

Center for Advanced Simulation and Technology (CAST) Czech Technical University in Prague

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measure.feld.cvut.cz/cast
www.facebook.com/simulatorfel

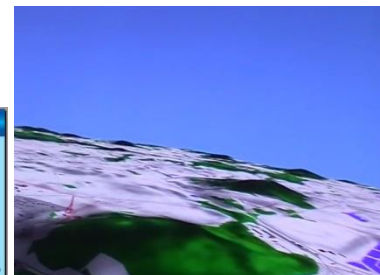
Center for Advanced Simulation and Technology

- **CTU in Prague** – the oldest technical university in Europe
- **Faculty of Electrical Engineering** – technology electronics
- **CAST** – Sensors and embedded systems, data processing, wireless data-link, certification process

Former experience:

- **Airplane tracking system – glider contests** – direct telemetry up to 100 km, GSM unlimited – ground online data visualization – the system won award in 2009
- **Calibration Probe – Aero-metrical quantities** – towed probe measuring also AOA and AOS for precise ALT and SPD, wireless data link
- **AHRS (IMU) unit for six-legged** – position angles, data fusion, terrain mapping
- **New patented system for position angles measurements**
- **Geographical Data Processing** – airport navigation, and terrain models generation – for our EFIS
- **Methodic for Pilot Testing**

Kontakt: Pavel Pačes, www.facebook.com/simulatorfel



Space related projects (CAST)

Full motion simulator

- Motion sickness testing
- Mainly for aerospace – International Space Station docking scenario possible
- HMI testing – coop. with US Air Force Research Laboratory
- SW, augmented reality, electronics, signal converters, Data Acquisition units



Small Satellite Platform

- Educational tool (illustrates Hubble Space Telescope Stabilization principles)
- Data fusion algorithms, Sensor data processing (IMU inside)
- Reaction wheels used for stabilization in 1D (horizontal plane)
- Already used:
 - Czech republic
CTU in Prague
 - Spain
IP Martin
 - Italy
University of Calabria
 - Pakistan
Institute of Space Tech.



Main projects (CAST)

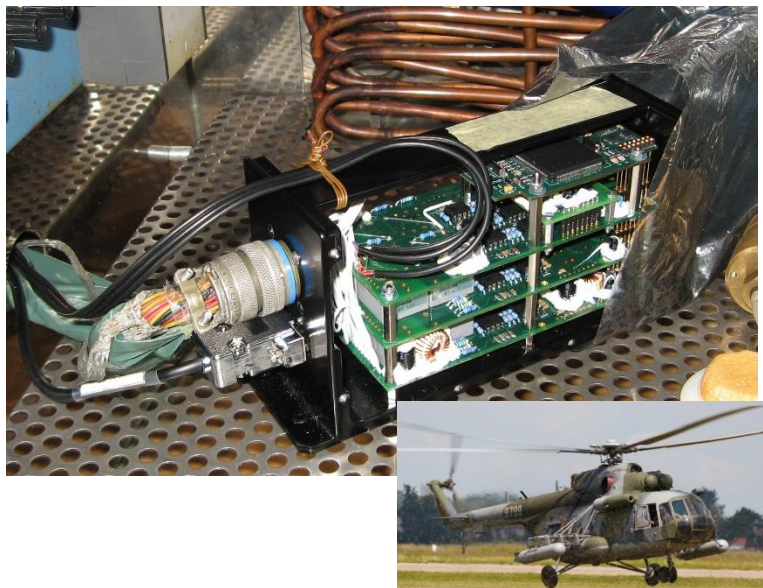
LUN1794 – Synchro/Resolver converter to ARINC429 (for Flight Management System)

Certification:

- DO-160 and DO-178B, Level C
- CAA Type Approval

Usage:

- Military: MI-8SP, MI-171S
- Civil: LET L410 (UVP – E20), An26, Boeing 707

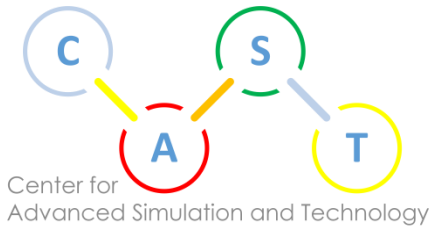


Testbed for Honeywell Technology Solutions Converter

- LaseRef V Inertial Navigation system (laser gyroscope based Inertial Reference System)
- a personal computer
- a reference for other Inertial Measurement Units (IMU)
- Award



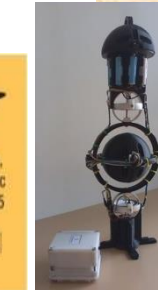
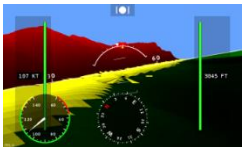
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- Motion sickness simulation – full-flight
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- SW, augmented reality, electronics, signal converters, Data Acquisition units
- **Digital Avionics Systems Conference**
 - In Prague, 2015 – www.dasconline.org



- Exhibitions at International Tech. Fair in Brno, FEL Fest Praha, Night of Scientists, NATO Future Forces, ...
- Volnočasové aktivity (Sněžka, Sázava, ...)

