News-Archive Braunschweig

Summer Camp Aviation

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DLR Braunschweig participated again in the 'Summer Camp Aviation' and gave 16 pupils the opportunity to take a look at its research activities. The participant's experience didn't stop with looking and learning but also included an interactive part.

In the ATS (Apron and Tower Simulator) of the Institute of Flight Guidance the air controllers of tomorrow gave the right instructions to the pseudo-pilots.

Picture: DLR.

The first facility to look at was the ATMOS (Air Traffic Management and Operations Simulator) in the Institute of Flight Guidance. There the 16-19 year old pupils gained some basic knowledge on the man-machine-interface, i.e. the assistance systems for air traffic controllers, as well as the operational framework and the procedures they are working in. After a short introduction into the field of radio communication and its basic rules and terms, the participants used different editors to create a small simulation scenario on their own.

In the ATS(Apron and Tower Simulator) the pupils had a direct com-connection to the so called 'pseudo-pilots'. These 'pilots' were sitting just one room away in front of one of six computers and controlling their aircraft that the air traffic controller would have to guide right through arrival and departure. They also followed the commands given by ATC and read them back to the controllers. The most important information on the 'pseudo-pilots' aircraft was given them via tables that included data like speed, altitude, course etc. Every pseudo-pilot controlled up to six 'aircraft' so that the controllers were able to get in contact with up to 36 'aircraft' and guide them down to a hopefully 'happy landing'.

The next step into the world of aviation brought them into the Institute of Aerodynamics and Flow Technology, where they learned how to design an aircraft on the computer. Using different parameters like width, length and form of the fuselage and wings they were able to develop their ‘own’ aircraft. All final processing was done by means of the institute’s computers. The following day gave them the opportunity to view their computer generated aircraft in a three dimensional fluid dynamic simulation in the Virtual-Reality-Laboratory and take a look at the aerodynamic qualities of their creation.

The next chance to take part in a ‘summer camp’ will be from the 20th till 24th of August 2007 when the ‘Summer Camp Rail’ will take place. Then, the Institute of Transportation Systems will actively participate and explain how rail traffic control can be optimized and speed- and safety-gains can be reached.

Related Contacts

Mark Schmidt
German Aerospace Center (DLR)
Location Development & Communication
Tel: +49 531 295-2129
Fax: +49 531 295-2271
E-Mail: DLR-Braunschweig@dlr.de
