

1 Assembly of a spring loaded drive.

## VIRTUAL INTERACTIVE LEARNING ENVIRONMENTS FOR TECHNICAL EXPERTS

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### Using Virtual Reality to Counter the Shortage of Skilled Labor

Demographic change will make it impossible to meet future labor requirements by recruiting young workers. This means more than an aging workforce. If they are to remain competitive, companies will have to ready themselves to be highly productive and provide innovative products and processes with an older workforce. The looming shortage of skilled labor will have to be countered with appropriate methods and steps:

- Lifelong learning
- Transfer of knowledge from experienced experts to young workers
- Improved quality of training

Shorter product life cycles and the greater diversity of products are moving the market to impose new demands on qualification.

Operational content must be retrievable anytime and adaptable to trainees' skills.

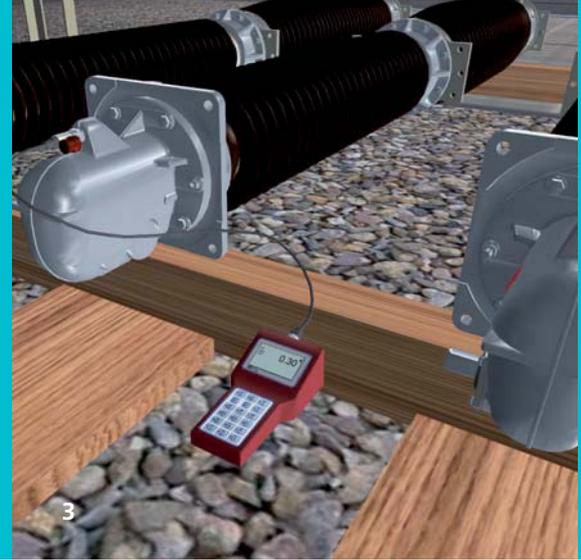
Virtual interactive learning environments will be an important tool to meet this trend. They can be used to compile older workers' empirical knowledge and make it easily accessible as a knowledge base and to teach operations, emphasizing action. Moreover, advanced technologies increase a company's attractiveness for young workers.

### Qualification with Virtual Interactive Learning Environments

Qualification in a virtual interactive learning environment enables trainees to perform real jobs faster and as required and prepares them for real work in a safe environment. Virtual interactive learning environ-



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ments facilitate action-driven learning of operations by replacing the teaching of purely factual knowledge with instruction in a real process. This additionally enhances trainees skills to act. Operations and relationships, which are concealed in reality and thus hard to teach, can be clarified in a safe learning environment.

We engineer customized virtual interactive learning environments based on a customized software solution and provide consulting on the latest technologies and hardware components.

### Development of a Virtual Interactive Learning Environment

Once we have determined your company's qualification needs together with you, we will engineer a training solution customized to your needs. In addition to preparing the technical contents, we will plan the integration of virtual learning units in existing curricula and provide you consulting to equip training rooms. In keeping with your future use scenario, you will be able to use your virtual interactive learning environment with a laptop or PC, a stereoscopic projection system or even a CAVE.

Our highly qualified researchers and close cooperation with Otto von Guericke University Magdeburg assure that our products and services are superior and innovative. Findings and developments from our numerous research projects will enter directly into your solution and give you an edge over the competition.

### Advantages and Benefits

Virtual interactive learning environments will cut your costs by:

- reducing attendance times during qualification,
- minimizing downtimes of real equipment and systems for qualification and
- minimizing your employees' errors in real operations.

Qualify your employees with virtual interactive learning environments and boost their performance by:

- strengthening their practical skills,
- effectively utilizing training times and
- boosting motivation.

What is more, working in virtual interactive learning environments eliminates the potential hazards of real work situations.

Our largely language-independent learning environment can be used globally.

Let us help you develop new qualification solutions utilizing our virtual interactive learning environment so that you will be able to rely on highly qualified personnel in the future, too.

2 Training with a virtual interactive learning environment

Photo: Fraunhofer IFF

3 Component visualization.