

VirtualConstructor – Tangible Interaction with Virtual Humans

The virtual characters Jara and Taron “live” at a construction lab of a car company and are acknowledged car specialists. With their expert guidance, visitors of the exhibit can build over 800,000 variants of a 3D car puzzle using just ten car parts on the scale 1:5.5 at five different positions on a workbench, although only 30 of these variants actually lead to valid car models.



Figure 1: Setup of the edutainment installation in the VW Autostadt in Wolfsburg

The virtual car specialists, Jara and Taron, appear in a life-size projection and comment on the actions being taken by the visitor and provide additional background information about the car assembly process, thus giving the impression of an actual conversation. Additionally, they can discuss the latest research results in car technology, e.g., concerning driver assistance and safety systems. Moreover they also inform about the technological basis and functionality underlying the exhibit.

“The complex combination of the latest RFID technology for automated situation and context-aware behavior and real time animation of virtual humans with coordinated speech synthesis, together with situational dependent dialog planning for edutainment purposes regarding innovative technologies in car industry, represents a novelty in the field of Artificial Intelligence”, said Prof. Wolfgang

Wahlster, Director of the German Research Center for AI. “This interactive installation creates a new dimension in intelligent edutainment.”

VirtualConstructor was developed as a tandem project of DFKI and the VW Autostadt of the Volkswagen Group. It is based on the results of the research conducted under Virtual-Human, a project funded by the German Federal Ministry of Education and Research (BMBF). This innovative attraction has been a permanent exhibit at the VW Autostadt in Wolfsburg since April 2006.



Figure 2: Jara and Taron in action

Additional Information

<http://vc.dfki.de/>
www.autostadt.de
www.virtual-human.org
www.dfki.de

Contact

Dr. Alassane Ndiaye
DFKI – German Research Center
for Artificial Intelligence
Stuhlsatzenhausweg 3
66123 Saarbruecken
E-Mail: Alassane.Ndiaye@dfki.de
Phone: 0681 302-536