

Project: FLEXIBLE INTEGRATED AIRCRAFT CONTROL AND PHYSIOLOGICAL PROFILE ASSESSMENT SYSTEM

Contract 9 / 09.09.2005

Project financed by MEC, Contract Authority: ROSA

Partners: National Institute for Aeronautical and Space Medicine, Aviation Academy

Main objectives:

- to develop a complex set of tools for aircraft control profile assessment of pilot candidates during training process,
- to build a scenario database for specific flight missions,
- to generate the numerical side of scenarios,
- to build a database with specific parameters for aircraft control profile models,
- to build a generic flight simulator,
- to build the data acquisition system, both for physiological data stream and for flight data stream,
- to generate the set of physiological data,
- to build the main network of the system.

Main stages of development:



- Preliminary system architecture
- Preliminary control profile
- Preliminary physiological profile
- Sever preliminary architecture
- Final system architecture
- First simulation software package
- Database software package

- Data acquisition and processing system: physiological stream
- Main system database
- Functional integrated system

Required measurements:

- aircraft control abilities,
- physiological data,
- learning rate,
- integration aptitudes,
- performance dynamic during training process.

Product development: a scalable network, supported by basic cells consisting in:



- candidate workplace:
 - display with flight environment,
 - flight controls,
 - sensors.
- instructor place,
- data acquisition and analysis.