Fraunhofer IML

LiftNick

Playful learning for more motivation

Why Serious Gaming and Virtual Reality (VR)?

Serious Games are training applications that contain playful elements that support sustainable, efficient and motivated learning. Studies show that increased immersion in the digital world substantially increases the learning effect.

With the help of virtual reality glasses, the real world is blocked out and the user is completely immersed in the virtual world. This ensures immersion and thus for an improved, sustainable training.

What is LiftNick?

LiftNick is a VR application for forklift drivers to train processes and locations (within the context of the company) as well as to increase hazard awareness. The control is adapted from the actual forklift via low-cost consumer hardware and enables realistic driving experiences in a true-to-life image of the warehouse.

Why LiftNick?

LiftNick is not a driving safety training course in the usual sense, but a process and regulation training for forklift drivers. Direct feedback and playful elements ensure increased motivation and a more efficient and therefore faster training. This is also considered for more unusual and not easily trained situations. Thanks to its modular structure, LiftNick can be easily adjusted to almost any process and warehouse layout. The multilingual implementation overcomes potentially existing language barriers.

Structure of LiftNick

The training is divided into several sections (levels), which are outlined below. Initially, the player is in a digital image of a warehouse and interacts with various objects such as the scanner, the logbook and, of course, the forklift truck. The process is supported with audiovisuals by the system throughout the experience. Additionally, LiftNick presents many setting options in the training itself. This includes comfort options, control configurations and a special process selection for advanced training.

Level 1: Start of shift

The correct procedure of a departure check is trained. Among other things a forklift check and a log in the driver's book needs to be performed.

Level 2: Core process

This is followed by a simulation of the basic warehouse processes of putting away, replenish and full pallet picking. Rule awareness is trained with direct feedback.

Level 3: End of shift

This level contains the end of a shift. The players will learn how to park and connect the forklift truck to the existing charging infrastructure.

Level 4: Complete shift

This covers the performance of a complete shift as a forklift driver and includes the start and end of the shift as well as the simulation of a storage process. This corresponds to a combination of levels 1 to 3.

Level 5: Special process

In this level a complete shift is performed, during which various exceptional situations can occur. This can be, for example, a blockade of the destination by other goods. This trains how to deal with situations and special processes that may be exceptional and rarely occur in practice.

Open game

This is a free training of several sequential storage processes without the support of the system. Various special cases can occur during this process. A playful character provides additional motivation. At the end the Statistics about one's own performance and a list of best performers can be examined.

Purchase and licensing model

The standard software is licensed on an annual basis. In addition to this, smaller adjustments as well as extensive individual developments can be commissioned. LiftNick requires a hardware setup consisting of:

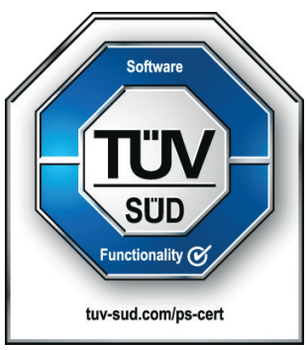
- High-Performance PC and VR-Set
- Simulator with motion platform, seat, steering wheel, joystick and monitor

Additional Information

Fraunhofer IML:
http://iml.fraunhofer.de/en

LiftNick
http://iml.fraunhofer.de/xr

We are looking forward to working with you!



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