Simulation Environment
Asseco SE
Integrated Simulation Environment

Integrated UAV aircraft simulation environment is a suitable solution for unmanned aircraft operators flight training procedures. The system provides the user with basic flight training in simulated conditions with no need to worry about platform crash or bad weather conditions.

The simulation environment consists of three separate parts:

- GCS – Ground Control Station software
- accurate flight simulation and weather engine
- autopilot or software embedded flight controller

According to customer needs, the simulation environment can be equipped with a real-life autopilot (hardware) or basic flight control structure which can be implemented as software solution. Simulation capabilities strictly depend on Asseco GCS software which is normally used for real-life flight operations. The system architecture ensures the highest level of integrity with real-life flight procedures.

Core features:

- mission execution training
- mission progress simulation
- weather conditions simulation
- real airfield and airport implementation
- emergency procedures training
- takeoff and recovery simulation
- multi-platform sessions
- full GCS functionalities coverage
- auto/manual flight modes support
- regular and VTOL takeoff and landing procedures
- customized platform implementation
- moving objects surveillance
Multi-platform support.

The simulation can be conducted with the use of more than one flying platform. The simulation process is based on complex calculations which depend on airframe dynamic and aerodynamic behavior. In this case, for multi-platform operations simulation, additional computer stands are needed for most accurate and close to real-life operations. In this structure, each simulated platform is flown by a separate autopilot module inside the simulation engine.

All telemetry data is transferred between GCS software and additional simulation engines/autopilots. This structure allows for multi-platform simulation and control from single or distributed GCS module.

Platform implementation.

The simulation engine has a possibility of customer-defined platform implementation. The airframe model can be implemented based on real-life platform airfoil, geometric and aerodynamic parameters.
Modern IT solutions for military sector.

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