

SATELLITE COMPONENTS AND SUBSYSTEMS

Aerospace

Project
Management



Mechanical
Engineering



Electrical
Engineering



ELECTRICAL AND MECHANICAL ANALYSES FOR A NEXT-GENERATION SATELLITE

APPROACH

- Use a hybrid project approach while working with client development systems
- Use a flexible multidisciplinary approach
- Perform circuit simulation using LTspice
- Perform a FIDES 2009 reliability analysis
- Derate per ECSS-Q-ST-11C
- Develop GSE based on dynamics requirements using an iterative design and analysis approach in Ansys SpaceClaim

RESULTS

- Analyzed electronics designs for beginning-of-life (BOL) and end-of-life (EOL) performance
- Analyzed electronics designs for reliability
- Used analysis to drive design improvements and meet mission targets
- Used GSE designs to support manufacturing processes as well as system-level qualification efforts

KEY TOOLS & TECHNOLOGIES

- LTspice
- Altium
- FIDES 2009
- Ansys SpaceClaim
- Siemens NX
- Siemens NX Simulation
- Siemens Teamcenter
- Simcenter Femap

ALTEN TECHNOLOGY