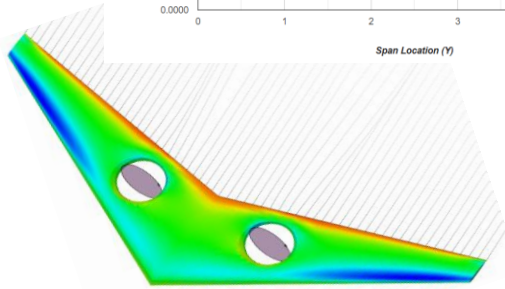
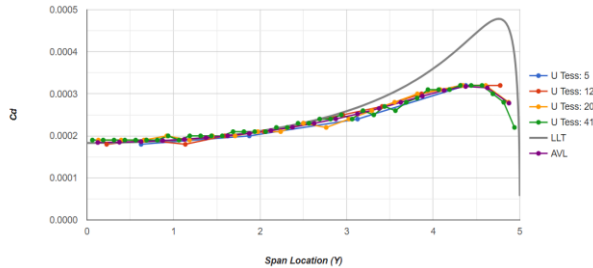


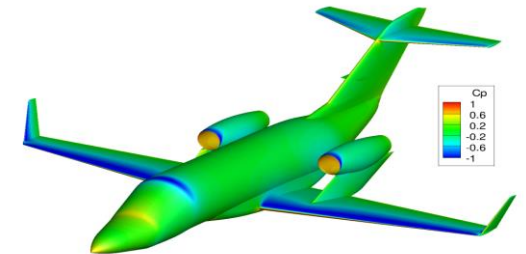
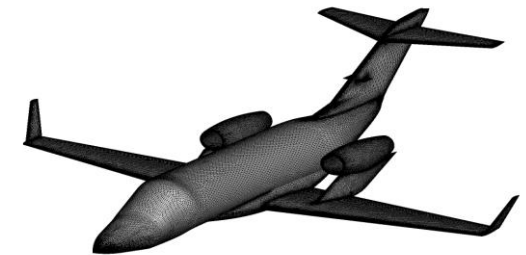
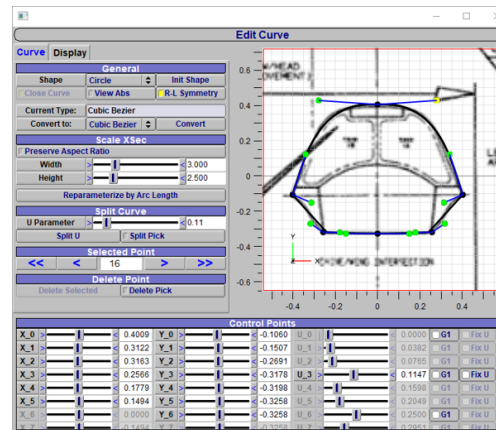
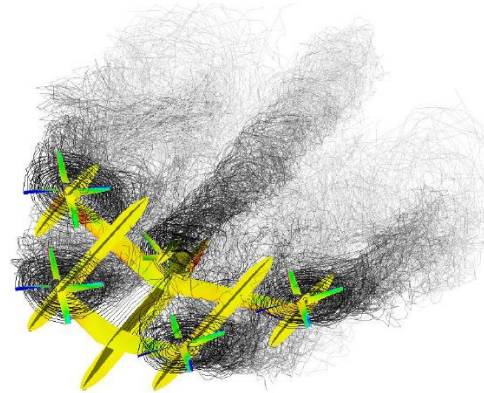
# OpenVSP Development Updates

Figure 10. Hershey Bar Drag Distribution Span Tesselation (U Tess) Sensitivity



OpenVSPAPI 3.25.0

Documentation for the OpenVSP API



Presented by:  
Justin Gravett

Empirical Systems Aerospace, Inc. (ESAero)

# Agenda

- History of Development with AFRL
- Recent Updates
  - Generic XSec
    - Demo
    - Questions
  - CAD Export
    - Demo
    - Questions
  - API
  - VSPAERO Integration
  - Mesh Capabilities
  - Miscellaneous Developments
- Questions



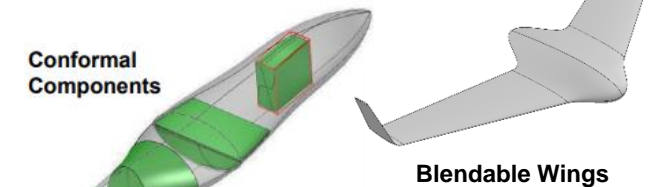
*Ongoing OpenVSP Development  
Supported by AFRL*

Last year's ESAero development update (OpenVSP Workshop 2020): [video](#), [slides](#)

# History of Development with AFRL

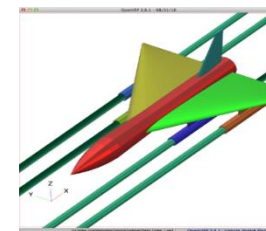
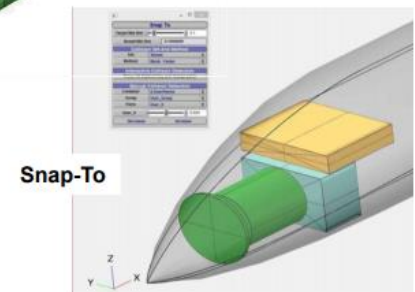
## Phase I SBIR (6 months)

- Task 1 – Inboard Profile Visualization
- Task 2 – Aircraft Subsystem User Defined Component Library
- Task 3 – Advanced Parameter Linking
- Task 4 – Aircraft Subsystem Advanced Parameter Link Library
- Task 5 – Drag Buildup Tool

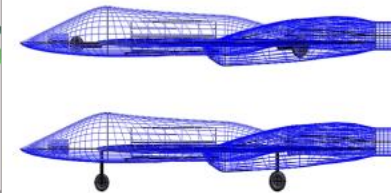


## Phase II SBIR (2 years)

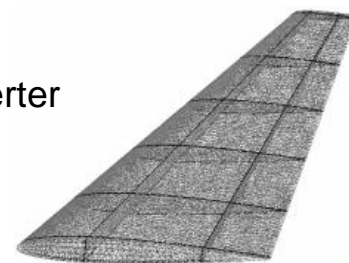
- Task 1 – Master Aerodynamic Analysis Tool
- Task 2 – Sub-Aero Tool Development and Modification
  - 2.1 Transonic Drag Rise Module
  - 2.2 Wave Drag Module
  - 2.3 Induced Drag Module Through VSPAERO
- Task 3 – Basic Static Stability Analysis
- Task 4 – Radar Cross Section (RCS) Analysis Using Xpatch®
- Task 5 – 2D Drawing Exportability
- Task 6 – Saved Parameter Settings
- Task 7 – Addition of Structure Modeling Capability
- Task 8 – Conformal Feature
- Task 9 – Blendable Wings
- Task 10 – Addition of a \*.VSP to \*.VSP3 Converter
- Task 11 – VSPAERO Verification & Validation
- Task 12 – Wiki Documentation



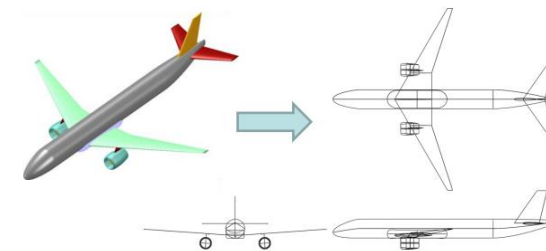
Wave Drag



Saved Parameter Settings



Structural Modeling



2D Drawing Export