Complete Immersion Into Virtual HMI Reality

Invensys Process Systems [1] recently unveiled its Immersive Virtual Reality Process technology-a next-generation human-machine interface (HMI) solution that aims to revolutionize the way engineers, plant operators and operator trainees see and interact with the plant and processes they control. (Please click on link to view a video of Immersive Virtual Reality Process technology in action.)

When it becomes commercially available later this year, Invensys expects this virtual reality process to deliver a range of benefits, such as:

- The creation of a 3D computer-generated representation of either a real or proposed process plant.
- The power to simulate virtually any scenario that a user could encounter in real life.
- Proprietary DYNSIM™ software to realistically emulate plant environments by linking process simulation models with physical-spatial models.
- The inclusion of a stereoscopic headset, so you can virtually move through the plant in any direction.
- Virtual environment renderings occurring at a rapid 60 frames per second.
- The flexibility for fast, yet economical program configurations.
- Suitability for process design, maintenance engineering and plant safety training programs.
- Application in the energy, oil and gas, chemical, and other process industries.
- The knowledge management, training and retention skills necessary to counter an aging work force.

- Improved plant safety and security.
- Environmental and regulatory accountability.
- Increased production and efficiency.
- The capacity to help control feedstock and material costs.

"The ability to simulate complex processes in connection with virtual actions allows the user to directly experience an environment that changes over time, making it more effective when transferring skills learned in training to the work environment," says Invensys director Maurizio Rovaglio.

"And because rarely performed volatile tasks (such as plant shutdowns) can be rehearsed in a stable, realistic environment, users have the opportunity to learn and make mistakes without putting themselves, the community or the environment at risk. In addition, using computer models of real equipment allows endless experimentation without ever taking the equipment offline, mitigating risk to production as well."

"Immersive Virtual Reality Process is another example of Invensys developing and delivering innovative solutions that help our clients solve their most critical business issues," pronounces Invensys vice president of advanced applications Tobias Scheele. "The solution continues to be tested in a variety of installations, and we are beginning to realize its full potential and value-add possibilities. When it becomes available in the second half of this year, we believe it will provide immediate far-reaching benefits to clients spanning the process industries."

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[1] http://www.chem.info/http