reduces development time by up to 20 percent. The solution makes it possible for all specialist departments to develop a machine together right from the start instead of successively, as has been the case until now. The Mechatronics Concept Designer is the first development tool of its kind for conceptualizing complex machines. The program was presented recently at the PLM Europe trade fair in Linz, Austria.

The design tool is a big leap forward in particular for manufacturers of

machine tools. Such machines produce work pieces from a predefined material, which they grind, stamp or mill, for example. The complex, program-controlled facilities perform a great many work steps, and experts in mechanics, electronics and [control software](#) take part in their development. Today, a concept for a new machine is usually sketched out with paper and pencil, and the sketch serves as the basis for building a [mechanical model](#). This is when the information for the electrical design first becomes available – for example how many sensors, actuators or electric motors are needed.

With the Mechatronics Concept Designer, however, all the specialists work together to develop a virtual machine — including all the motors, sensors or actuators — and thus generate data structures with which the work in each discipline can be immediately continued. The program is based on interactive games software and simulates the machine's behavior in real time in a three-dimensional model. As in a computer game, the user can intervene in a simulation that is in progress. Once created, the objects can be deposited in a library, complete with all their mechatronic data — for example a gripper with its geometry, movements, sensors and motors. The process saves not only development time; it also boosts the quality of the unit because it enables the use of components that have already been validated. And it also makes it easier and faster to perform subsequent modifications.

The Mechatronics Concept Designer was developed by Siemens Industry's PLM Software (Product Lifecycle Management) division and features open interfaces for interaction with tools from Industry Automation and Drive Technologies.

Provided by Siemens

Citation: Developers of machines receive help from PC game technology (2010, November 11)

retrieved 1 May 2024 from <https://phys.org/news/2010-11-machines-pc-game-technology.html>

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