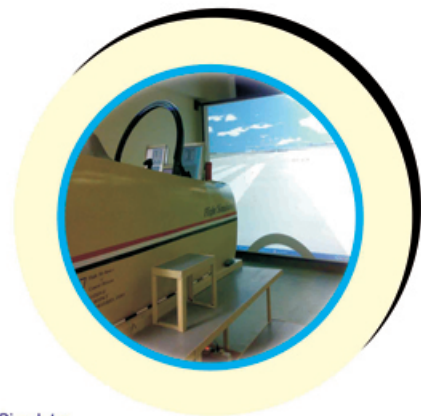
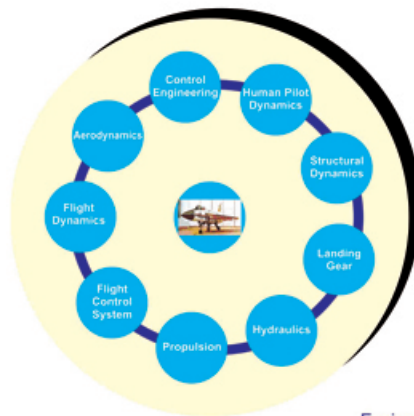




## Modeling of Airframe & Other Related Subsystems

- Engineer-in-Loop Simulation, facility was successfully used in the design, development, testing and clearance of the fly-by-wire and autopilot flight control laws for the Light Combat Aircraft - TEJAS
- Modeling of Complex Aircraft Subsystems (Including Engine, Landing Gear, Hydraulics and Flight Control System Hardware) with good fidelity and real time capability
- Pilot in loop verification of the SARAS Autopilot Control Laws with hardware in loop and active force feedback of the reversible flight control system



Engineer-in-Loop Simulator

## Aerodynamic Modeling and Estimation from Aircraft Flight Data

- Aircraft modeling and parameter identification techniques have been successfully applied to determine aerodynamic characteristics from flight tests for various aircraft programmes of the country (LCA, IJT, ALH, Jaguar, SARAS, Hansa...)

## Other Activities

### Multi Sensor Data Fusion

- Algorithms for multisensor single target and multisensor multi target tracking
- Interacting multiple model filters for maneuvering target tracking fuzzy logic and Bayesian network based situation assessment

### Development & Testing of Flight Control Laws

Research in evaluation of aircraft handling qualities, Aircraft pilot coupling and effect of Pilot Vehicle Interface (PVI) elements including Head Up Display (HUD) Symbology, Stick and Pedal Dynamics