vdtc Virtual Development and Training Centre

Virtual model with real controls.

Facilities

- "Elbe Dom" 360° large projection system
- VR process design labs
- Computational mechanics lab
- Mixed reality testing facility
- Prototyping labs
- VR training rooms
- Seminar rooms

Winner of the

European Regional Innovation Awards

Contact

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vdtc Virtual Development and Training Centre

Encounter – Experience – Learn: Human and Machine in Interactive Dialog

Fraunhofer IFF Institut Fabrikbetrieb und -automatisierung

Deutschland Land der Ideen
Ausgewählter Ort 2006

Virtual, Augmented and Mixed Reality for Engineering, Testing and Operating Technical Systems

The Virtual Development and Training Centre VDTC makes its infrastructure and its specialists' know-how available so you can take advantage of state-of-the-art technologies. This means clients receive optimal support when they are implementing their projects.

Augmented reality in order picking.

Business and Research: A Meeting of Two Worlds in a Virtual Environment

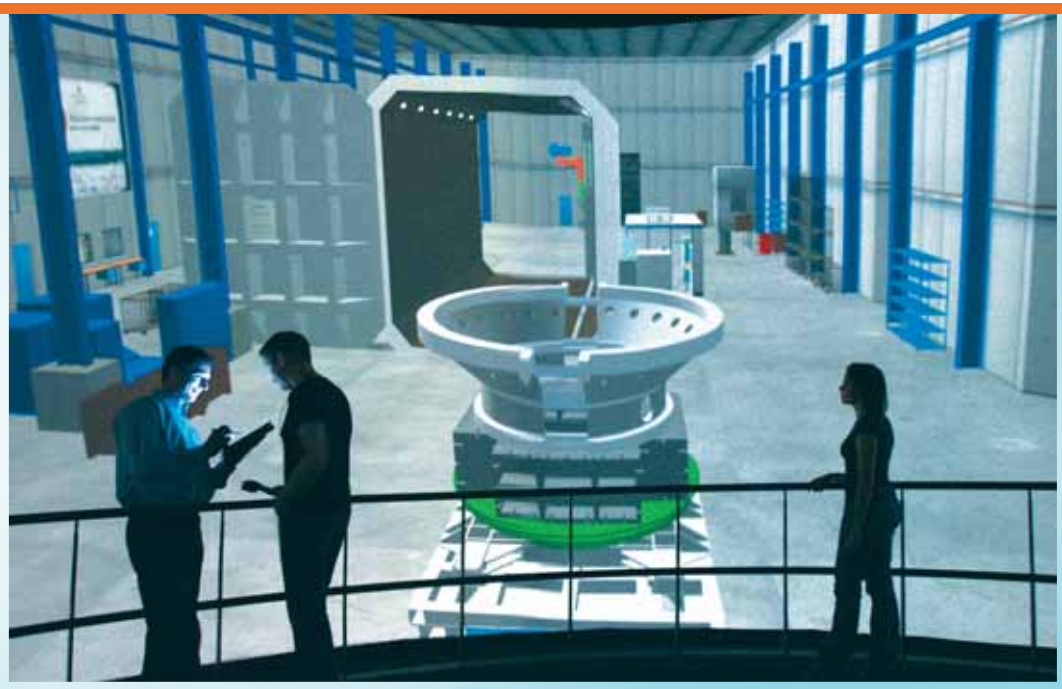
In the high-tech labs of the VDTC, researchers collaborate interdisciplinarily with industrial users and innovative service providers. With an intense practical orientation, they use virtual development and training platforms as the basis for developing joint solutions.

Firmly integrated in international research and business networks and closely collaborating with Otto von Guericke University Magdeburg and universities of applied science, the VDTC has already evolved into an indispensable link between academic research and industrial application.The research and technology center welcomes collaboration with external partners. This opens up promising prospects, particularly for business start-ups and spin-offs.

By bundling competencies and taking advantage of the latest virtual technologies and state-of-the-art network technologies, you can launch your ideas on the market purposefully and rapidly.

Customized Solutions for Businesses

Companies are already profiting from the potentials of virtual technologies. National and international companies from the widest variety of sectors come to the Fraunhofer IFF for its highly specialized know-how and infrastructure to carry out their projects. The services offered include a broad range of individual services that are adapted specifically to a client's needs. The cost effective and real-time applications based on these remarkable next generation technologies are especially suited for small and medium-sized enterprises.



You and your client can view products and processes three-dimensionally on the 360° large projection surface in the Elbe Dom at the VDTC.

Development, Experiments and Training in a Virtual Environment

State-of-the-art virtual and augmented reality methods make it possible to visualize customized technical solutions at the VDTC before they really exist. Geared directly toward a client's needs, customized, interactive simulations and visualizations are developed, e.g. for virtual product and process development. Complex functions of technical products can be tested and thus optimized before a first prototype has been built. Experiments can be conducted in a virtual environment without any risk.

What is more, VDTC technology provides remarkable opportunities to train and school technical staff, e.g. by coupling real control units to virtual models. A special scenario concept prepares educational contents didactically and stores them together with the virtual representation of the models.

Our Services: Virtual, Augmented and Mixed Reality in the Digital Process Chain

- Virtual engineering for the development of products, processes and systems,
- FEM calculations,
- Virtual factory layout and assembly planning,
- Qualification and basic and advanced training,
- Marketing and sales support.

Systems for networking service information for plant management:

- Virtual-interactive product documentation,
- Virtual-interactive spare parts catalogs,
- Feedback management,
- Maintenance,
- Virtual-interactive manuals.

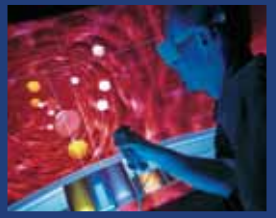
Digital process chain.

Applications:

Aerospace, e.g. for Airbus Deutschland GmbH.

Mechanical and plant engineering e.g. for Schiess GmbH.

Sytems Documentation, e.g. for AEM Dessau GmbH.



Medicine, e.g. for Otto von Guericke University Magdeburg.

E-learning, e.g. for Westermann Verlag.

Urban planning, e.g. for Lutherstadt Eisleben.

Power engineering e.g. for RWE.

Automotive industry, e.g. for Auto 5000 GmbH.