GAMMA
TECHNOLOGIES

AEROSPACE SOLUTIONS

Simulation for Electric & Turbine Aircraft

Multi-Physics, Model-Based Sytem Simulation

GT-SUITE is the leading 0D/1D/3D multi-physics CAE system simulation software developed by Gamma Technologies. GT supplies a comprehensive set of validated component libraries which simulates the physics of fluid, flow, thermal, mechanical, electrical, magnetic, chemistry, and controls This deep physics approach offers solutions across multiple disciplines from system to component level.
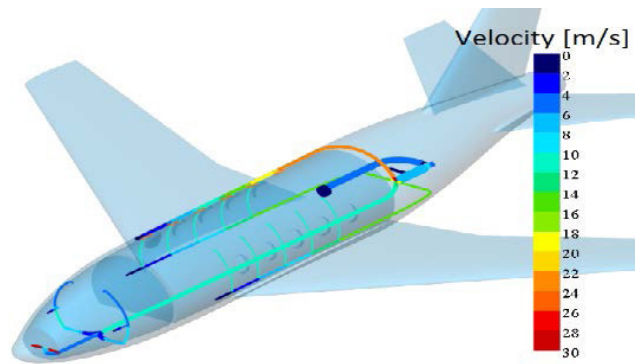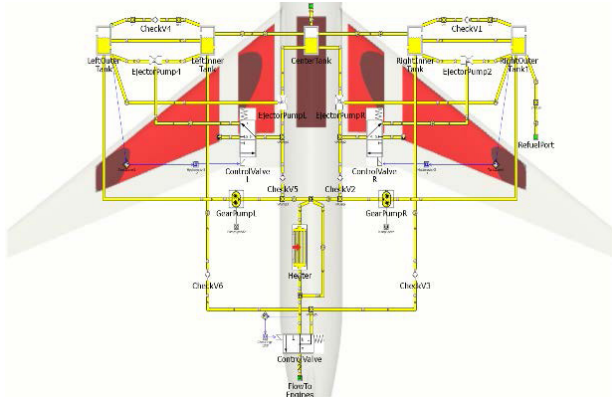
Our Expertise

- Integrated Systems
- Thermal Management
- Multi-Body Mechanics
- Propulsion Systems
- Fluid & Hydraulic Systems
- Environmental Control
- Electric, Hybrid, Battery
- Fuel Systems
- Landing Gears
- Cryogenic Systems

Environmental Control Systems (ECS)

- Model the complete ECS, including air distribution systems, liquid circuits, and thermal masses
- Fast and efficient model building: Quickly convert 3D CAD to system-level simulation models
- 3D cabin modeling provides temperature, humidity, and airflow results
- Fully parametric for quick and easy model changes
- Air cycle or vapor compression cycle (two-phase flow) systems
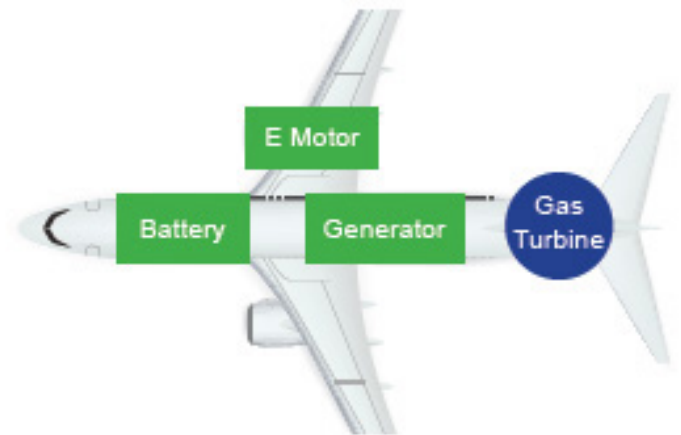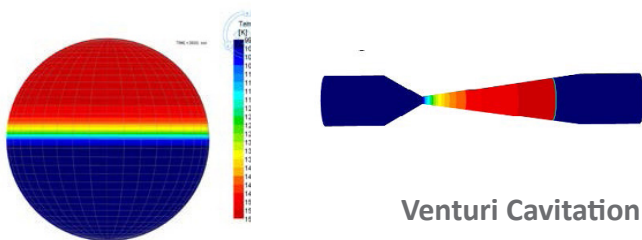

Velocity [m/s]

Fuel Systems

- Transient fuel transport, pressurization, distribution, inerting, heat transfer, fuel surface tracing, and more
- Define aircraft missions and environment conditions, including altitude, attitude, and 3D accelerations
- Fueling, refueling, defueling, venting of complete systems

Propulsion and Hybrid Electric

- Simulate gas turbine, electric, and hybrid propulsion systems
- Modular model building approach allows modeling of all major engine and non-standard configurations
- Integrate propulsion system with connected systems: thermal management, ECS, APU, fuel systems, and more

E Motor

Battery   Generator

Gas Turbine

Tank Thermal Stratification

Venturi Cavitation

Cryogenic Systems

- Industry-leading 2-phase, thermal-fluid transient solution
- Extensive fluid properties database provided by NIST
- Link fluid system with thermal FE structures
- Study entire propulsion systems for line priming, tank charging (filling), water hammer.

HEADQUARTERS | 601 Oakmont Lane, Suite 220, Westmont, IL 60559, USA. Other GT offices: GERMANY | INDIA | GREECE | FRANCE

For more information, please visit: www.gtisoft.com

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